## 3Q18 Earnings

Presentation
October 24, 2018

## NASDAQ 3Q18 HIGHLIGHTS

Driving Accelerating Growth, Creating Sustainable Value

| Nasdaq |
| :---: |
| Net Revenues |
| 3Q18 Revenue |
| Growth ${ }^{1}:$ |
| +5\% Organic |
| Y-o-Y |

Non-Trading
Segments
3Q18 Revenue
Growth ${ }^{1}:$
$+6 \%$ Organic
Y-o-Y
Free Cash Flow ex
Section 31 Fees
\$678 Million
YTD
$+17 \%$ Y-o-Y

> Capital Returns to Shareholders $^{2}$  \$602 Million YTD, including \$394 Million in share repurchases

## 3 Q18 NON-GAAP SUMMARY ${ }^{(1)}$

| (USS millions, except per share) | $3 Q 18$ | $3 Q 17$ | $\% \Delta$ |
| :--- | :---: | :---: | :---: |
| Revenue from non-trading segments $^{(2)}$ | $\$ 378$ | $\$ 338$ | $12 \%$ |
| Market Services Net Revenue $^{(3)}$ | $\$ 222$ | $\$ 219$ | $1 \%$ |
| Other Revenue | $\$-$ | $\$ 46$ | $(100) \%$ |
| Net Revenues ${ }^{(3)}$ | $\$ 600$ | $\$ 603$ | $-\%$ |
| Operating Expenses | $\$ 311$ | $\$ 315$ | $(1) \%$ |
| Operating Income | $\$ 289$ | $\$ 288$ | $-\%$ |
| Operating Margin | $\$ 8 \%$ | $48 \%$ | - |
| Net Income | $\$ 1.15$ | $\$ 1.01$ | $14 \%$ |
| Diluted EPS | 167.3 | 170.0 | $(2) \%$ |
| Diluted Shares Outstanding | $\$ 172$ | $12 \%$ |  |

- 3 Q18 net revenues ${ }^{(3)}$ totaled $\$ 600$ million
- Revenues from non-trading segments ${ }^{(2)}$ increased $12 \%$, or $\$ 40$ million $y-0-y$, with increases in Information Services, Corporate Services and Market Technology.
- Net revenues from Market Services ${ }^{(3)}$ increased $1 \%$, or $\$ 3$ million y-o-y.
- Other revenues declined $\$ 46$ million $y-o-y$, due to the divestiture of the Public Relations Solutions and Digital Media Services businesses in mid-April 2018.

1. Please refer to the appendix for a reconciliation of U.S. GAAP to non-GAAP measures.
2. Represents revenues from our Corporate Services, Information Services and Market Technology segments.
3. Represents revenues less transaction-based expenses.

## ORGANIC REVENUE AND OUTLOOK

NASDAQ YEAR-OVER-YEAR REVENUE GROWTH EXCLUDING ACQUISITIONS AND DIVESTITURES, CONSTANT CURRENCY ${ }^{(1)}$



Non-Trading

Segments (IS, CS, MT)

- Market Services

NASDAQ MEDIUM-TERM (3-5 YR) ORGANIC REVENUE GROWTH OUTLOOK

| U.S. GDP ${ }^{(2)}$ | Information <br> Services | Market <br> Technology | Corporate <br> Services | Non-Trading Segments <br> (IS, CS, MT) |
| :---: | :---: | :---: | :---: | :---: |
| $2.5 \%-3.0 \%$ | $5 \%-7 \%$ | $8 \%-11 \%$ | $3 \%-5 \%$ | $5 \%-7 \%$ |

1. Please refer to pages $25-26$ for a reconciliation of organic revenue growth.
2. GDP forecasts for 2018 and 2019 according to Consensus Economics Inc.

## INFORMATION SERVICES

IS 3Q18
Net Revenue Contribution



INFORMATION SERVICES NET REVENUES


1. Information Services' margins reflect the allocation of certain costs that support the operation of various aspects of Nasdaq's business, including Market Services, to units other than Information Services.

## MARKET TECHNOLOGY

MT 3Q18
Net Revenue Contribution


Operating Income Margin


| Market Technology Performance Summary |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 3Q18 | 3Q17 | $\% \triangle$ |  |
| Net Revenue | \$68M | \$62M | 10\% | - 10\% growth in Market Technology revenues: Reflecting growth in delivery and support revenues and higher software as a service revenues, partially offset by lower change requests and advisory revenues and an unfavorable impact from changes in foreign exchange rates of $\$ 2$ million. <br> - $\$ 40$ million new order intake in $3 Q 18$ and $5 \% y-0-y$ increase in total order value to $\$ 703$ million at 3Q18. <br> - The operating margin totaled $13 \%$, down 10 percentage points $y-0-y$ reflecting increased investment to implement our next-generation Nasdaq Financial Framework market technology platform and increased customer deliveries. |
| Operating Income | \$9M | \$14M | (36)\% |  |
| Operating Income Margin | 13\% | 23\% |  |  |

MARKET TECHNOLOGY NET REVENUES


## CORPORATE SERVICES

## CS 3Q18

Net Revenue
Contribution


Operating Income Margin


| Corporate Services Performance Summary |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 3Q18 | 3Q17 | \% $\triangle$ |  |
| Net Revenue | \$131M | \$126M | 4\% | - Corporate Solutions revenues unchanged. <br> - 7\% increase in Listing Services revenues: Reflects an organic |
| Operating Income | \$42M | \$41M | 2\% | increase resulting from client adoption of our all-inclusive annual listing fee program and an increase in the number and size of IPOs, partially offset by the run-off of fees earned from listing of additional shares and a negative impact from changes in foreign exchange rates. |
| Operating Income Margin | 32\% | 33\% |  | - 85 new U.S. listings including 52 IPOs in 3Q18, and a 76\% U.S. IPO win rate. European new listings totaled 6 in 3Q18. |

