



3Q19 Earnings Presentation

October 23, 2019

NASDAQ 3Q19 HIGHLIGHTS

Driving Accelerating Growth, Creating Sustainable Value

Non-Trading Segments Organic Revenue Growth¹

3Q19:

+8% Y-o-Y

Market Technology Organic Revenue Growth¹

3Q19:

+9% Y-o-Y

Information Services Organic Revenue Growth¹

3Q19:

+11% Y-o-Y

Non-GAAP Operating Margin²

50% in 3Q19

versus

48% in 3Q18

Reduction In Leverage Ratio

2.6x Total Debt to
EBITDA³ at 9/30/19
versus 2.7x at 6/30/19

Capital Returned to Shareholders

\$428 Million YTD,
including \$200 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.

3Q19 NON-GAAP SUMMARY⁽¹⁾

<i>(US\$ millions, except per share)</i>	3Q19	3Q18	% Δ
Revenue from non-trading segments ⁽²⁾	\$406	\$368	10%
Market Services Net Revenue ⁽³⁾	\$226	\$222	2%
Other Revenue	\$—	\$10	(100)%
Net Revenues⁽³⁾	\$632	\$600	5%
Operating Expenses	\$317	\$311	2%
Operating Income	\$315	\$289	9%
Operating Margin	50%	48%	—
Net Income	\$212	\$189	12%
Diluted EPS	\$1.27	\$1.13	12%
Diluted Shares Outstanding	167.0	167.3	—%

- 3Q19 net revenues⁽³⁾ totaled \$632 million.
 - Revenues from non-trading segments⁽²⁾ increased 10%, or \$38 million y-o-y, with increases in Information Services, Market Technology and Corporate Services.
 - Net revenues⁽³⁾ from Market Services increased 2%, or \$4 million y-o-y.
 - Other revenues declined \$10 million y-o-y, due to the divestiture of Bwise in March 2019.
- Operating leverage drove operating income 9% higher y-o-y, with margin expansion of 2 percentage points.
- Net income rose 12%, reflecting the impact of lower interest expense.

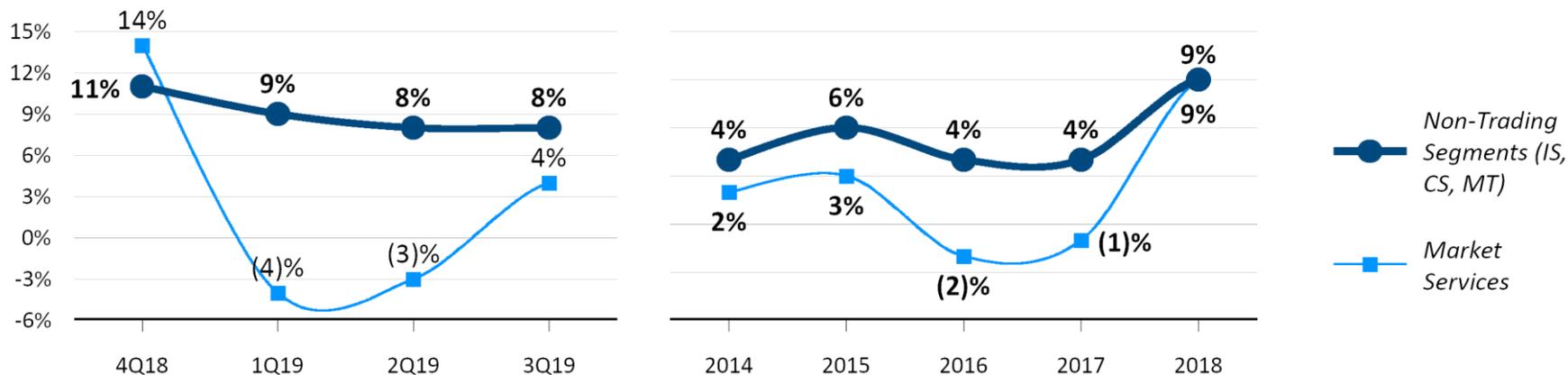
1. Please refer to the appendix for a reconciliation of U.S. GAAP to non-GAAP measures.

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⁾



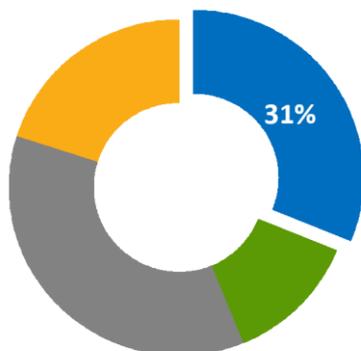
NASDAQ MEDIUM-TERM (3-5 YR) ORGANIC REVENUE GROWTH OUTLOOK

U.S. GDP ⁽²⁾	Information Services	Market Technology	Corporate Services	Non-Trading Segments (IS, CS, MT)
1.8% - 2.3%	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.

