



2Q19 Earnings Presentation

July 24, 2019

NASDAQ 2Q19 HIGHLIGHTS

Driving Accelerating Growth, Creating Sustainable Value

Non-Trading Segments Organic Revenue Growth¹

2Q19:

+8% Y-o-Y

Market Technology Organic Revenue Growth¹

2Q19:

+9% Y-o-Y

Information Services Organic Revenue Growth¹

2Q19:

+11% Y-o-Y

Non-GAAP Operating Margin²

48% in 2Q19

versus

47% in 2Q18

Reduction In Leverage Ratio

2.7x Total Debt to
EBITDA³ at 6/30/19
versus 2.8x at 3/31/19

Capital Returned to Shareholders

\$200 Million YTD,
including \$50 Million
in share repurchases

¹Please refer to pages 14, 25 and 26 for a reconciliation of organic revenue growth.

²Please refer to the appendix for a reconciliation of U.S. GAAP to non-GAAP measures.

³See Appendix for EBITDA reconciliation.

2Q19 NON-GAAP SUMMARY⁽¹⁾

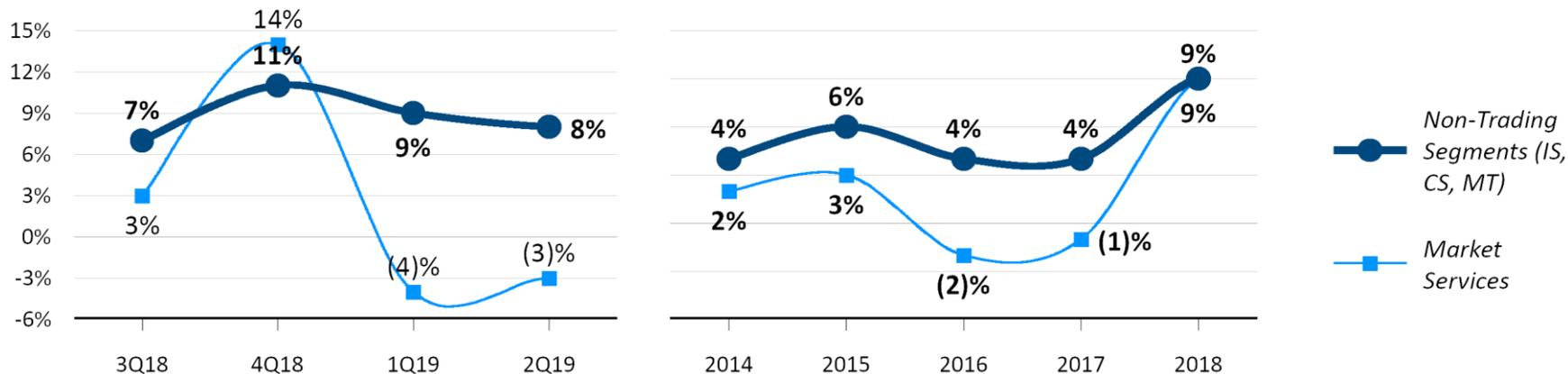
<i>(US\$ millions, except per share)</i>	2Q19	2Q18	% Δ
Revenue from non-trading segments ⁽²⁾	\$396	\$361	10%
Market Services Net Revenue ⁽³⁾	\$227	\$237	(4)%
Other Revenue	\$—	\$17	(100)%
Net Revenues⁽³⁾	\$623	\$615	1%
Operating Expenses	\$322	\$325	(1)%
Operating Income	\$301	\$290	4%
Operating Margin	48%	47%	—
Net Income	\$203	\$194	5%
Diluted EPS	\$1.22	\$1.16	5%
Diluted Shares Outstanding	167.0	167.4	—%

- 2Q19 net revenues⁽³⁾ totaled \$623 million.
- Revenues from non-trading segments⁽²⁾ increased 10%, or \$35 million y-o-y, with increases in Information Services, Market Technology and Corporate Services.
- Net revenues⁽³⁾ from Market Services decreased 4%, or \$10 million y-o-y.
- Other revenues declined \$17 million y-o-y, due to the divestiture of the Public Relations Solutions and Digital Media Services businesses in mid-April 2018 and the divestiture of Bwise in March 2019.

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⁾



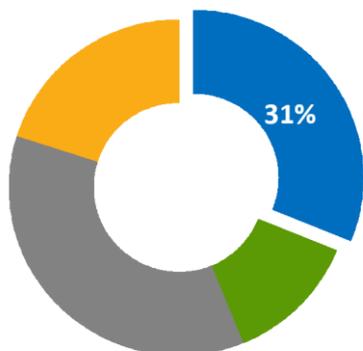
NASDAQ MEDIUM-TERM (3-5 YR) ORGANIC REVENUE GROWTH OUTLOOK

U.S. GDP ⁽²⁾	Information Services	Market Technology	Corporate Services	Non-Trading Segments (IS, CS, MT)
1.9% - 2.5%	5% - 7%	8% - 11%	3% - 5%	5% - 7%

1. Please refer to pages 14, 25 and 26 for a reconciliation of organic revenue growth.
2. U.S. GDP forecasts for 2019 and 2020 according to Consensus Economics Inc.

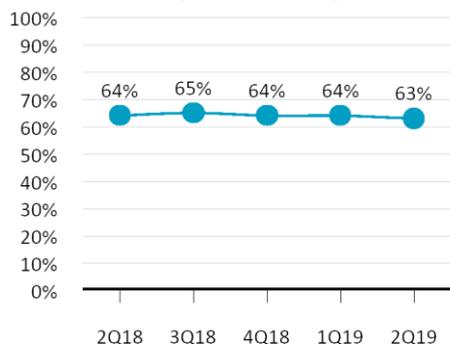
INFORMATION SERVICES

IS 2Q19
Net Revenue
Contribution



Information Services Performance Summary				
	2Q19	2Q18	% Δ	
Net Revenue	\$194M	\$175M	11%	<ul style="list-style-type: none"> • 2% increase in Market Data revenues: Primarily due to higher U.S. tape revenues.
Operating Income	\$122M	\$112M	9%	<ul style="list-style-type: none"> • 10% increase in Index revenues: Primarily driven by higher licensing revenue from futures trading linked to the Nasdaq 100 Index and higher average assets under management (AUM) in exchange traded products (ETPs) linked to Nasdaq indexes.
Operating Income Margin	63%	64%		<ul style="list-style-type: none"> • \$12 million increase in Investment Data & Analytics revenues: Due to increase in eVestment revenues resulting from an \$7 million purchase price adjustment on deferred revenue in the second quarter of 2018, as well as organic growth and the acquisition of Quandl.