CORPORATE SERVICES NET REVENUES

$\square$ Listing Services
$\square \quad$ Corporate Solutions

## MARKET SERVICES

MS 3 Q18
Net Revenue Contribution


| Market Services Performance Summary |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 3Q18 | 3Q17 | $\% \Delta$ |  |
| Net Revenue | \$222M | \$219M | 1\% | - 10\% increase in Equity Derivative Trading and Clearing revenues: Due primarily to higher U.S. industry trading volumes and revenue capture, partially offset by lower U.S. market share. <br> - 2\% increase in Cash Equity Trading revenues: Due primarily to higher |
| Operating Income | \$121M | \$118M | 3\% | U.S. industry trading volumes and higher U.S. market share, partially offset by a lower net capture rate. <br> - $5 \%$ decrease in Fixed Income and Commodities Trading and Clearing revenues: Primarily due to a decline in revenues related to U.S. fixed income products and the unfavorable impact from changes in foreign |
| Operating Income Margin | 55\% | 54\% |  | exchange rates, partially offset by higher net revenues at NFX. <br> - 4\% decrease in Trade Management Services revenues: Primarily due to a decline in port connectivity and an unfavorable impact from changes in foreign exchange rates of $\$ 1$ million. |

Operating Income Margin


MARKET SERVICES NET REVENUES


## NON-GAAP OPERATING EXPENSES¹

(US\$ millions)

| Total Non-GAAP operating <br> expenses | 3 Q18 | 2 Q18 | 3 Q17 |
| :--- | ---: | ---: | ---: |
| Compensation and benefits | 164 | 173 | 167 |
| Professional and contract services ${ }^{(2)}$ | 31 | 34 | 38 |
| Computer operations and data <br> communications | 32 | 30 | 32 |
| Occupancy | 23 | 23 | 23 |
| General, admin. \& other ${ }^{(2)}$ | 20 | 22 | 15 |
| Marketing and advertising | 7 | 10 | 7 |
| Depreciation and amortization ${ }^{(2)}$ | 26 | 25 | 25 |
| Regulatory ${ }^{(2)}$ | 8 | 8 | 8 |
| Total non-GAAP operating expenses | 311 | 325 | 315 |




1. Please refer to the appendix for reconciliation of U.S. GAAP to non-GAAP measures.
2. Depreciation and amortization expense in all periods has been adjusted from GAAP expense. For 3Q18 and 2Q18, general, administrative and other expense is adjusted. For 3Q18, professional and contract services expense are adjusted. For 3Q17, regulatory expense is adjusted. Refer to slides 21 and 22 for the amounts and details of the adjustments for all periods presented.

## 2018 NON-GAAP EXPENSE AND TAX GUIDANCE

> Nasdaq Non-GAAP Operating Expense Guidance
> Includes partial-year of expenses from MM \& PR businesses

> Total Non-GAAP
> Operating Expenses
\$1,310-\$1,325 Million

Non-GAAP Tax Rate Guidance: 24.5\% - 26.5\%

## DEBT OVERVIEW

## Plan to De-Lever to Mid-2X

- 3 Q18 debt increased by $\$ 33 \mathrm{M}$ versus 2 Q 18 primarily due to a $\$ 40 \mathrm{M}$ increase in outstanding commercial paper offset by an $\$ 8$ million decrease in Euro bonds book values caused by a weaker Euro
- 3Q18 total debt to EBITDA remained at 3.1x as in 2Q18. Plan to de-lever to mid-2x leverage ratio by mid-2019
- 3 Q18 net interest expense was $\$ 35 \mathrm{M}, \$ 3 \mathrm{M}$ higher than in 3Q17, primarily due to debt issued in connection with the eVestment acquisition

| \$3.6B Net Debt |  |  |  |
| :--- | :---: | :---: | :---: |
| (US\$ millions) | $9 / 30 / 2018$ | $6 / 30 / 2018$ | Maturity Date |
| Commercial Paper | 309 | 269 | Various |
| Revolver (Libor + 117.5 bps) ${ }^{(2)}$ | $(4)$ | $(4)$ | Apr 2022 |
| Term Loan (Libor + 150 bps) | 100 | 100 | Nov 2019 |
| Floating rate note (Libor + 39 bps) | 499 | 499 | Mar 2019 |
| 5.55\% Bond | 599 | 599 | Jan 2020 |
| 3.88\% Euro Bond | 694 | 698 | Jun 2021 |
| 1.75\% Euro Bond | 690 | 694 | May 2023 |
| 4.25\% Bond | 497 | 496 | Jun 2024 |
| 3.85\% Bond | 496 | 496 | Jun 2026 |
| Total Debt Obligations | $\$ 3,880$ | $\$ 3,847$ |  |
| Less Cash and Cash Equivalents ${ }^{(3)}$ | $(324)$ | $(322)$ |  |
| Net Debt | $\$ 3,556$ | $\$ 3,525$ |  |

## Leverage Ratios

Net Debt to EBITDA ${ }^{(1)}=2.8 x$
Total Debt to EBITDA ${ }^{(1)}=3.1 x$
LTM EBITDA ${ }^{(1)}=\$ 1,254 \mathrm{M}$

Well Laddered Debt Maturities


1. See Appendix for EBITDA reconciliation.
2. Includes debt issuance costs of $\$ 4 \mathrm{M}$ at September 30, 2018 and at June 30, 2018.
3. Excludes $\$ 52 \mathrm{M}$ of restricted cash as of September 30, 2018 and $\$ 34 \mathrm{M}$ as of June 30, 2018.