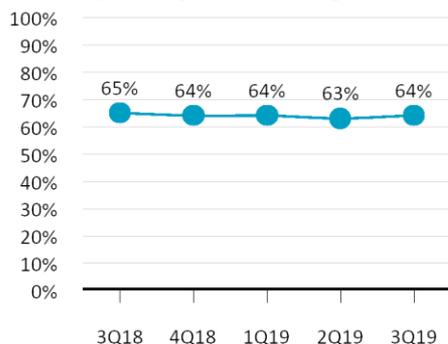
INFORMATION SERVICES

IS 3Q19
Net Revenue
Contribution



Information Services Performance Summary				
	3Q19	3Q18	% Δ	
Net Revenue	\$198M	\$179M	11%	<ul style="list-style-type: none"> ● 7% increase in Market Data revenues: Primarily due to new proprietary data sales as well as higher U.S. tape revenues related to collections from unreported usage.
Operating Income	\$126M	\$117M	8%	<ul style="list-style-type: none"> ● 8% 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	64%	65%		<ul style="list-style-type: none"> ● \$8 million increase in Investment Data & Analytics revenues: Due to an increase in eVestment revenues resulting from a \$4 million purchase price adjustment on deferred revenue in the third quarter of 2018, organic growth, and the acquisition of Quandl.

Operating Income Margin ⁽¹⁾



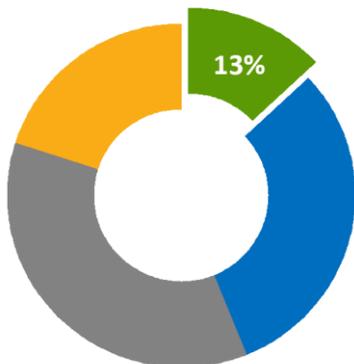
INFORMATION SERVICES NET REVENUES



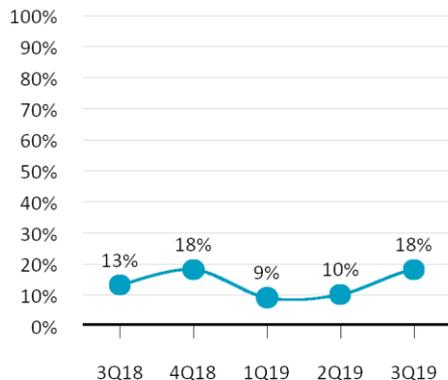
1. Information Services' margins reflect the allocation of certain costs that support the operation of various aspects of Nasdaq's business, including Market Services, to units other than Information Services.

MARKET TECHNOLOGY

MT 3Q19
Net Revenue
Contribution



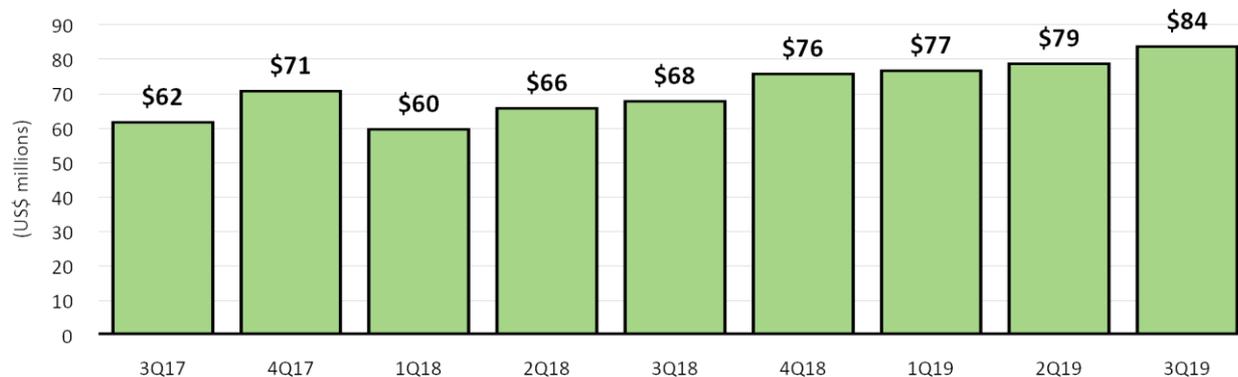
Operating Income Margin



Market Technology Performance Summary

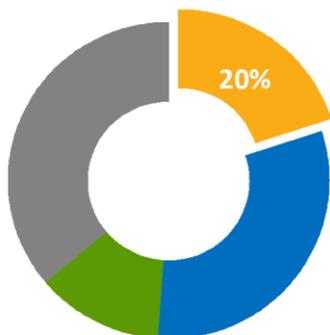
	3Q19	3Q18	% Δ	
Net Revenue	\$84M	\$68M	24%	<ul style="list-style-type: none"> • 24% growth in Market Technology revenues: <i>Primarily due the impact of the Cinnober acquisition, an increase in software as a service (SaaS) revenues and an increase in the size and number of software delivery projects.</i> • \$255 million in annualized recurring revenue, or ARR, <i>in the third quarter of 2019, an increase of 17% from the prior year period, and \$62 million in new order intake.</i>
Operating Income	\$15M	\$9M	67%	
Operating Income Margin	18%	13%		

MARKET TECHNOLOGY NET REVENUES

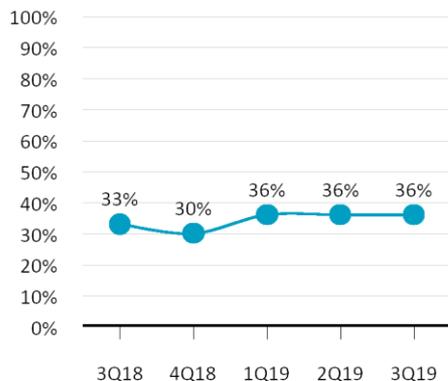


CORPORATE SERVICES

CS 3Q19
Net Revenue
Contribution



Operating Income Margin



Corporate Services Performance Summary

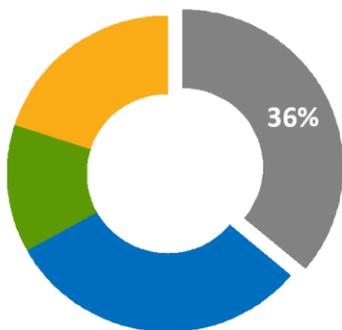
	3Q19	3Q18	% Δ	
Net Revenue	\$124M	\$121M	2%	<ul style="list-style-type: none"> ● 3% increase in Listing Services revenues: Reflecting higher listings revenues due to an increase in the number of listed companies.
Operating Income	\$45M	\$40M	13%	
Operating Income Margin	36%	33%		<ul style="list-style-type: none"> ● Nasdaq welcomed 66 new U.S. listings including 41 IPOs in 3Q19, and a 69% U.S. IPO win rate. European new listings totaled 8 in 3Q19.