Operating Income Margin ⁽¹⁾



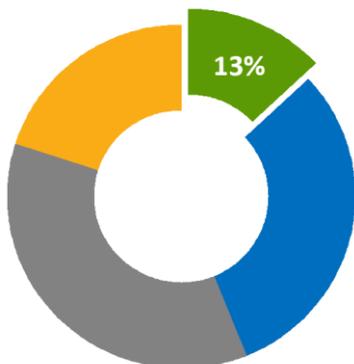
INFORMATION SERVICES NET REVENUES



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

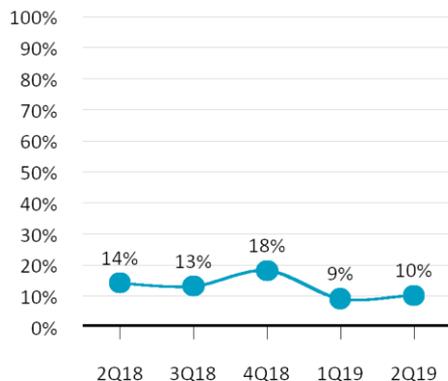
MT 2Q19
Net Revenue
Contribution



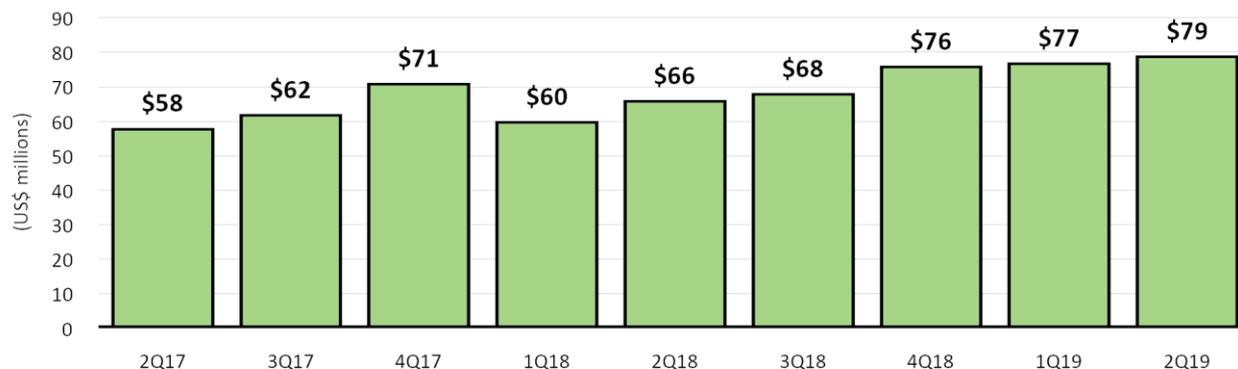
Market Technology Performance Summary			
	2Q19	2Q18	% Δ
Net Revenue	\$79M	\$66M	20%
Operating Income	\$8M	\$9M	(11)%
Operating Income Margin	10%	14%	

- **20% growth in Market Technology revenues:** Primarily due the impact of the Cinnober acquisition, an increase in the size and number of software delivery projects and an increase in SaaS surveillance revenues, partially offset by an unfavorable impact from foreign exchange rates.
- \$46 million new order intake in 2Q19, and \$247 million in annualized recurring revenue, or ARR, in the second quarter of 2019, an increase of 16% from the prior year period.
- The operating margin totaled 10%, down 4 percentage points y-o-y reflecting the impact of the acquisition of Cinnober, unfavorable changes in foreign exchange and the increase in the number of delivery projects.

Operating Income Margin

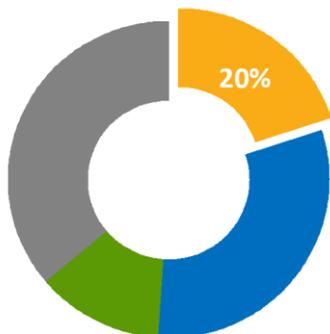


MARKET TECHNOLOGY NET REVENUES

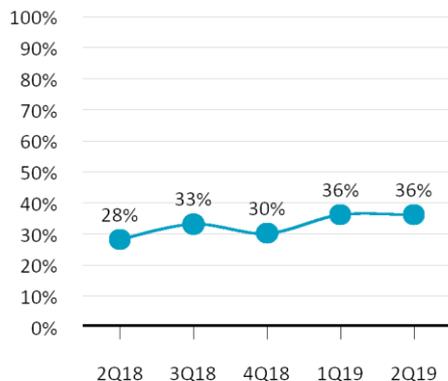


CORPORATE SERVICES

CS 2Q19
Net Revenue
Contribution



Operating Income Margin



Corporate Services Performance Summary

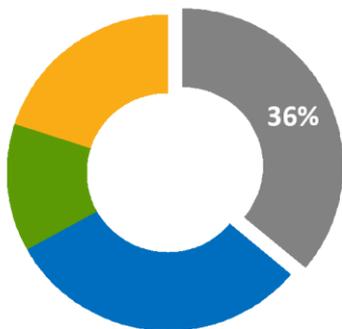
	2Q19	2Q18	% Δ	
Net Revenue	\$123M	\$120M	3%	<ul style="list-style-type: none"> ● 3% increase in Listing Services revenues: Reflecting higher listings revenues due to an increase in the number of listed companies, partially offset by the run-off of fees earned from listing of additional shares and an unfavorable impact from changes in foreign exchange rates of \$2 million. ● 2% increase Corporate Solutions revenues: Reflecting an increase in governance solutions revenues. ● 81 new U.S. listings including 60 IPOs in 2Q19, and a 75% U.S. IPO win rate. European new listings totaled 19 in 2Q19.
Operating Income	\$44M	\$34M	29%	
Operating Income Margin	36%	28%		