APPENDIX

## HISTORICAL CASH FLOW/ USES OF CASH FLOW

| Free Cash Flow Calculation (US\$ millions) | 2015 | 2016 | 2017 | 2018 YTD | 2015-2018 YTD |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Cash flow from operations ${ }^{(1)}$ | \$727 | \$776 | \$909 | \$668 | \$3,080 |
| Capital expenditure | (133) | (134) | (144) | (72) | (483) |
| Free cash flow | 594 | 642 | 765 | 596 | 2,597 |
| Section 31 fees, net ${ }^{(2)}$ | 16 | (4) | (9) | 82 | 85 |
| Free cash flow ex. Section 31 fees | \$610 | \$638 | \$756 | \$678 | \$2,682 |
| Uses of cash flow |  |  |  |  |  |
| Share repurchases | \$377 | \$100 | \$203 | \$394 | \$1,074 |
| Net repayment/(borrowing) of debt | (137) | $(1,300)$ | (411) | 285 | $(1,563)$ |
| Acquisitions and divestitures | 256 | 1,460 | 776 | (286) | 2,206 |
| Dividends paid | 149 | 200 | 243 | 208 | 800 |
| Total uses of cash flow | \$645 | \$460 | \$811 | \$601 | \$2,517 |

1. Cash flow from operations has been restated for adoption of ASU 2016-15, ASU 2016-18, and ASU 2016-09.
2. Net of change in Section 31 fees receivables of ( $\$ 11$ million) in 2015; \$1 million in 2016; \$11 million in 2017; (\$25) million in 2018 YTD and (\$24) million in 2015 - 2018 YTD.

## TOTAL VARIANCE NET IMPACTS: 3Q18

|  |  |  | Total Variance |  | Organic Impact |  | Net Acquisition \& Divestiture Impact ${ }^{2}$ |  | FX Impact (Prior Year Rates) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| All figures in US\$ Millions | 3Q18 actual | 3Q17 <br> actual | \$M | \% | \$M | \% | \$M | \% | \$M | \% |
| Market Services | \$222 | \$219 | \$3 | 1 \% | \$7 | 3\% | \$- | - \% | (\$4) | (2)\% |
| Corporate Services | 131 | 126 | 5 | 4 \% | 6 | 5\% | - | - \% | (1) | (1)\% |
| Information Services | 179 | 150 | 29 | 19 \% | 7 | 5\% | 22 | 15 \% | - | - \% |
| Market Technology | 68 | 62 | 6 | 10 \% | 8 | 13\% | - | - \% | (2) | (3)\% |
| Other | - | 46 | (46) | (100)\% | - | -\% | (46) | (100)\% | - | - \% |
| Total Non-trading Segment Revenue ${ }^{1}$ | 378 | 338 | 40 | 12 \% | 21 | 6\% | 22 | 7 \% | (3) | (1)\% |
| Total Revenue less transaction expenses | 600 | 603 | (3) | - \% | 28 | 5\% | (24) | (4)\% | (7) | (1)\% |
| Non-GAAP Operating Expenses | 311 | 315 | (4) | (1)\% | 15 | 5\% | (13) | (4)\% | (6) | (2)\% |
| Non-GAAP Operating Income | 289 | 288 | 1 | - \% | 13 | 5\% | (11) | (4)\% | (1) | - \% |
| Non-GAAP Operating Margin | 48\% | 48\% | - | - | - | - | - | - | - | - |
|  |  |  | Total Variance |  | Organic Impact |  | Net Acquisition \& Divestiture Impact ${ }^{2}$ |  | FX Impact (Prior Year Rates) |  |
| All figures in US\$ Millions | $\begin{aligned} & \hline 2018 \\ & \text { YTD } \end{aligned}$ | $\begin{aligned} & \hline 2017 \\ & \text { YTD } \end{aligned}$ | \$M | \% | \$M | \% | \$M | \% | \$M | \% |
| Market Services | \$709 | \$659 | \$50 | 8 \% | \$44 | 7\% | \$- | - \% | \$6 | 1 \% |
| Corporate Services | 395 | 370 | 25 | 7 \% | 21 | 6\% | - | - \% | 4 | 1 \% |
| Information Services | 528 | 432 | 96 | 22 \% | 39 | 9\% | 52 | 12 \% | 5 | 1 \% |
| Market Technology | 194 | 176 | 18 | 10 \% | 19 | 11\% | - | - \% | (1) | (1)\% |
| Other | 56 | 143 | (87) | (61)\% | - | - | (88) | (62)\% | 1 | 1 \% |
| Total Non-trading Segment Revenue ${ }^{1}$ | 1,117 | 978 | 139 | 14 \% | 79 | 8\% | 52 | 5 \% | 8 | 1 \% |
| Total Revenue less transaction expenses | 1,882 | 1,780 | 102 | 6 \% | 123 | 7\% | (36) | (2)\% | 15 | 1 \% |

[^0]
## EQUITY DERIVATIVE TRADING AND CLEARING

$\square \quad$ European options and futures $\quad \square \quad$ U.S. equity options


|  |  | 3Q17 |  | 4Q17 |  | 1Q18 |  | 2Q18 |  | 3Q18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Revenues (US\$ in Millions) |  |  |  |  |  |  |  |  |  |  |
| U.S. equity options |  | 52 |  | 52 |  | 67 |  | 62 |  | 59 |
| European options and futures |  | 10 |  | 11 |  | 11 |  | 10 |  | 9 |
| Equity Derivatives |  | 62 |  | 63 |  | 78 |  | 72 |  | 68 |
| Nasdaq Volumes |  |  |  |  |  |  |  |  |  |  |
| U.S. equity options (millions of contracts) |  | 364 |  | 399 |  | 474 |  | 417 |  | 407 |
| European options and futures (millions of contracts) |  | 19.2 |  | 19.8 |  | 22.3 |  | 21.9 |  | 18.1 |
| Revenue Capture |  |  |  |  |  |  |  |  |  |  |
| U.S. equity options (RPC) | \$ | 0.14 | \$ | 0.13 | \$ | 0.14 | \$ | 0.15 | \$ | 0.15 |
| European options and futures (RPC) | \$ | 0.51 | \$ | 0.56 | \$ | 0.47 | \$ | 0.44 | \$ | 0.48 |
| SEK/US\$ average | \$ | 0.123 | \$ | 0.120 | \$ | 0.123 | \$ | 0.115 | \$ | 0.112 |
| Euro/US\$ average | \$ | 1.175 | \$ | 1.178 | \$ | 1.229 | \$ | 1.191 | \$ | 1.163 |