CORPORATE SERVICES NET REVENUES

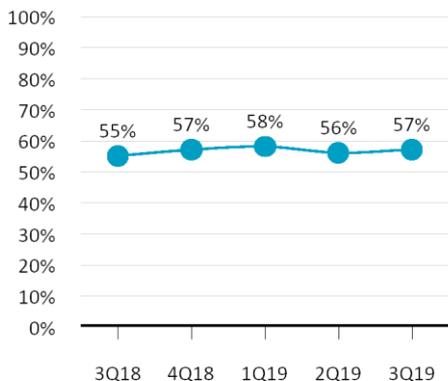


MARKET SERVICES

MS 3Q19
Net Revenue
Contribution



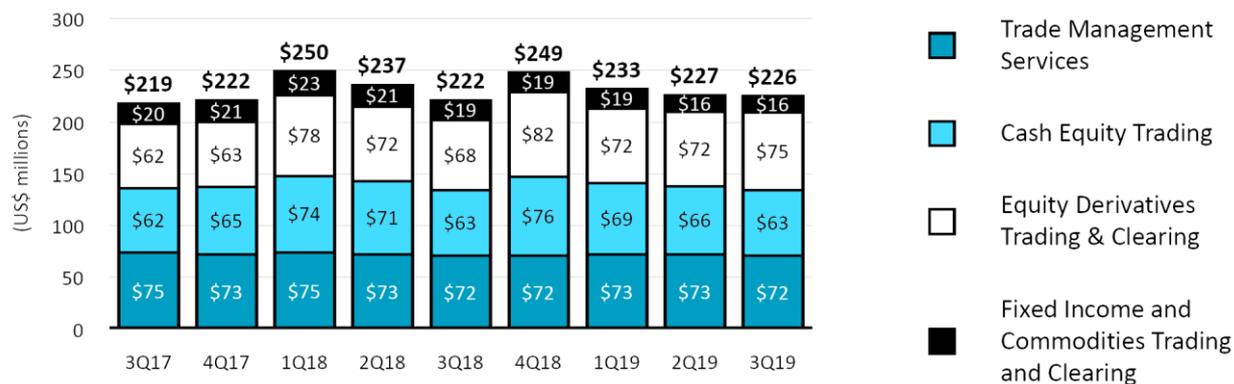
Operating Income Margin



Market Services Performance Summary

	3Q19	3Q18	% Δ	
Net Revenue	\$226M	\$222M	2%	<ul style="list-style-type: none"> ● 10% increase in Equity Derivative Trading and Clearing revenues: Primary reflects higher U.S. industry trading volumes and U.S. revenue capture, partially offset by lower U.S. market share. ● Unchanged Cash Equity Trading revenues: Primarily reflects higher U.S. industry volumes offset by a lower U.S. net capture rate due to higher matched market share executed on Nasdaq's exchanges, driving customers to reach higher volume tiers. ● 16% decrease in Fixed Income and Commodities Trading and Clearing revenues: The decrease in revenues is primarily driven by lower volumes in U.S. fixed income and European commodities products. ● Unchanged Trade Management Services revenues.
Operating Income	\$129M	\$121M	7%	
Operating Income Margin	57%	55%		

MARKET SERVICES NET REVENUES

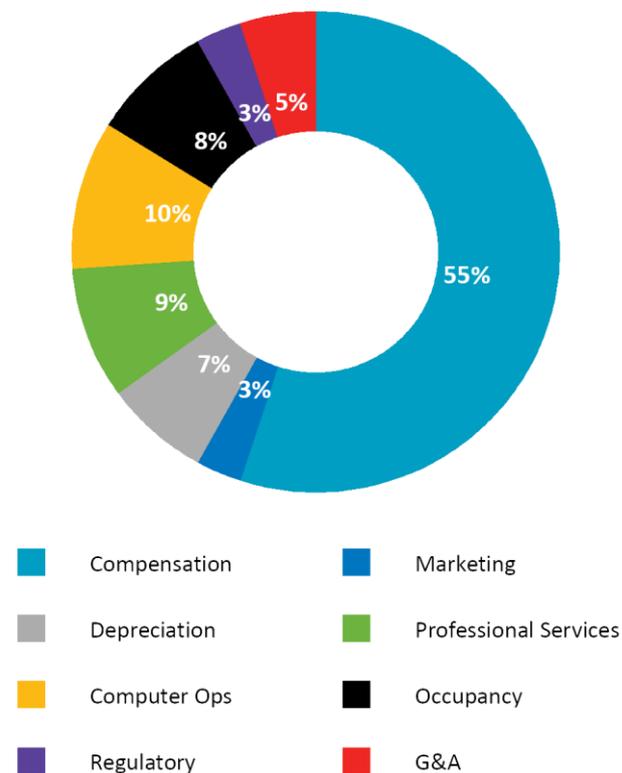


NON-GAAP OPERATING EXPENSES¹

(US\$ millions)