CORPORATE SERVICES NET REVENUES

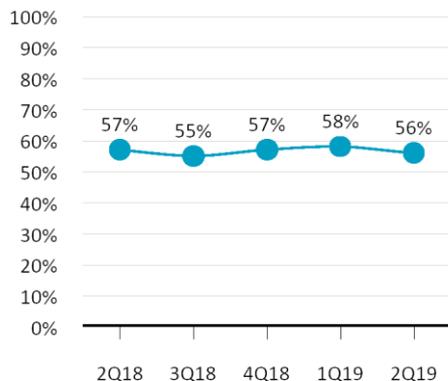


MARKET SERVICES

MS 2Q19
Net Revenue
Contribution



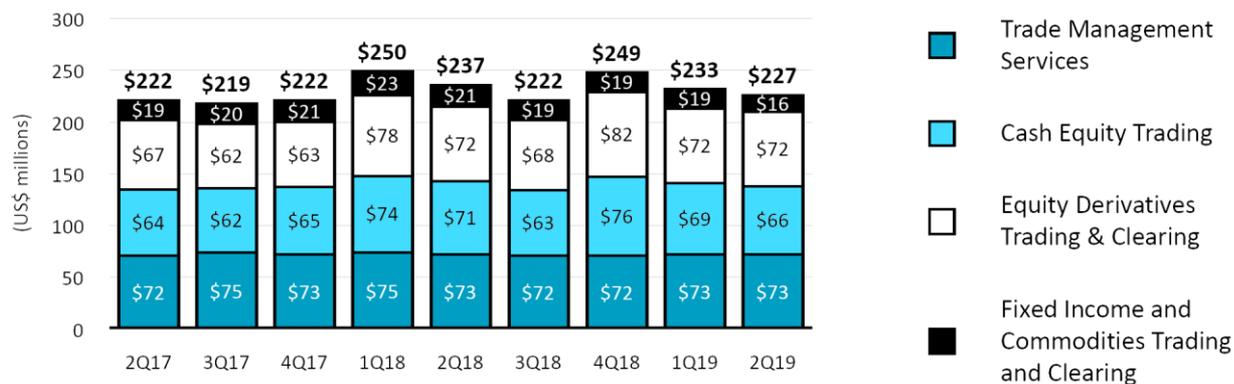
Operating Income Margin



Market Services Performance Summary

	2Q19	2Q18	% Δ	
Net Revenue	\$227M	\$237M	(4)%	<ul style="list-style-type: none"> • Unchanged Equity Derivative Trading and Clearing revenues. • 7% decrease in Cash Equity Trading revenues: Reflects a lower U.S. net capture rate compared to a particularly strong 2018 period partially offset by higher U.S. market share. In addition, in Europe, lower industry trading volumes and an unfavorable impact from changes in foreign exchange rates were partially offset by a higher European net capture rate • 24% decrease in Fixed Income and Commodities Trading and Clearing revenues: Primarily the result of a decline in revenues related to U.S. fixed income products due to lower market share and a decline in revenues in European commodities products due to lower volume. • Unchanged Trade Management Services revenues.
Operating Income	\$127M	\$134M	(5)%	
Operating Income Margin	56%	57%		

MARKET SERVICES NET REVENUES

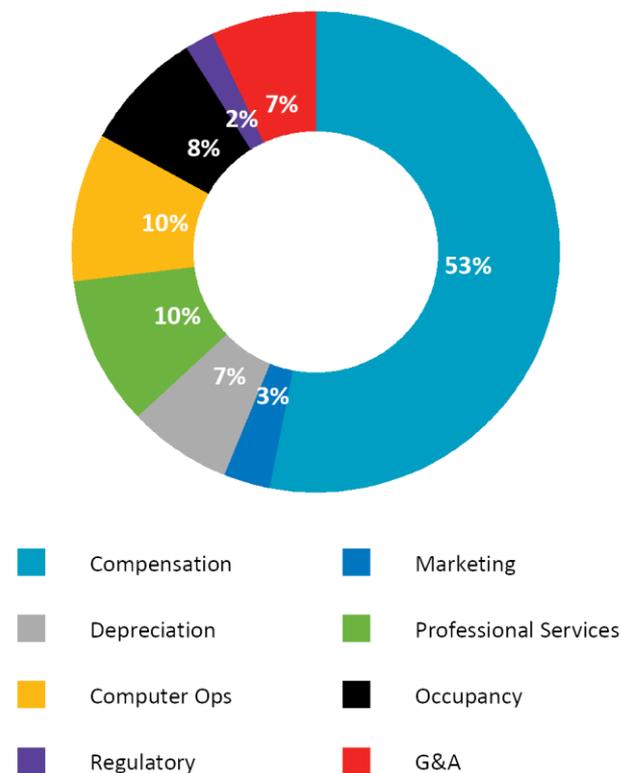


NON-GAAP OPERATING EXPENSES¹

(US\$ millions)

Total Non-GAAP operating expenses	2Q19	1Q19	2Q18
Compensation and benefits	169	175	173
Professional and contract services ⁽²⁾	33	32	34
Computer operations and data communications	33	33	30
Occupancy	24	24	23
General, admin. & other ⁽²⁾	23	19	22
Marketing and advertising	10	10	10
Depreciation and amortization ⁽²⁾	22	22	25
Regulatory	8	7	8
Total non-GAAP operating expenses	322	322	325

2Q19 EXPENSE CATEGORIES



1. Please refer to the appendix for reconciliation of U.S. GAAP to non-GAAP measures.

2. Depreciation and amortization expense in all periods were adjusted from GAAP expense. For 2Q19 and 1Q19, professional and contract services was adjusted. For 2Q18, general, administrative and other expense was adjusted. Refer to slides 21-23 for the amounts and details of the adjustments for all periods presented.

2019 NON-GAAP EXPENSE AND TAX GUIDANCE¹

*April 24, 2019
Guidance*

*July 24, 2019
Update*

Core Non-GAAP
Operating Expenses

\$1,205-\$1,235 Million

\$1,210-\$1,225 Million

R&D Expenses

\$85-\$95 Million

\$85-\$95 Million

**Total Non-GAAP
Operating Expenses**

\$1,290-\$1,330 Million

\$1,295-\$1,320 Million

Non-GAAP Tax Rate

26% - 27%

26% - 27%

¹U.S. GAAP operating expense and tax guidance is not provided due to the inherent difficulty in quantifying certain amounts due to a variety of factors including the unpredictability in the movement in foreign currency rates, as well as future charges or reversals outside of the normal course of business.

DEBT OVERVIEW

Debt Key Highlights

- 2Q19 debt decreased by \$78M vs. 1Q19 primarily due to paying down commercial paper offset by a \$28M increase in Euro bonds book values caused by a stronger Euro.
- 2Q19 Total debt to EBITDA declined to 2.7x compared to 2.8x in 1Q19, fulfilling the plan to de-lever to mid-2x leverage ratio by mid-2019.
- 2Q19 net interest expense was \$28M, \$7M lower than in 2Q18, primarily due to lower debt balances and refinancing the 5.55% \$600M bond with a new 1.75% €600M bond.