## CASH EQUITY TRADING

$\square \quad$ European cash equities
$\square$
U.S. cash equities
$\square$ Other


|  |  | 3Q17 |  | 4Q17 |  | 1Q18 |  | 2 Q 18 |  | 3Q18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Revenues (US\$ in Millions) |  |  |  |  |  |  |  |  |  |  |
| U.S. cash equities |  | 36 |  | 38 |  | 42 |  | 44 |  | 38 |
| European cash equities |  | 24 |  | 25 |  | 29 |  | 25 |  | 23 |
| Other |  | 2 |  | 2 |  | 3 |  | 2 |  | 2 |
| Cash Equity Trading |  | 62 |  | 65 |  | 74 |  | 71 |  | 63 |
| Nasdaq Volumes |  |  |  |  |  |  |  |  |  |  |
| U.S. cash equities (billions of shares) |  | 69.1 |  | 72.7 |  | 88.6 |  | 83.8 |  | 77.8 |
| European cash equities value shares traded (\$B) |  | 221 |  | 238 |  | 260 |  | 232 |  | 204 |
| Revenue Capture |  |  |  |  |  |  |  |  |  |  |
| U.S. cash equities revenue capture per 1000 shares | \$ | 0.52 | \$ | 0.52 | \$ | 0.48 | \$ | 0.52 | \$ | 0.48 |
| European cash equities revenue capture per \$1000 traded | \$ | 0.11 | \$ | 0.11 | \$ | 0.11 | \$ | 0.11 | \$ | 0.12 |
| SEK/US\$ average | \$ | 0.123 | \$ | 0.120 | \$ | 0.123 | \$ | 0.115 | \$ | 0.112 |
| Euro/US\$ average | \$ | 1.175 | \$ | 1.178 | \$ | 1.229 | \$ | 1.191 | \$ | 1.163 |

## FIXED INCOME AND COMMODITIES TRADING \& CLEARING

$\square \quad$ Other fees and revenues
$\square \quad$ Energy and carbon products $\quad \square$ Fixed income products


|  |  | 3Q17 |  | 4Q17 |  | 1Q18 |  | 2Q18 |  | 3Q18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Revenues (US\$ in Millions) |  |  |  |  |  |  |  |  |  |  |
| Fixed income products |  | 10 |  | 10 |  | 12 |  | 11 |  | 10 |
| Energy and carbon products |  | 7 |  | 8 |  | 8 |  | 7 |  | 6 |
| Other fees and revenues |  | 3 |  | 3 |  | 3 |  | 3 |  | 3 |
| Fixed Income and Commodities Trading and Clearing |  | 20 |  | 21 |  | 23 |  | 21 |  | 19 |
| Nasdaq Volumes |  |  |  |  |  |  |  |  |  |  |
| U.S. Fixed income trading volume (billions of \$ notional) |  | 3,975 |  | 4,030 |  | 5,156 |  | 4,134 |  | 3,194 |
| European Fixed income products (millions of contracts) |  | 6.8 |  | 8.3 |  | 8.3 |  | 7.5 |  | 7.9 |
| Energy trading and clearing (TWh) |  | 392 |  | 424 |  | 397 |  | 451 |  | 404 |
| Revenue Capture |  |  |  |  |  |  |  |  |  |  |
| European Fixed Income (RPC) | \$ | 0.63 | \$ | 0.49 | \$ | 0.65 | \$ | 0.58 | \$ | 0.48 |
| Energy trading and clearing (\$1000 per TWh) | \$ | 18.17 | \$ | 19.08 | \$ | 20.30 | \$ | 16.68 | \$ | 15.55 |
| SEK/US\$ average | \$ | 0.123 | \$ | 0.120 | \$ | 0.123 | \$ | 0.115 | \$ | 0.112 |
| Euro/US\$ average | \$ | 1.175 | \$ | 1.178 | \$ | 1.229 | \$ | 1.191 | \$ | 1.163 |

## INDEX



## MARKET TECHNOLOGY

$\square$ Total Order Value $\longrightarrow$ New Order Intake


|  | 3Q17 | 4Q17 | 1Q18 | 2 Q 18 | 3Q18 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| New Order Intake | 57 | 100 | 45 | 64 | 40 |
| Total Order Value | 670 | 717 | 704 | 714 | 703 |
| Net Revenue | 62 | 71 | 60 | 66 | 68 |

## RECONCILIATIONS OF U.S. GAAP to NON-GAAP

## NON-GAAP ADJUSTMENTS

| (US\$ millions) | 3 Q18 | $2 \mathrm{Q18}$ | 1Q18 | 4Q17 | 3017 | 2017 | 2016 | 2015 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Amortization expense of acquired intangible assets ${ }^{(1)}$ | 27 | 28 | 28 | 25 | 22 | 92 | 82 | 62 |
| Merger and strategic initiatives ${ }^{(2)}$ | 6 | (10) | 10 | 24 | 3 | 44 | 76 | 10 |
| Restructuring charges ${ }^{(3)}$ | - | - | - | - | - | - | 41 | 172 |
| Asset impairment charge ${ }^{(4)}$ | - | - | - | - | - | - | 578 | - |
| Regulatory matter ${ }^{(5)}$ | - | - | - | - | - | 1 | 6 | - |
| Executive compensation ${ }^{(6)}$ | - | - | - | - | - | - | 12 | - |
| Sublease loss reserve ${ }^{(7)}$ | - | - | 2 | 2 | - | 2 | (1) | - |
| Reversal of value added tax refund ${ }^{(8)}$ | - | - | - | - | - | - | - | 12 |
| Extinguishment of debt ${ }^{(9)}$ | - | - | - | - | - | 10 | - | - |
| Net gain on divestiture of businesses ${ }^{(10)}$ | 8 | (41) | - | - | - | - | - | - |
| Clearing default loss ${ }^{(11)}$ | 8 | - | - | - | - | - | - | - |
| Other ${ }^{(12)}$ | 2 | 3 | - | - | 1 | 2 | 6 | - |
| Income from OCC equity investment ${ }^{(13)}$ | - | - | - | - | - | - | - | (13) |
| Total Non-GAAP adjustments | 51 | (20) | 40 | 51 | 26 | 151 | 800 | 243 |
| Non-GAAP adjustment to the income tax benefit (provision) ${ }^{(14)}$ | (21) | 56 | (8) | (120) | (24) | (199) | (287) | (90) |
| Total Non-GAAP Adjustments, net of tax | 30 | 36 | 32 | (69) | 2 | (48) | 513 | 153 |