Total Non-GAAP operating expenses	3Q19	2Q19	3Q18
Compensation and benefits	175	169	164
Professional and contract services ⁽²⁾	30	33	31
Computer operations and data communications	33	33	32
Occupancy	24	24	23
General, admin. & other ⁽²⁾	17	23	20
Marketing and advertising	8	10	7
Depreciation and amortization ⁽²⁾	22	22	26
Regulatory	8	8	8
Total non-GAAP operating expenses	317	322	311

3Q19 EXPENSE CATEGORIES



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

2. Professional and contract services expense, general, administrative and other expense and depreciation and amortization expense in all periods were adjusted from GAAP expense. Refer to slides 21-23 for the amounts and details of the adjustments for all periods presented.

2019 NON-GAAP EXPENSE AND TAX GUIDANCE¹

*July 24, 2019
Guidance*

*October 23, 2019
Update*

Core Non-GAAP
Operating Expenses

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

\$1,205-\$1,210 Million

R&D Expenses

\$85-\$95 Million

\$80-\$85 Million

**Total Non-GAAP
Operating Expenses**

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

\$1,285-\$1,295 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

- 3Q19 total debt decreased by \$11M vs. 2Q19 primarily due to a \$84M decrease in the Euro Notes book value caused by a weaker Euro partially offset by net borrowing of \$72M of commercial paper.
- 3Q19 Total debt to EBITDA declined to 2.6x compared to 2.7x in 2Q19.
- 3Q19 net interest expense was \$26M, \$9M lower than in 3Q18, 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⁾ = 2.6x

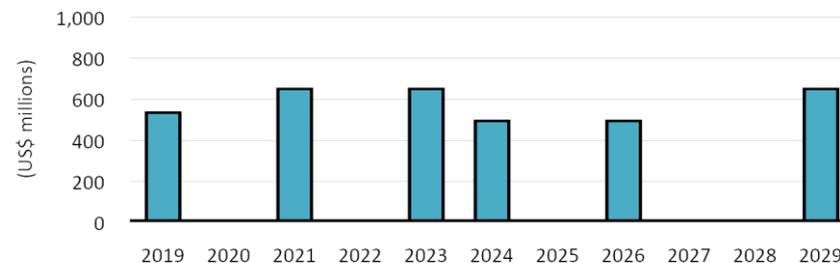
LTM EBITDA ⁽¹⁾ = \$1,329M

1. See Appendix for EBITDA reconciliation.
2. Includes debt issuance costs of \$3M at Sep 30, 2019 and \$3M at Jun 30, 2019
3. Excludes \$29M of restricted cash in 3Q19 and \$30M in 2Q19.

\$3.2B Net Debt

(US\$ millions)	9/30/2019	6/30/2019	Maturity Date
Commercial Paper	539	467	Various
Revolver (Libor + 117.5 bps) ⁽²⁾	(3)	(3)	Apr 2022
3.88% Euro Notes	652	680	Jun 2021
1.75% Euro Notes	649	677	May 2023
4.25% Notes	497	497	Jun 2024
3.85% Notes	497	497	Jun 2026
1.75% Euro Notes	647	674	Mar 2029
Total Debt Obligations	\$3,478	\$3,489	
Less Cash and Cash Equivalents ⁽³⁾	(304)	(333)	
Net Debt	\$3,174	\$3,156	

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	\$624	\$3,337
Capital expenditure	(134)	(144)	(111)	(88)	(477)
Free cash flow	642	765	917	536	2,860
Section 31 fees, net ⁽²⁾	(4)	(9)	9	72	68
Free cash flow ex. Section 31 fees	\$638	\$756	\$926	\$608	\$2,928
Uses of cash flow					
Share repurchases	\$100	\$203	\$394	\$200	\$897
Net repayment/(borrowing) of debt	(1,300)	(411)	320	282	(1,109)
Acquisitions, net of dispositions and other	1,460	776	(380)	74	1,930
Dividends paid	200	243	280	228	951
Total uses of cash flow	\$460	\$811	\$614	\$784	\$2,669

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; \$(3) million in 2019 YTD; and \$(1) million in 2016-2019 YTD.