Leverage Ratios

Net Debt to EBITDA ⁽¹⁾ = 2.4x

Total Debt to EBITDA ⁽¹⁾ = 2.7x

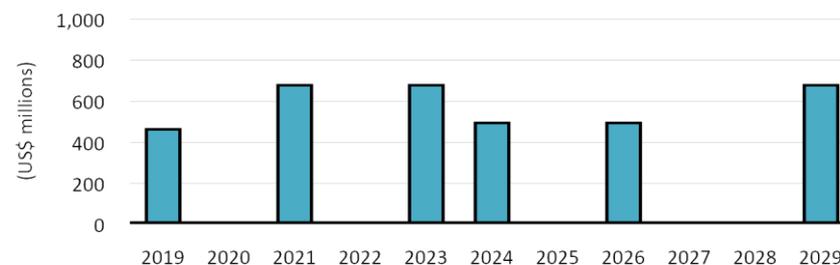
LTM EBITDA ⁽¹⁾ = \$1,304M

1. See Appendix for EBITDA reconciliation.
2. Includes debt issuance costs of \$3M at Jun 30, 2019 and \$3M at Mar 31, 2019
3. Excludes \$30M of restricted cash in 2Q19 and \$67M in 1Q19.

\$3.2B Net Debt

(US\$ millions)	6/30/2019	3/31/2019	Maturity Date
Commercial Paper	467	540	Various
Revolver (Libor + 117.5 bps) ⁽²⁾	(3)	(3)	Apr 2022
Term Loan (Libor + 150 bps)	—	100	Nov 2019
5.55% Bond	—	599	Jan 2020
3.88% Euro Bond	680	671	Jun 2021
1.75% Euro Bond	677	667	May 2023
4.25% Bond	497	497	Jun 2024
3.85% Bond	497	496	Jun 2026
1.75% Euro Bond	674	—	Mar 2029
Total Debt Obligations	\$3,489	\$3,567	
Less Cash and Cash Equivalents ⁽³⁾	(333)	(472)	
Net Debt	\$3,156	\$3,095	

Well Laddered Debt Maturities



APPENDIX

HISTORICAL CASH FLOW/ USES OF CASH FLOW

Free Cash Flow Calculation (US\$ millions)	2016	2017	2018	2019 YTD	2016-2019 YTD
Cash flow from operations ⁽¹⁾	\$776	\$909	\$1,028	\$523	\$3,236
Capital expenditure	(134)	(144)	(111)	(63)	(452)
Free cash flow	642	765	917	460	2,784
Section 31 fees, net ⁽²⁾	(4)	(9)	9	(48)	(52)
Free cash flow ex. Section 31 fees	\$638	\$756	\$926	\$412	\$2,732
Uses of cash flow					
Share repurchases	\$100	\$203	\$394	\$50	\$747
Net repayment/(borrowing) of debt	(1,300)	(411)	320	354	(1,037)
Acquisitions, net of dispositions and other	1,460	776	(380)	85	1,941
Dividends paid	200	243	280	150	873
Total uses of cash flow	\$460	\$811	\$614	\$639	\$2,524

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 \$1 million in 2016; \$11 million in 2017; \$(10) million in 2018; \$13 million in 2019 YTD; and \$15 million in 2016-2019 YTD.

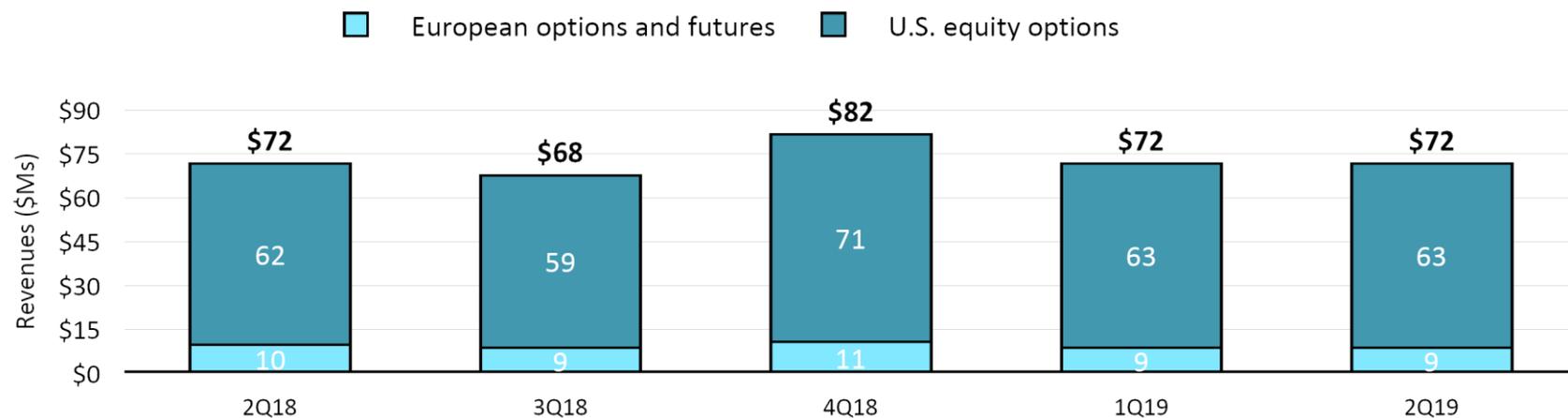
TOTAL VARIANCE NET IMPACTS: 2Q19

All figures in US\$ Millions	2Q19 actual	2Q18 actual	Total Variance		Organic Impact		Net Acquisition & Divestiture Impact ²		FX Impact (Prior Year Rates)	
			\$M	%	\$M	%	\$M	%	\$M	%
Market Services	\$227	\$237	(\$10)	(4)%	(\$6)	(3)%	\$—	—%	(\$4)	(2)%
Corporate Services	123	120	3	3%	5	4%	—	—%	(2)	(2)%
Information Services	194	175	19	11%	19	11%	1	1%	(1)	(1)%
Market Technology	79	66	13	20%	6	9%	10	15%	(3)	(5)%
Other	—	17	(17)	(100)%	—	—%	(17)	(100)%	—	—%
Total Non-trading Segment Revenue¹	396	361	35	10%	30	8%	11	3%	(6)	(2)%
Total Revenue less transaction expenses	623	615	8	1%	24	4%	(6)	(1)%	(10)	(2)%
Non-GAAP Operating Expenses	322	325	(3)	(1)%	7	2%	(2)	(1)%	(8)	(2)%
Non-GAAP Operating Income	301	290	11	4%	17	6%	(4)	(1)%	(2)	(1)%
Non-GAAP Operating Margin	48%	47%	—	—	—	—	—	—	—	—

¹Represents our Corporate Services, Information Services and Market Technology segments.