## NON-GAAP ADJUSTMENTS FOOTNOTES

(1) Refer to the non-GAAP disclaimer information section for further discussion of why we consider amortization expense of acquired intangible assets and other items to be non-GAAP adjustments.
(2) For the three months ended September 30, 2018, merger and strategic initiatives expense relates to costs associated with the divestiture of the Public Relations Solutions and Digital Media Services businesses within our Corporate Solutions business and other strategic initiatives. For the three months ended June 30, 2018, the credit in merger and strategic initiatives expense relates to the reclass of transaction related costs incurred during the first quarter of 2018 to sell the Public Relations Solutions and Digital Media Services businesses. Since these businesses were sold during the second quarter of 2018, these transaction related costs have been included as a reduction to the gain on the sale of these businesses. For the three months ended March 31, 2018, this expense is primarily related to the sale of our Public Relations Solutions and Digital Media Services businesses within our Corporate Solutions business. For the three months and year ended December 31, 2017 and for the three months ended September 30, 2017, this expense is primarily related to our acquisitions of eVestment, Inc. and International Securities Exchange, or ISE, as well as costs associated with the sale of our Public Relations and Digital Media businesses within our Corporate Solutions business. For the year ended December 31, 2015, this expense primarily related to certain strategic initiatives and our acquisition of Dorsey, Wright \& Associates, LLC. Refer to the non-GAAP disclaimer of this earnings presentation for further discussion on why we consider merger and strategic initiatives expense to be a non-GAAP adjustment.
(3) During 2016, we completed our 2015 restructuring plan. For the years ended December 31, 2016 and December 31, 2015, restructuring charges primarily related to severance and other termination benefits, asset impairment charges, and other charges.
(4) For the year ended December 31, 2016, we recorded a pre-tax, non-cash intangible asset impairment charge of $\$ 578$ million related to the full write-off of the eSpeed trade name due to a continued decline in operating performance of the eSpeed business during 2016 and a rebranding of our Fixed Income business.
(5) During 2016, the Swedish Financial Supervisory Authority, or SFSA, completed their investigations of cybersecurity processes at our Nordic exchanges and clearinghouse. In December 2016, we were issued a $\$ 6$ million fine by the SFSA as a result of findings in connection with its investigation. The SFSA's conclusions related to governance issues rather than systems and platform security. We have appealed the SFSA's decision, including the amount of the fine. The court has not yet reached a decision regarding our appeal. This charge is included in regulatory expense in the Condensed Consolidated Statements of Income (Loss) for the three months and year ended December $31,2016$.
(6) For the year ended December 31, 2016, we recorded $\$ 12$ million in accelerated expense due to the retirement of the company's former CEO for equity awards previously granted.
(7) For the three months ended March 31, 2018 we established a sublease loss reserve on space we currently occupy due to excess capacity. For both the three months and year ended December 31, 2017, we established a sublease loss reserve on space we currently occupy due to excess capacity. The credit of \$1 million for the year ended December 31, 2016, pertains to the release of a previously recorded sublease loss reserve due to the early exit of a facility, partially offset by a sublease loss reserve charge recorded on space we currently occupy due to excess capacity.
(8) We previously recorded receivables for expected value added tax, or VAT, refunds based on an approach that had been accepted by the tax authorities in prior years. The tax authorities have since challenged our approach, and the revised position of the tax authorities was upheld in court during the first quarter of 2015 . As a result, in the first quarter of 2015, we recorded a charge of $\$ 12$ million for previously recorded receivables based on the court decision.