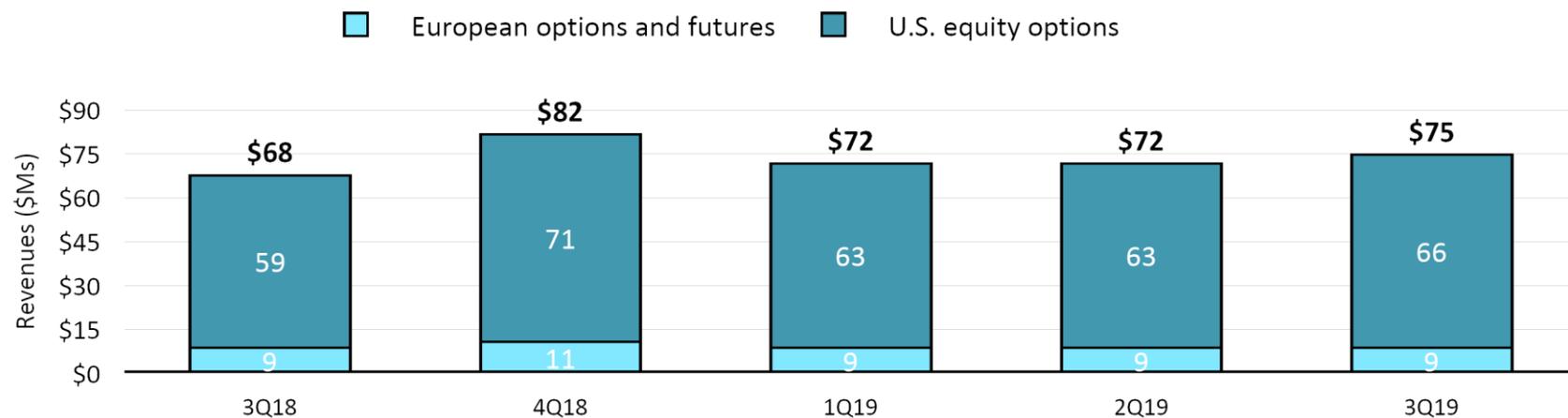
TOTAL VARIANCE NET IMPACTS: 3Q19

All figures in US\$ Millions	3Q19 actual	3Q18 actual	Total Variance		Organic Impact		Net Acquisition & Divestiture Impact ²		FX Impact (Prior Year Rates)	
			\$M	%	\$M	%	\$M	%	\$M	%
Market Services	\$226	\$222	\$4	2%	\$8	4%	\$—	—%	(\$4)	(2)%
Corporate Services	124	121	3	2%	4	3%	—	—%	(1)	(1)%
Information Services	198	179	19	11%	19	11%	1	1%	(1)	(1)%
Market Technology	84	68	16	24%	6	9%	11	16%	(1)	(1)%
Other	—	10	(10)	(100)%	—	—%	(10)	(100)%	—	—%
Total Non-trading Segment Revenue¹	406	368	38	10%	29	8%	12	3%	(3)	(1)%
Total Revenue less transaction expenses	632	600	32	5%	37	6%	2	—%	(7)	(1)%
Non-GAAP Operating Expenses	317	311	6	2%	11	4%	1	—%	(6)	(2)%
Non-GAAP Operating Income	315	289	26	9%	26	9%	1	—%	(1)	—%
Non-GAAP Operating Margin	50%	48%	—	—	—	—	—	—	—	—

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

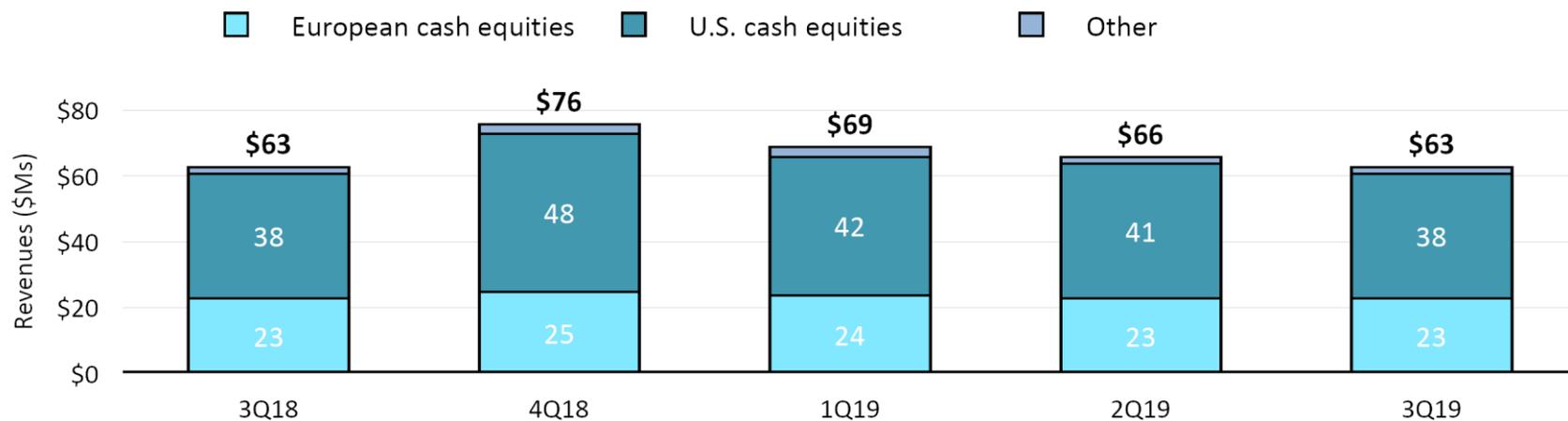
²Reflects the impact of the Cinnober and Quandl acquisitions and the sale of the BWISE enterprise governance, risk and compliance software platform in March 2019.