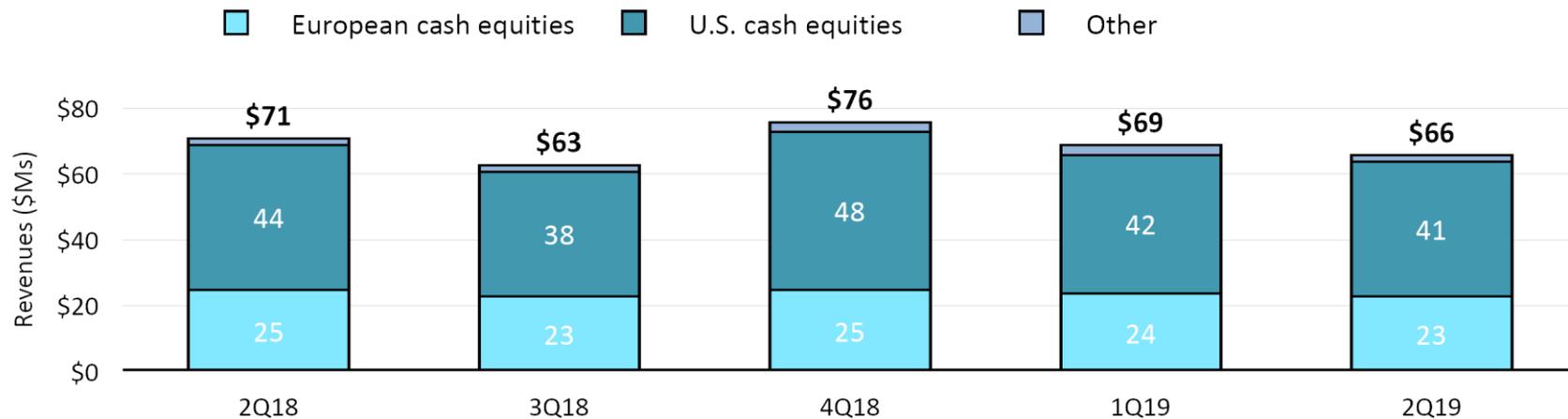
²Reflects the impact of the Cinnober and Quandl acquisitions, the divestiture of the Public Relations Solutions and Digital Media Services businesses in mid-April 2018, net of costs previously allocated to the divested businesses that were not eliminated at the time of sale, and the sale of the BWISE enterprise governance, risk and compliance software platform in March 2019.

EQUITY DERIVATIVE TRADING AND CLEARING



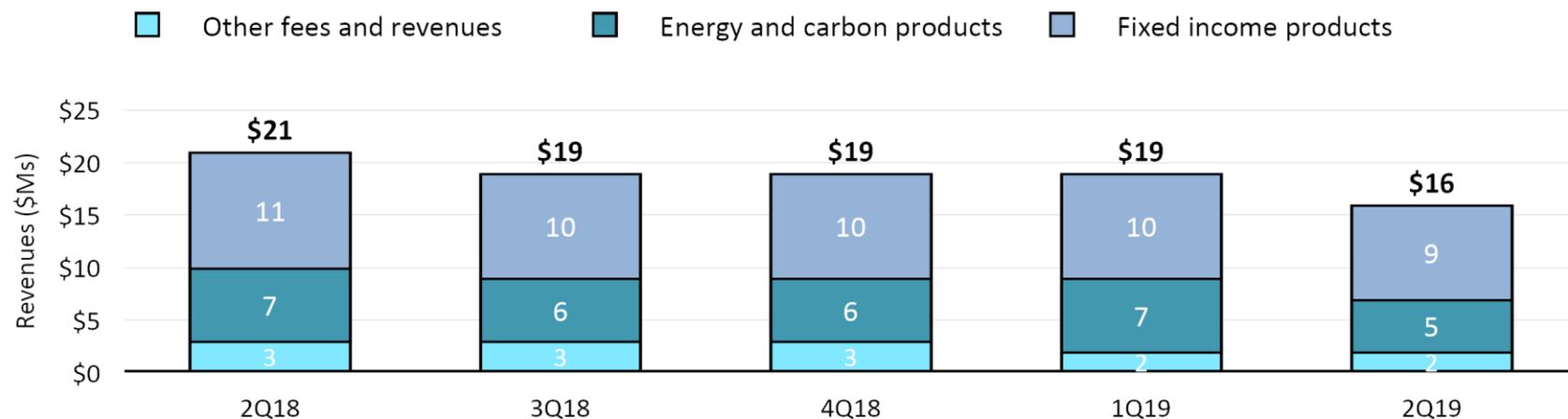
	2Q18	3Q18	4Q18	1Q19	2Q19
Net Revenues (US\$ in Millions)					
U.S. equity options	62	59	71	63	63
European options and futures	10	9	11	9	9
Equity Derivatives	72	68	82	72	72
Nasdaq Volumes					
U.S. equity options (millions of contracts)	417	407	482	406	420
European options and futures (millions of contracts)	21.9	18.1	22.6	22.4	22.7
Revenue Capture					
U.S. equity options (RPC)	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15
European options and futures (RPC)	\$ 0.44	\$ 0.48	\$ 0.49	\$ 0.42	\$ 0.40
<i>SEK/US\$ average</i>	\$ 0.115	\$ 0.112	\$ 0.111	\$ 0.109	\$ 0.106
<i>Euro/US\$ average</i>	\$ 1.191	\$ 1.163	\$ 1.141	\$ 1.136	\$ 1.124