## NON-GAAP ADJUSTMENTS FOOTNOTES

(9) For the year ended December 31, 2017, in connection with the early extinguishment of our $5.25 \%$ senior unsecured notes and the $\$ 300$ million repayment on our $\$ 400$ million senior unsecured term loan facility due November 25,2019 , we recorded a charge of $\$ 10$ million primarily related to a premium paid for early redemption.
(10) In April 2018, we completed the sale of the Public Relations Solutions and Digital Media Services businesses. In the second quarter of 2018, we recognized a pre-tax gain on the sale of $\$ 41$ million ( $\$ 19$ million after tax) net of certain transaction related costs recognized during the first half of 2018 . For the three months ended September 30 2018, we recorded an $\$ 8$ million post-closing working capital adjustment
(11) For the three months ended September 30, 2018, we recorded an $\$ 8$ million loss associated with the default of a Nasdaq Clearing member.
(12) For the three months ended September 30, 2018, other charges primarily relates to litigation costs related to certain legal matters. For the three months ended June 30 , 2018 , other relates to a charge associated with a sales \& use tax audit, which related to prior periods. For the year ended December 31, 2017, other charge relates to wind down costs associated with an equity method investment that was previously written off, which is included in net income (loss) from unconsolidated investees in the Condensed Consolidated Statements of Income (Loss). For the year ended December 31, 2016, other charges primarily include the impact of the write-off of an equity method investment, partially offset by a gain resulting from the sale of a percentage of a separate equity method investment. We recorded the net loss in net income (loss) from unconsolidated investees in the Condensed Consolidated Statements of Income (Loss).
(13) We record our investment in The Options Clearing Corporation, or OCC, as an equity method investment. Under the equity method of accounting, we recognize our share of earnings or losses of an equity method investee based on our ownership percentage. As a result of a new capital plan implemented by OCC, we were not able to determine what our share of OCC's income was for the year ended December 31, 2014 until the first quarter of 2015, when OCC financial statements were made available to us. Therefore, we recorded other income of $\$ 13$ million in the first quarter of 2015 relating to our share of OCC's income for the year ended December 31 , 2014
(14) The non-GAAP adjustment to the income tax provision primarily includes the tax impact of each non-GAAP adjustment. In addition, in some periods, the adjustment includes the recognition of previously unrecognized tax benefits associated with positions taken in prior years. For the three months ended September 30, 2018, we recorded a decrease to tax expense of $\$ 4$ million, which reflects the remeasurement of certain deferred tax assets and liabilities associated with the impact of the Tax Cuts and Jobs Act. For the three months ended June 30, 2018, we recorded an increase to tax expense due to the Swedish Administrative Court of Appeal's unfavorable court rulings that were issued against other Swedish entities during the second quarter of 2018, the impact of which relates to prior quarters. The Tax Cuts \& Jobs Act, or TCJA, was enacted on December 22, 2017. For the three months ended March 31, 2018, we recorded an increase to tax expense of $\$ 5$ million, which reflects the reduced federal tax benefit associated with state unrecognized tax benefits. For the three months ended December 31, 2017, we recorded a decrease to tax expense of $\$ 89$ million, which reflected the estimated impact associated with the enactment of the TCJA. The decrease in tax expense primarily related to the remeasurement of our net U.S. deferred tax liability at the lower U.S. federal corporate income tax rate. The amounts referred to above may be refined in the future as new information becomes available. For the three months and year ended December 31, 2017, we recorded a decrease to tax expense of $\$ 6$ million, which reflects the impact of amending our assertion regarding the indefinite reinvestment of earnings of certain subsidiaries outside the U.S. In addition, the non-GAAP adjustment to the income tax provision reflects the recognition of previously unrecognized tax benefits associated with positions taken in prior years of $\$ 8$ million for the three months ended September 30, 2017 and $\$ 12$ million for the year ended December 31, 2017. Excess tax benefits related to employee share-based compensation of $\$ 5$ million for the three months ended March 31,2018 , $\$ 10$ million for the three months ended December 31, 2017, $\$ 7$ million for the three months ended September 30, 2017, and $\$ 40$ million for the year ended December 31, 2017 were recorded as a result of the adoption of new accounting guidance on January 1, 2017. Refer to the non-GAAP disclaimer section for further discussion on why we consider excess tax benefits related to employee share-based compensation to be a non-GAAP adjustment. For the year ended December 31, 2016, we recorded a $\$ 27$ million tax expense due to an unfavorable tax ruling received during the second quarter of 2016, the impact of which is related to prior periods

## RECONCILIATION OF U.S. GAAP to NON-GAAP: OPERATING EXPENSES, OPERATING INCOME, NET INCOME AND DILUTED EARNINGS PER COMMON SHARE

| (US\$ millions, except per share) | 3Q18 | 2Q18 | 3Q17 | 2017 | 2016 | 2015 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| U.S. GAAP operating expenses: | \$354 | \$346 | \$341 | \$1,420 | \$1,440 | \$1,370 |
| Total Non-GAAP adjustments: | (43) | (21) | (26) | (149) | (216) | (256) |
| Non-GAAP operating expenses: | \$311 | \$325 | \$315 | \$1,271 | \$1,224 | \$1,114 |
| U.S. GAAP operating income: | \$246 | \$269 | \$262 | \$991 | \$836 | \$720 |
| Total Non-GAAP adjustments: | 43 | 21 | 26 | 149 | 216 | 256 |
| Non-GAAP operating income: | \$289 | \$290 | \$288 | \$1,140 | \$1,052 | \$976 |
| Revenues less transaction based expenses | \$600 | \$615 | \$603 | \$2,411 | \$2,276 | \$2,090 |
| U.S.-GAAP operating margin ${ }^{(1)}$ | 41\% | 44\% | 43\% | 41\% | 37\% | 34\% |
| Non-GAAP operating margin ${ }^{(2)}$ | 48\% | 47\% | 48\% | 47\% | 46\% | 47\% |
| U.S. GAAP net income attributable to Nasdaq: | \$163 | \$162 | \$170 | \$729 | \$106 | \$428 |
| Total Non-GAAP Adjustments, net of tax: | 30 | 36 | 2 | (48) | 513 | 153 |
| Non-GAAP net income attributable to Nasdaq: | \$193 | \$198 | \$172 | \$681 | \$619 | \$581 |
| U.S. GAAP diluted earnings per share: | \$0.97 | \$0.97 | \$1.00 | \$4.30 | \$0.63 | \$2.50 |
| Total adjustments from non-GAAP net income above: | 0.18 | 0.21 | 0.01 | (0.28) | 3.04 | 0.89 |
| Non-GAAP diluted earnings per share: | \$1.15 | \$1.18 | \$1.01 | \$4.02 | \$3.67 | \$3.39 |

1. U.S. GAAP operating margin equals U.S. GAAP operating income divided by total revenues less transaction-based expenses.
2. Non-GAAP operating margin equals non-GAAP operating income divided by total revenues less transaction-based expenses.