EQUITY DERIVATIVE TRADING AND CLEARING



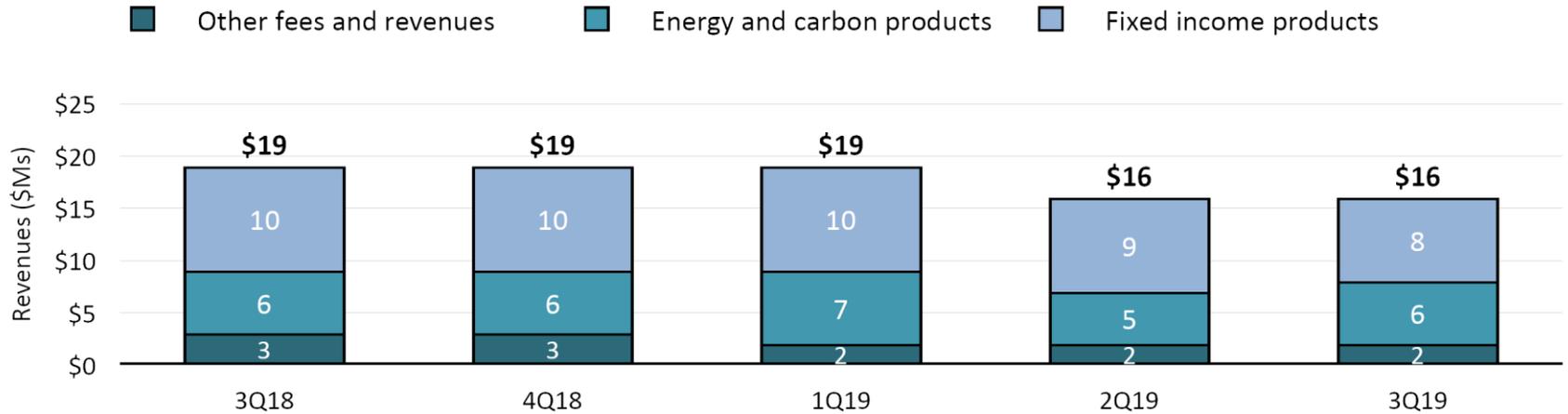
	3Q18	4Q18	1Q19	2Q19	3Q19
Net Revenues (US\$ in Millions)					
U.S. equity options	59	71	63	63	66
European options and futures	9	11	9	9	9
Equity Derivatives	68	82	72	72	75
Nasdaq Volumes					
U.S. equity options (millions of contracts)	407	482	406	420	434
European options and futures (millions of contracts)	18.1	22.6	22.4	22.7	21.8
Revenue Capture					
U.S. equity options (RPC)	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15
European options and futures (RPC)	\$ 0.48	\$ 0.49	\$ 0.42	\$ 0.40	\$ 0.39
<i>SEK/US\$ average</i>	\$ 0.112	\$ 0.111	\$ 0.109	\$ 0.106	\$ 0.104
<i>Euro/US\$ average</i>	\$ 1.163	\$ 1.141	\$ 1.136	\$ 1.124	\$ 1.111

CASH EQUITY TRADING



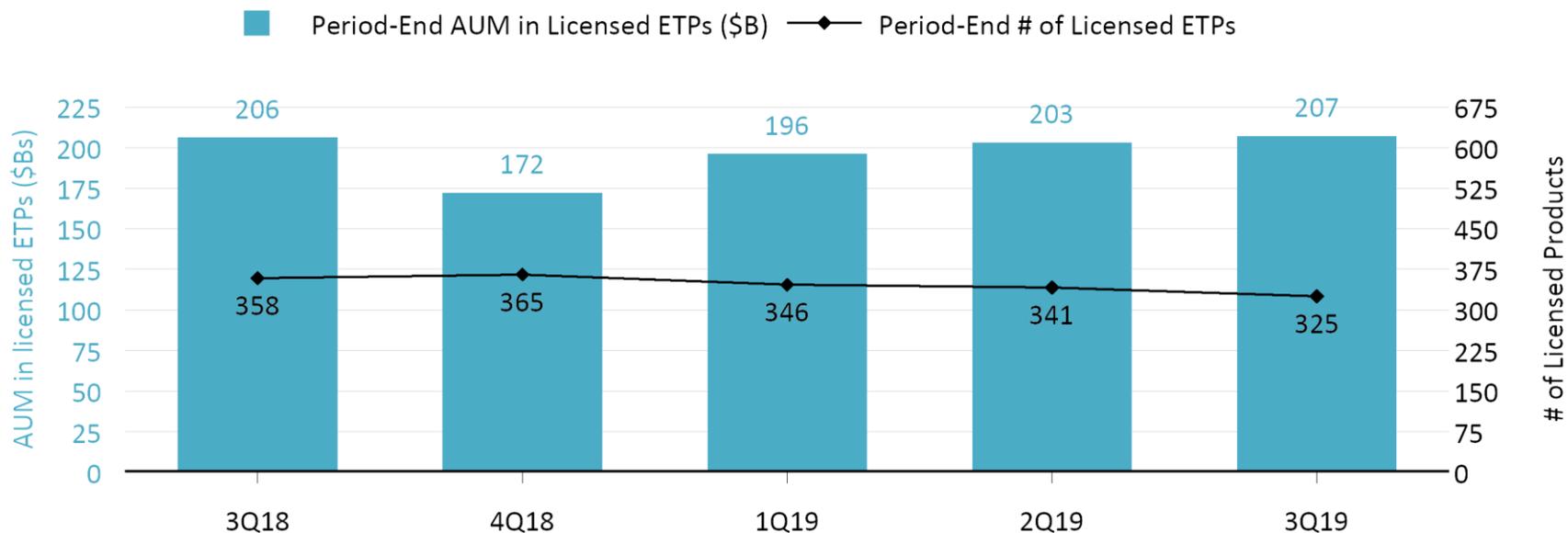
	3Q18	4Q18	1Q19	2Q19	3Q19
Net Revenues (US\$ in Millions)					
U.S. cash equities	38	48	42	41	38
European cash equities	23	25	24	23	23
Other	2	3	3	2	2
Cash Equity Trading	63	76	69	66	63
Nasdaq Volumes					
U.S. cash equities (billions of shares)	77.8	108.3	90.6	87.7	90.2
European cash equities value shares traded (\$B)	204	220	211	189	192
Revenue Capture					
U.S. cash equities revenue capture per 1000 shares	\$ 0.48	\$ 0.45	\$ 0.47	\$ 0.46	\$ 0.42
European cash equities revenue capture per \$1000 traded	\$ 0.12	\$ 0.11	\$ 0.11	\$ 0.12	\$ 0.12
<i>SEK/US\$ average</i>	\$ 0.112	\$ 0.111	\$ 0.109	\$ 0.106	\$ 0.104
<i>Euro/US\$ average</i>	\$ 1.163	\$ 1.141	\$ 1.136	\$ 1.124	\$ 1.111