CASH EQUITY TRADING



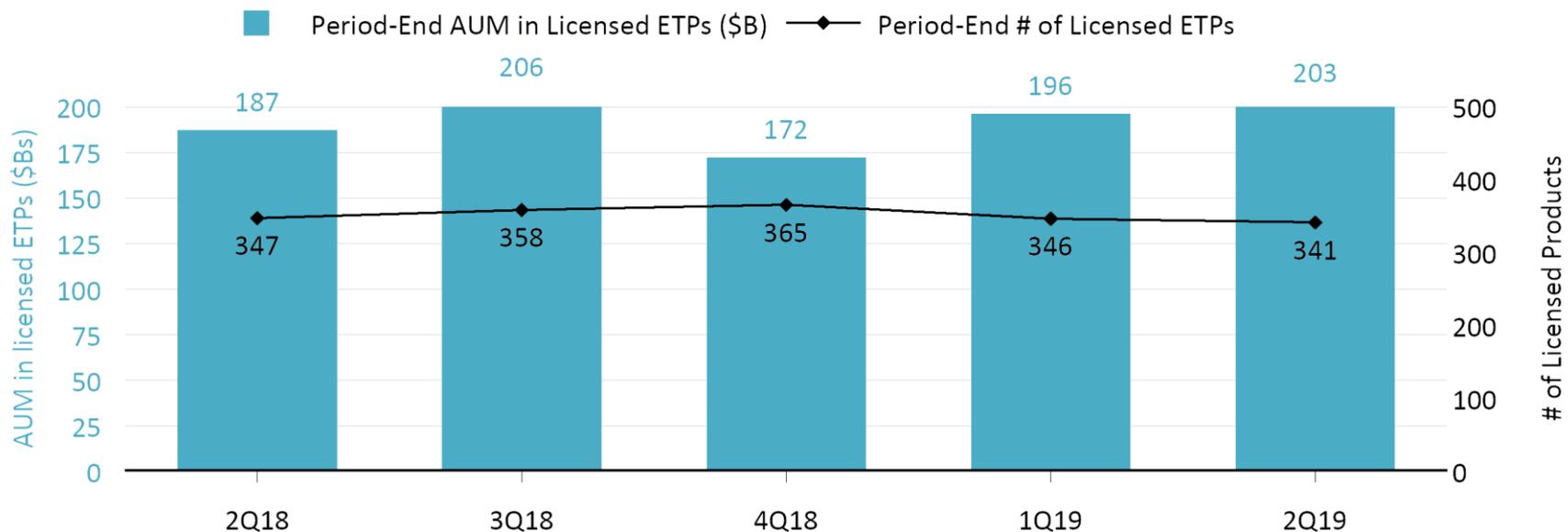
	2Q18	3Q18	4Q18	1Q19	2Q19
Net Revenues (US\$ in Millions)					
U.S. cash equities	44	38	48	42	41
European cash equities	25	23	25	24	23
Other	2	2	3	3	2
Cash Equity Trading	71	63	76	69	66
Nasdaq Volumes					
U.S. cash equities (billions of shares)	83.8	77.8	108.3	90.6	87.7
European cash equities value shares traded (\$B)	232	204	220	211	189
Revenue Capture					
U.S. cash equities revenue capture per 1000 shares	\$ 0.52	\$ 0.48	\$ 0.45	\$ 0.47	\$ 0.46
European cash equities revenue capture per \$1000 traded	\$ 0.11	\$ 0.12	\$ 0.11	\$ 0.11	\$ 0.12
<i>SEK/US\$ average</i>	\$ 0.115	\$ 0.112	\$ 0.111	\$ 0.109	\$ 0.106
<i>Euro/US\$ average</i>	\$ 1.191	\$ 1.163	\$ 1.141	\$ 1.136	\$ 1.124

FIXED INCOME AND COMMODITIES TRADING & CLEARING



	2Q18	3Q18	4Q18	1Q19	2Q19
Net Revenues (US\$ in Millions)					
Fixed income products	11	10	10	10	9
Energy and carbon products	7	6	6	7	5
Other fees and revenues	3	3	3	2	2
Fixed Income and Commodities Trading and Clearing	21	19	19	19	16
Nasdaq Volumes					
U.S. Fixed income trading volume (billions of \$ notional)	4,134	3,194	3,499	2,715	2,921
European Fixed income products (millions of contracts)	7.5	7.9	9.4	7.3	7.5
Energy trading and clearing (TWh)	451	404	303	367	254
Revenue Capture					
European Fixed Income (RPC)	\$ 0.58	\$ 0.48	\$ 0.42	\$ 0.61	\$ 0.51
Energy trading and clearing (\$1000 per TWh traded and cleared)	\$ 16.7	\$ 15.6	\$ 19.9	\$ 18.8	\$ 19.3
<i>SEK/US\$ average</i>	\$ 0.115	\$ 0.112	\$ 0.111	\$ 0.109	\$ 0.106
<i>Euro/US\$ average</i>	\$ 1.191	\$ 1.163	\$ 1.141	\$ 1.136	\$ 1.124

INDEX



	2Q18	3Q18	4Q18	1Q19	2Q19
Period-End # of Licensed ETPs	347	358	365	346	341
Period-End AUM in Licensed ETPs (\$B)	187	206	172	196	203
Index Revenues (\$M)	50	52	54	54	55

MARKET TECHNOLOGY



Annualized Recurring Revenue¹ (ARR)

- Annualized Recurring Revenue (ARR) is the total annualized revenue of active software support and SaaS subscription revenues.
- ARR represented 78% of Market Technology revenues in the second quarter of 2019.
- The company believes ARR is a better key performance metric to assess the trajectory of the business as it better captures the growth in SaaS revenues.
- ARR increased 16% in the second quarter of 2019 versus the prior year period.

	2Q18	3Q18	4Q18	1Q19	2Q19
New Order Intake (\$M)	64	40	74	54	46
Annualized Recurring Revenue¹ (\$M)	213	218	222	236	247
Net Revenue (\$M)	66	68	76	77	79

¹Annualized Recurring Revenue (ARR) for a given quarter is the annualized revenue of Market Technology support and SaaS subscription contracts. ARR is currently one of our key performance metrics to assess the health and trajectory of our business. ARR does not have any standardized definition and is therefore unlikely to be comparable to similarly titled measures presented by other companies. ARR should be viewed independently of revenue and deferred revenue and is not intended to be combined with or to replace either of those items. ARR is not a forecast and the active contracts during the reporting period used in calculating ARR may or may not be extended or renewed by our customers.