## NON-TRADING SEGMENTS ORGANIC REVENUE GROWTH

| Non-Trading Segments |  |  | Total Variance |  | Organic Impact |  | Other Impact ${ }^{(1)}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| All figures in US\$ Millions | Current Period | Prior-year Period | \$ | \% | \$ | \% | \$ | \% |
| 3Q18 ${ }^{2}$ | 378 | 338 | 40 | 12\% | 21 | 6\% | 19 | $6 \%$ |
| 2Q18 ${ }^{2}$ | 372 | 324 | 48 | 15\% | 27 | 8\% | 21 | $6 \%$ |
| 1Q18 | 416 | 363 | 53 | 15\% | 30 | 8\% | 23 | $6 \%$ |
| 4Q17 | 408 | 373 | 35 | 9\% | 20 | 5\% | 15 | $4 \%$ |
| 2018 YTD ${ }^{2}$ | 1,117 | 978 | 139 | 14\% | 79 | 8\% | 60 | $6 \%$ |
| 2017 | 1,530 | 1,449 | 81 | 6\% | 59 | 4\% | 22 | $2 \%$ |
| 2016 | 1,449 | 1,319 | 130 | 10\% | 53 | 4\% | 77 | 6 \% |
| 2015 | 1,319 | 1,271 | 48 | 4\% | 70 | 6\% | (22) | (2)\% |
| 2014 | 1,271 | 1,139 | 132 | 12\% | 46 | 4\% | 86 | 8 \% |
| 2013 | 1,139 | 937 | 202 | 22\% | 59 | 6\% | 143 | 15 \% |

1. Other impact includes acquisitions, divestitures, and changes in FX rates.
2. Reflects the impact of our divestiture of the Public Relations Solutions and Digital Media Services businesses.

## MARKET SERVICES ORGANIC REVENUE GROWTH

| Market Services Segment |  |  | Total Variance |  | Organic Impact |  | Other Impact ${ }^{(1)}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| All figures in US\$ Mrllions | Current Period | Prior-year Period | \$ | \% | \$ | \% | \$ | \% |
| 3Q18 | 222 | 219 | 3 | 1 \% | 7 | 3 \% | (4) | (2)\% |
| 2Q18 | 237 | 222 | 15 | 7 \% | 13 | 6 \% | 2 | 1 \% |
| 1Q18 | 250 | 218 | 32 | 15 \% | 25 | 11 \% | 7 | $3 \%$ |
| 4Q17 | 222 | 220 | 2 | 1 \% | (3) | (1)\% | 5 | $2 \%$ |
| 2018 YTD | 709 | 659 | 50 | 8 \% | 44 | 7 \% | 6 | 1 \% |
| 2017 | 881 | 827 | 54 | 7 \% | (7) | (1)\% | 61 | 7 \% |
| 2016 | 827 | 771 | 56 | 7 \% | (13) | (2)\% | 69 | $9 \%$ |
| 2015 | 771 | 796 | (25) | (3)\% | 23 | $3 \%$ | (48) | (6)\% |
| 2014 | 796 | 756 | 40 | 5 \% | 21 | 2 \% | 19 | $3 \%$ |
| 2013 | 756 | 737 | 19 | $3 \%$ | (24) | (3)\% | 43 | $6 \%$ |

1. Other impacts includes acquisitions, divestitures and changes in FX rates.

## EBITDA: EARNINGS BEFORE INTEREST, TAXES, DEPRECIATION AND AMORTIZATION

| (US\$ millions) | TTM | 3Q18 | 2Q18 | 1Q18 | 4Q17 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GAAP net income attributable to Nasdaq: | \$748 | \$163 | \$162 | \$177 | \$246 |
| Income tax provision | 199 | 46 | 126 | 62 | (35) |
| Net income from unconsolidated investees | (18) | (6) | (5) | (2) | (5) |
| Other investment income | (8) | - | (8) | - | - |
| Net gain on the sale of businesses | (33) | 8 | (41) | - | - |
| Net interest expense | 140 | 35 | 35 | 36 | 34 |
| GAAP operating income: | \$1,028 | \$246 | \$269 | \$273 | \$240 |
| Non-GAAP Adjustments ${ }^{(1)}$ | 155 | 43 | 21 | 40 | 51 |
| Non-GAAP operating income: | \$1,183 | \$289 | \$290 | \$313 | \$291 |
| Depreciation and amortization of tangibles (Nasdaq) | 99 | 26 | 25 | 24 | 24 |
| EBITDA of eVestment pre-acquisition, and Public Relations Solutions and Digital Media Services business pre-divestiture | (28) | - | - | (15) | (13) |
| EBITDA: | \$1,254 | \$315 | \$315 | \$322 | \$302 |

1. Please see slide 24 for reconciliation of GAAP operating income to non-GAAP operating income.

## TAX RATE: RECONCILIATION OF GAAP EFFECTIVE TAX RATE TO NON-GAAP EFFECTIVE TAX RATE

|  | Three Months Ended Sep 30, 2018 |  |  |
| :---: | :---: | :---: | :---: |
| (US\$ millions, except effective tax rate) | U.S. GAAP | Non-GAAP Adjustments ${ }^{(1)}$ | Non-GAAP |
| Income before income taxes | \$209 | \$51 | \$260 |
| Income tax provision | 46 | 21 | 67 |
| Net Income | \$163 | \$30 | \$193 |
| Effective tax rate | 22\% | 41\% | 26\% |

[^1]
## DISCLAIMERS

## Non-GAAP Information

In addition to disclosing results determined in accordance with U.S. GAAP, Nasdaq also discloses certain non-GAAP results of operations, including, but not limited to, net income attributable to Nasdaq, diluted earnings per share, operating income, and operating expenses, that include certain adjustments or exclude certain charges and gains that are described in the reconciliation table of U.S. GAAP to non-GAAP information provided at the end of this release. Management uses this non-GAAP information internally, along with U.S. GAAP information, in evaluating our performance and in making financial and operational decisions. We believe our presentation of these measures provides investors with greater transparency and supplemental data relating to our financial condition and results of operations. In addition, we believe the presentation of these measures is useful to investors for period-to-period comparisons of results as the items described below do not reflect ongoing operating performance.

These measures are not in accordance with, or an alternative to, U.S. GAAP, and may be different from non-GAAP measures used by other companies. Investors should not rely on any single financial measure when evaluating our business. We recommend investors review the U.S. GAAP financial measures included in this earnings release. When viewed in conjunction with our U.S. GAAP results and the accompanying reconciliations, we believe these non-GAAP measures provide greater transparency and a more complete understanding of factors affecting our business than U.S. GAAP measures alone.