FIXED INCOME AND COMMODITIES TRADING & CLEARING



	3Q18	4Q18	1Q19	2Q19	3Q19
Net Revenues (US\$ in Millions)					
Fixed income products	10	10	10	9	8
Energy and carbon products	6	6	7	5	6
Other fees and revenues	3	3	2	2	2
Fixed Income and Commodities Trading and Clearing	19	19	19	16	16
Nasdaq Volumes					
U.S. Fixed income trading volume (billions of \$ notional)	3,194	3,499	2,715	2,921	3,033
European Fixed income products (millions of contracts)	7.9	9.4	7.3	7.5	6.9
Energy trading and clearing (TWh)	404	303	367	254	290
Revenue Capture					
European Fixed Income (RPC)	\$ 0.48	\$ 0.42	\$ 0.61	\$ 0.51	\$ 0.52
Energy trading and clearing (\$1000 per TWh traded and cleared)	\$ 15.6	\$ 19.9	\$ 18.8	\$ 19.3	\$ 19.4
<i>SEK/US\$ average</i>	\$ 0.112	\$ 0.111	\$ 0.109	\$ 0.106	\$ 0.104
<i>Euro/US\$ average</i>	\$ 1.163	\$ 1.141	\$ 1.136	\$ 1.124	\$ 1.111

INDEX



	3Q18	4Q18	1Q19	2Q19	3Q19
Period-End # of Licensed ETPs	358	365	346	341	325
Period-End AUM in Licensed ETPs (\$B)	206	172	196	203	207
Index Revenues (\$M)	52	54	54	55	56

MARKET TECHNOLOGY



Annualized Recurring Revenue¹ (ARR)

- ARR is the total annualized revenue of active software support and SaaS subscription revenues.
- ARR represented 76% of Market Technology annualized revenues in the third quarter of 2019.
- The company believes ARR is a key performance metric to assess the trajectory of the business as it captures the growth in SaaS revenues.
- ARR increased 17% in the third quarter of 2019 versus the prior year period.

	3Q18	4Q18	1Q19	2Q19	3Q19
New Order Intake (\$M)	40	74	54	46	62
Annualized Recurring Revenue¹ (\$M)	218	222	236	247	255
Net Revenue (\$M)	68	76	77	79	84

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>	3Q19	2Q19	1Q19	4Q18	3Q18	2018	2017	2016
Amortization expense of acquired intangible assets ⁽¹⁾	\$ 25	\$ 26	\$ 26	\$ 26	\$ 27	\$ 109	\$ 92	\$ 82
Merger and strategic initiatives expense ⁽²⁾	10	5	9	14	6	21	44	76
Restructuring charges ⁽³⁾	30	—	—	—	—	—	—	41
Asset impairment charge ⁽⁴⁾	—	—	—	—	—	—	—	578
Regulatory matter ⁽⁵⁾	—	—	—	—	—	—	—	6
Executive compensation ⁽⁶⁾	—	—	—	—	—	—	—	12
Extinguishment of debt ⁽⁷⁾	—	11	—	—	—	—	10	—
Net (gain) / loss on divestiture of businesses ⁽⁸⁾	—	—	(27)	—	8	(33)	—	—
Clearing default ⁽⁹⁾	—	—	—	23	8	31	—	—
Provision for notes receivable ⁽¹⁰⁾	20	—	—	—	—	—	—	—
Net income from unconsolidated investees ⁽¹¹⁾	(15)	(9)	(45)	(5)	(5)	(16)	(13)	(1)
Other ⁽¹²⁾	4	3	2	11	2	17	3	(1)
Gain on sale of investment security ⁽¹³⁾	—	—	—	(118)	—	(118)	—	—
Total Non-GAAP adjustments	74	36	(35)	(49)	46	11	136	793
Non-GAAP adjustment to the income tax (benefit) provision ⁽¹⁴⁾	(12)	(7)	(4)	15	(16)	6	(66)	(313)
Impact of enacted U.S. tax legislation ⁽¹⁵⁾	—	—	—	289	(4)	290	(89)	—
Excess tax benefits related to employee share-based compensation ⁽¹⁶⁾	—	—	(4)	(4)	—	(9)	(40)	—
Reversal of Swedish tax benefits ⁽¹⁷⁾	—	—	—	—	—	41	—	—
Reversal of Finnish tax benefits ⁽¹⁸⁾	—	—	—	—	—	—	—	27
Total Non-GAAP tax adjustments	(12)	(7)	(8)	300	(20)	328	(195)	(286)
Total Non-GAAP Adjustments, net of tax	\$ 62	\$ 29	\$ (43)	\$ 251	\$ 26	\$ 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.
- (3) In September 2019, we initiated the transition of certain technology platforms to advance the company's strategic opportunities as a technology and analytics provider and continue the re-alignment of certain business areas. In connection with these restructuring efforts, we are retiring certain elements of our marketplace infrastructure and technology product offerings as we implement the Nasdaq Financial Framework internally and externally. For the three months ended September 30, 2019, restructuring charges primarily consisted of asset impairment charges mainly related to capitalized software. 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. Refer to the non-GAAP information section of the earnings release for further discussion of why we consider restructuring charges to be a non-GAAP adjustment.
- (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) For the year ended December 31, 2016, we recorded a \$6 million charge related to a fine received from the Swedish Financial Supervisory Authority as a result of findings in connection with its investigation of cybersecurity processes at our Nordic exchanges. The fine related to governance issues rather than systems and platform security.
- (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, these charges 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. We recognized a pre-tax net gain on the sale of \$33 million for the nine months ended September 30, 2018. This includes a post closing working capital adjustment of \$8 million 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.
- (10) For the three months ended September 30, 2019, we recorded a provision to notes receivable associated with the funding of technology development for the consolidated audit trail. This charge is included in general, administrative and other expense in our Condensed Consolidated Statements of Income.