RECONCILIATIONS OF U.S. GAAP to NON-GAAP

NON-GAAP ADJUSTMENTS

<i>(US\$ millions)</i>	2Q19	1Q19	4Q18	3Q18	2Q18	2018	2017	2016
Amortization expense of acquired intangible assets ⁽¹⁾	\$ 26	\$ 26	\$ 26	\$ 27	\$ 28	\$ 109	\$ 92	\$ 82
Merger and strategic initiatives expense ⁽²⁾	5	9	14	6	(10)	21	44	76
Restructuring charges ⁽³⁾	—	—	—	—	—	—	—	41
Asset impairment charge ⁽⁴⁾	—	—	—	—	—	—	—	578
Regulatory matter ⁽⁵⁾	—	—	—	—	—	—	—	6
Executive compensation ⁽⁶⁾	—	—	—	—	—	—	—	12
Extinguishment of debt ⁽⁷⁾	11	—	—	—	—	—	10	—
Net gain on divestiture of businesses ⁽⁸⁾	—	(27)	—	8	(41)	(33)	—	—
Clearing default ⁽⁹⁾	—	—	23	8	—	31	—	—
Net income from unconsolidated investees ⁽¹⁰⁾	(9)	(45)	(5)	(5)	(4)	(16)	(13)	(1)
Other ⁽¹¹⁾	3	2	11	2	3	17	3	(1)
Gain on sale of investment security ⁽¹²⁾	—	—	(118)	—	—	(118)	—	—
Total Non-GAAP adjustments	36	(35)	(49)	46	(24)	11	136	793
Non-GAAP adjustment to the income tax (benefit) provision ⁽¹³⁾	(7)	(4)	15	(16)	15	6	(66)	(313)
Impact of enacted U.S. tax legislation ⁽¹⁴⁾	—	—	289	(4)	—	290	(89)	—
Excess tax benefits related to employee share-based compensation ⁽¹⁵⁾	—	(4)	(4)	—	—	(9)	(40)	—
Reversal of Swedish tax benefits ⁽¹⁶⁾	—	—	—	—	41	41	—	—
Reversal of Finnish tax benefits ⁽¹⁷⁾	—	—	—	—	—	—	—	27
Total Non-GAAP tax adjustments	(7)	(8)	300	(20)	56	328	(195)	(286)
Total Non-GAAP Adjustments, net of tax	\$ 29	\$ (43)	\$ 251	\$ 26	\$ 32	\$ 339	\$ (59)	\$ 507

Please see pages 22-23 for above footnotes

NON-GAAP ADJUSTMENTS FOOTNOTES

- (1) 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.
- (2) We have pursued various strategic initiatives and completed acquisitions and divestitures 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 and will vary based on the size and frequency of the activities described above. The credit balance in merger and strategic initiative expense in the second quarter of 2018 relates to the reclass of 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 costs have been included as a deduction to the gain on the sale of these businesses.
- (3) During 2016, we completed our 2015 restructuring plan. For the year ended December 31, 2016, 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 write-off of a trade name from an acquired business due to a continued decline in operating performance of the 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. This charge was recorded in regulatory expense in our Consolidated Statements of Income.
- (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. This charge was recorded in compensation and benefits expense in our Consolidated Statements of Income.
- (7) For the three months ended June 30, 2019 and the year ended December 31, 2017, primarily included a make-whole redemption price premium paid on the early extinguishment of outstanding debt. These charges are included in general, administrative and other expense in our Consolidated Statements of Income.
- (8) In March 2019, we completed the sale of the BWISE enterprise governance, risk and compliance software platform and recognized a pre-tax gain of \$27 million, net of disposal costs (\$20 million after tax). In April 2018, we completed the sale of the Public Relations Solutions and Digital Media Services businesses. For the year ended December 31, 2018 we recognized a pre-tax net gain of \$33 million which includes a pre-tax gain of \$41 million which was recorded during the six months ended June 30, 2018 and an \$8 million post-closing working capital adjustment recorded during the three months ended September 30, 2018.
- (9) For the year ended December 31, 2018, we recorded \$31 million in expenses related to the clearing default that occurred in September 2018. For the three months ended December 2018, we recorded a \$23 million charge associated with our capital relief program, where we will allocate capital back to default fund participants. The capital relief program is in addition to any funds to be recovered from the defaulting member. For the three months ended September 30, 2018, we recorded an \$8 million loss related to the default. These charges are recorded in general, administrative and other expense in our Condensed Consolidated Statements of Income.

NON-GAAP ADJUSTMENTS FOOTNOTES

(10) For all periods presented, net income from unconsolidated investees primarily includes income from our investment in OCC. In February 2019, the SEC disapproved the OCC rule change that established OCC's 2015 capital plan. Following the disapproval of the OCC capital plan, OCC suspended customer rebates and dividends to owners, including the unpaid dividend on 2018 results which Nasdaq expected to receive in March 2019. As a result, in March 2019, we recognized \$36 million of income relating to our share of OCC's net income for the year ended December 31, 2018 in addition to our share of OCC's first quarter 2019 net income of \$9 million. For all other periods presented the amount represents our share of OCC's quarterly net income. We will continue to exclude net income related to our share of OCC's earnings for purposes of calculating non-GAAP measures as our income on this investment will vary significantly compared to prior years. This will provide a more meaningful analysis of Nasdaq's ongoing operating performance or comparisons in Nasdaq's performance between periods.

(11) For the year ended December 31, 2018, other charges included litigation costs related to certain legal matters and are recorded in professional and contract services expense in our Consolidated Statements of Income. For the three months and year ended December 31, 2018, other charges also included certain charges related to uncertain positions pertaining to sales and use tax and VAT which are recorded in general, administrative and other expense in our Consolidated Statements of Income.

(12) In December 2018, we sold our 5.0% ownership interest in LCH Group Holdings Limited for \$169 million in cash. As a result of the sale, we recognized a pre-tax gain of \$118 million (\$93 million after tax).

(13) The non-GAAP adjustment to the income tax provision primarily includes the tax impact of each non-GAAP adjustment. In certain periods the adjustment may include the recognition of previously unrecognized tax benefits associated with positions taken in prior years and/or the impact of state tax rate changes. For the three months ended March 31, 2019, includes a tax benefit of \$10 million related to capital distributions from the OCC and a reversal of a previously accrued tax penalty in Finland. See footnote 10 above for further discussion of our OCC investment.

(14) We were required to remeasure all of our U.S. deferred tax assets and liabilities as of December 22, 2017 and record the impact of such remeasurement in our 2017 financial statements. The net effect of applying the provisions of the act on our 2017 Consolidated Statement of Income was a non-cash provisional tax benefit of \$89 million, substantially all of which reflects the estimated impact associated with the remeasurement of our net U.S. deferred tax liability at the lower U.S. federal corporate income tax rate. This guidance allowed us to record provisional amounts during a measurement period of up to one year from the enactment date to finalize the recording of any related tax impacts. During the fourth quarter of 2018, we completed our accounting for the tax effects of the act, finalizing our analysis of the act and subsequent guidance issued by the U.S. Internal Revenue Service. As a result, we recorded a \$290 million non-cash tax charge, reducing deferred tax assets relating to foreign currency translation.