We understand that analysts and investors regularly rely on non-GAAP financial measures, such as non-GAAP net income attributable to Nasdaq, non-GAAP diluted earnings per share, non-GAAP operating income and non-GAAP operating expenses to assess operating performance. We use these measures because they highlight trends more clearly in our business that may not otherwise be apparent when relying solely on U.S. GAAP financial measures, since these measures eliminate from our results specific financial items, such as those described below, that have less bearing on our ongoing operating performance.

Amortization expense of acquired intangible assets: We amortize intangible assets acquired in connection with various acquisitions. Intangible asset amortization expense can vary from period to period due to episodic acquisitions completed, rather than from our ongoing business operations. As such, if intangible asset amortization is included in performance measures, it is more difficult to assess the day-to-day operating performance of the businesses, the relative operating performance of the businesses between periods, and the earnings power of Nasdaq. Management does not consider intangible asset amortization expense for the purpose of evaluating the performance of our business or its managers or when making decisions to allocate resources. Therefore, we believe performance measures excluding intangible asset amortization expense provide investors with a more useful representation of our businesses' ongoing activity in each period.

Merger and strategic initiatives expense: We have pursued various strategic initiatives, completed a divestiture, and a number of acquisitions in recent years which have resulted in expenses which would not have otherwise been incurred. These expenses generally include integration costs, as well as legal, due diligence and other third party transaction costs. The frequency and the amount of such expenses vary significantly based on the size, timing and complexity of the transaction. Accordingly, we exclude these costs for purposes of calculating non-GAAP measures which provide a more meaningful analysis of Nasdaq's ongoing operating performance or comparisons in Nasdaq's performance between periods.

## DISCLAIMERS

## Non-GAAP Information (cont.)

Other significant items: We have excluded certain other charges or gains, including certain tax items, that are the result of other non-comparable events to measure operating performance. We believe the exclusion of such amounts allows management and investors to better understand the ongoing financial results of Nasdaq. For the three months ended June 30, 2018 and September 30, 2018, other significant items included the net gain on divestiture of businesses, which pertains to the sale of the Public Relations Solutions and Digital Media Services businesses. For the three months ended June 30, 2018, we recognized a pre-tax net gain on the sale of $\$ 41$ million and during the three months ended September 30, 2018, we recorded a post-closing working capital adjustment of $\$ 8$ million. For the three months ended September 30, 2018, other significant items included a loss associated with the default of a Nasdaq Clearing member, and litigation costs related to certain legal matters. For the three months ended June 30, 2018, other significant items included a charge associated with a sales and use tax audit which relates to prior periods.

Significant tax items: The adjustment to the income tax provision includes the tax impact of each non-GAAP adjustment. In addition, for the three months ended September 30, 2017, the adjustment includes an $\$ 8$ million recognition of previously unrecognized tax benefits associated with positions taken in prior years is included. Additional adjustments include the following items:

- For the three months ended June 30, 2018, we recorded a reversal of previously recognized Swedish tax benefits, due to unfavorable court rulings received by other Swedish entities during the three months ended June 30, 2018, the impact of which relates to prior periods.
- The impact of the newly enacted U.S. tax legislation is related to the Tax Cuts and Jobs Act which was enacted on December 22, 2017. For the three months ended September 30, 2018, we recorded a decrease to tax expense of $\$ 4$ million, which reflects the remeasurement of certain deferred tax assets and liabilities as of September 30, 2018.
- For the three months ended September 30, 2017, we recorded excess tax benefits of $\$ 7$ million related to employee share-based compensation which reflects the recognition of income tax effects of share-based awards when awards vest or are settled. This item is subject to volatility and will vary based on the timing of the vesting of employee share-based compensation arrangements and fluctuation in our stock price.

Foreign exchange impact: In countries with currencies other than the U.S. dollar, revenues and expenses are translated using monthly average exchange rates. Certain discussions in this release isolate the impact of year-over-year foreign currency fluctuations to better measure the comparability of operating results between periods. Operating results excluding the impact of foreign currency fluctuations are calculated by translating the current period's results by the prior period's exchange rates.

## DISCLAIMERS

## Non-GAAP Information (cont.)

## Cautionary Note Regarding Forward-Looking Statements

Information set forth in this communication contains forward-looking statements that involve a number of risks and uncertainties. Nasdaq cautions readers that any forward-looking information is not a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking information. Such forward-looking statements include, but are not limited to (i) projections relating to our future financial results, total shareholder returns, growth, trading volumes, products and services, order backlog, taxes and achievement of synergy targets, (ii) statements about the closing or implementation dates and benefits of certain acquisitions and other strategic, restructuring, technology, de-leveraging and capital allocation initiatives, (iii) statements about our integrations of our recent acquisitions, (iv) statements relating to any litigation or regulatory or government investigation or action to which we are or could become a party, and (v) other statements that are not historical facts. Forward-looking statements involve a number of risks, uncertainties or other factors beyond Nasdaq's control. These factors include, but are not limited to, Nasdaq's ability to implement its strategic initiatives, economic, political and market conditions and fluctuations, government and industry regulation, interest rate risk, U.S. and global competition, and other factors detailed in Nasdaq's filings with the U.S. Securities and Exchange Commission, including its annual reports on Form 10-K and quarterly reports on Form 10-Q which are available on Nasdaq's investor relations website at http://ir.nasdaq.com and the SEC's website at www.sec.gov. Nasdaq undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

## Website Disclosure

Nasdaq intends to use its website, ir.nasdaq.com, as a means for disclosing material non-public information and for complying with SEC Regulation FD and other disclosure obligations. These disclosures will be included on Nasdaq's website under "Investor Relations."


[^0]:    ${ }^{1}$ Represents our Corporate Services, Information Services and Market Technology segments.
    ${ }^{2}$ Reflects the impact of the eVestment acquisition and the divestiture of our Public Relations Solutions and Digital Media Services businesses, net of costs previously allocated to the divested businesses that were not eliminated at the time of sale.

[^1]:    1. Please see slides 21-23 for details of non-GAAP adjustments and non-GAAP adjustment to the income tax provision.