NON-GAAP ADJUSTMENTS FOOTNOTES

(11) 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.

(12) 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.

(13) 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).

(14) 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 11 above for further discussion of our OCC investment.

(15) 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. For the three months ended September 30, 2018, we recorded a decrease to tax expense of \$4 million related to the remeasurement of our deferred tax assets and liabilities as of the enactment date. 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.

(16) 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.

(17) For the 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.

(18) 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>	3Q19	2Q19	3Q18	2018	2017	2016
U.S. GAAP operating expenses:	\$406	\$367	\$354	\$1,498	\$1,420	\$1,440
Total Non-GAAP adjustments:	(89)	(45)	(43)	(178)	(149)	(216)
Non-GAAP operating expenses:	\$317	\$322	\$311	\$1,320	\$1,271	\$1,224
U.S. GAAP operating income:	\$226	\$256	\$246	\$1,028	\$991	\$836
Total Non-GAAP adjustments:	89	45	43	178	149	216
Non-GAAP operating income:	\$315	\$301	\$289	\$1,206	\$1,140	\$1,052
Revenues less transaction based expenses	\$632	\$623	\$600	\$2,526	\$2,411	\$2,276
U.S. GAAP operating margin ⁽¹⁾	36%	41%	41%	41%	41%	37%
Non-GAAP operating margin ⁽²⁾	50%	48%	48%	48%	47%	46%
U.S. GAAP net income attributable to Nasdaq:	\$150	\$174	\$163	\$458	\$729	\$106
Total Non-GAAP Adjustments, net of tax:	62	29	26	339	(59)	507
Non-GAAP net income attributable to Nasdaq:	\$212	\$203	\$189	\$797	\$670	\$613
U.S. GAAP diluted earnings per share:	\$0.90	\$1.04	\$0.97	\$2.73	\$4.30	\$0.63
Total adjustments from non-GAAP net income above:	0.37	0.18	0.16	2.02	(0.35)	3.00
Non-GAAP diluted earnings per share:	\$1.27	\$1.22	\$1.13	\$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	\$	%	\$	%	\$	%
3Q19 ²	\$406	\$368	38	10%	29	8%	9	2%
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%
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	\$	%	\$	%	\$	%
3Q19	\$226	\$222	4	2%	8	4%	(4)	(2)%
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)%
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	3Q19	2Q19	1Q19	4Q18
U.S. GAAP net income (loss) attributable to Nasdaq:	\$527	\$150	\$174	\$247	(\$44)
Income tax provision	568	65	65	66	372
Net income from unconsolidated investees	(74)	(15)	(10)	(45)	(4)
Other investment income	(1)	—	(1)	—	—
Net gain on the sale of businesses	(27)	—	—	(27)	—
Gain on sale of investment security	(118)	—	—	—	(118)
Net interest expense	123	26	28	34	35
U.S. GAAP operating income:	\$998	\$226	\$256	\$275	\$241
Non-GAAP Adjustments ⁽¹⁾	245	89	45	37	74
Non-GAAP operating income:	\$1,243	\$315	\$301	\$312	\$315
Depreciation and amortization of tangibles (Nasdaq)	91	22	22	22	25
EBITDA of BWISE and Public Relations Solutions and Digital Media Services business pre-divestiture; and Cinnober and Quandl pre-acquisition	(5)	—	—	—	(5)
EBITDA pro forma for acquisitions and divestitures:	\$1,329	\$337	\$323	\$334	\$335

1. Please see slides 21-23 for a 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 Sep 30, 2019		
	U.S. GAAP	Non-GAAP Adjustments ⁽¹⁾	Non-GAAP
Income before income taxes	\$215	\$74	\$289
Income tax provision	65	12	77
Net Income	\$150	\$62	\$212
Effective tax rate	30%	16%	27%

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.

Restructuring charges: In September 2019, we initiated the transition of certain technology platforms and continued a re-alignment of certain business areas to advance the company's strategic opportunities as a technology and analytics provider. In connection with these restructuring efforts, we are retiring certain elements of our marketplace infrastructure and technology product offerings as we implement the Nasdaq Financial Framework internally and externally. Charges associated with this program represent a fundamental shift in our strategy and technology as well as executive re-alignment. We will exclude charges associated with this program for purposes of calculating non-GAAP measures as they are not reflective of ongoing operating performance or comparisons in Nasdaq's performance between periods.

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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