(15) Excess tax benefits related to employee share-based compensation reflect the recognition of income tax effects of share-based awards when awards vest or are settled.

(16) For the three months ended June 30, 2018 and year ended December 31, 2018, we recorded a reversal of previously recognized Swedish tax benefits, due to unfavorable court rulings received by other Swedish entities during the year, the impact of which is related to prior periods.

(17) For the year ended December 31, 2016, we recorded a reversal of previously recognized Finnish tax benefits due to 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

<i>(US\$ millions, except per share)</i>	2Q19	1Q19	2Q18	2018	2017	2016
U.S. GAAP operating expenses:	\$367	\$359	\$346	\$1,498	\$1,420	\$1,440
Total Non-GAAP adjustments:	(45)	(37)	(21)	(178)	(149)	(216)
Non-GAAP operating expenses:	\$322	\$322	\$325	\$1,320	\$1,271	\$1,224
U.S. GAAP operating income:	\$256	\$275	\$269	\$1,028	\$991	\$836
Total Non-GAAP adjustments:	45	37	21	178	149	216
Non-GAAP operating income:	\$301	\$312	\$290	\$1,206	\$1,140	\$1,052
Revenues less transaction based expenses	\$623	\$634	\$615	\$2,526	\$2,411	\$2,276
U.S. GAAP operating margin ⁽¹⁾	41%	43%	44%	41%	41%	37%
Non-GAAP operating margin ⁽²⁾	48%	49%	47%	48%	47%	46%
U.S. GAAP net income attributable to Nasdaq:	\$174	\$247	\$162	\$458	\$729	\$106
Total Non-GAAP Adjustments, net of tax:	29	(43)	32	339	(59)	507
Non-GAAP net income attributable to Nasdaq:	\$203	\$204	\$194	\$797	\$670	\$613
U.S. GAAP diluted earnings per share:	\$1.04	\$1.48	\$0.97	\$2.73	\$4.30	\$0.63
Total adjustments from non-GAAP net income above:	0.18	(0.26)	0.19	2.02	(0.35)	3.00
Non-GAAP diluted earnings per share:	\$1.22	\$1.22	\$1.16	\$4.75	\$3.95	\$3.63

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

<u>Non-Trading Segments</u>			Total Variance		Organic Impact		Other Impact ⁽¹⁾	
<i>All figures in US\$ Millions</i>	Current Period	Prior-year Period	\$	%	\$	%	\$	%
2Q19 ²	\$396	\$361	35	10%	30	8%	5	1%
1Q19 ²	391	356	35	10%	32	9%	3	1%
4Q18 ²	386	346	40	12%	38	11%	2	1%
3Q18 ²	368	327	41	13%	22	7%	19	6%
2018 ²	\$1,471	\$1,294	177	14%	115	9%	62	5%
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%

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

2. Revenues from the BWISE enterprise governance, risk and compliance software platform which was sold in March 2019 and the Public Relations Solutions and Digital Media Services businesses which were sold in mid-April 2018 are included in Other Revenues for these periods and therefore not reflected above.

MARKET SERVICES ORGANIC REVENUE GROWTH

<u>Market Services Segment</u>			Total Variance		Organic Impact		Other Impact ⁽¹⁾	
<i>All figures in US\$ Millions</i>	Current Period	Prior-year Period	\$	%	\$	%	\$	%
2Q19	\$227	\$237	(10)	(4)%	(6)	(3)%	(4)	(2)%
1Q19	233	250	(17)	(7)%	(10)	(4)%	(7)	(3)%
4Q18	249	222	27	12%	31	14%	(4)	(2)%
3Q18	222	219	3	1%	7	3%	(4)	(2)%
2018	\$958	\$881	77	9%	75	9%	2	—%
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%

1. Other impact includes changes in FX rates.

EBITDA: EARNINGS BEFORE INTEREST, TAXES, DEPRECIATION AND AMORTIZATION

<i>(US\$ millions)</i>	TTM	2Q19	1Q19	4Q18	3Q18
U.S. GAAP net income (loss) attributable to Nasdaq:	\$540	\$174	\$247	(\$44)	\$163
Income tax provision	549	65	66	372	46
Net income from unconsolidated investees	(65)	(10)	(45)	(4)	(6)
Other investment income	(1)	(1)	—	—	—
Net gain on the sale of businesses	(19)	—	(27)	—	8
Gain on sale of investment security	(118)	—	—	(118)	—
Net interest expense	132	28	34	35	35
U.S. GAAP operating income:	\$1,018	\$256	\$275	\$241	\$246
Non-GAAP Adjustments ⁽¹⁾	199	45	37	74	43
Non-GAAP operating income:	\$1,217	\$301	\$312	\$315	\$289
Depreciation and amortization of tangibles (Nasdaq)	95	22	22	25	26
EBITDA of BWISE and Public Relations Solutions and Digital Media Services business pre-divestiture; and Cinnober and Quandl pre-acquisition	(8)	—	—	(5)	(3)
EBITDA pro forma for acquisitions and divestitures:	\$1,304	\$323	\$334	\$335	\$312

1. Please see slides 21-23 for reconciliation of U.S. GAAP operating income to non-GAAP operating income.

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

<i>(US\$ millions, except effective tax rate)</i>	Three Months Ended Jun 30, 2019		
	U.S. GAAP	Non-GAAP Adjustments ⁽¹⁾	Non-GAAP
Income before income taxes	\$239	\$36	\$275
Income tax provision	65	7	72
Net Income	\$174	\$29	\$203
Effective tax rate	27%	19%	26%

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

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. In addition, other companies, including companies in our industry, may calculate such measures differently, which reduces their usefulness as a comparative measure. Investors should not rely on any single financial measure when evaluating our business. This information should be considered as supplemental in nature and is not meant as a substitute for our operating results in accordance with U.S. GAAP. 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.

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.

Adopted accounting standards

ASU 2016-09: "Compensation —Stock Compensation (Topic 718)"

ASU 2016-15: "Statement of Cash flows (Topic 230): Classification Of Certain Cash Receipts and Cash Payments"

ASU 2016-18: "Statement of Cash flows (Topic 230): Restricted Cash"

DISCLAIMERS

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.

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