1Q19 Earnings Presentation

April 24, 2019

NASDAQ 1Q19 HIGHLIGHTS

Driving Accelerating Growth, Creating Sustainable Value

Non-Trading Segments Organic Revenue Growth[1]

1Q19:

+9% Y-o-Y

Market Technology Organic Revenue Growth[1]

1Q19:

+17% Y-o-Y

Information Services Organic Revenue Growth[1]

1Q19:

+11% Y-o-Y

Non-GAAP Operating Margin[2]

49% in 1Q19

versus

47% in 1Q18

Reduction In Leverage Ratio

2.8x Total Debt to EBITDA[3] at 3/31/19

vs

3.0x Total Debt to EBITDA[3] at 12/31/18

Increase In Quarterly Dividend

7% increase to $0.47 per share

[1]Please refer to pages 15, 26 and 27 for a reconciliation of organic revenue growth.

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

[3]See Appendix for EBITDA reconciliation.

1Q19 NON-GAAP SUMMARY[1]

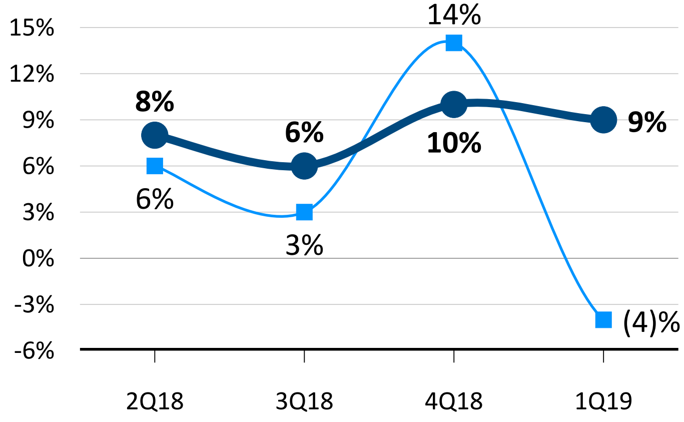
(US$ millions, except per share)	1Q19	1Q18	% Δ
Revenue from non-trading segments[2]	$401	$366	*10%*
Market Services Net Revenue[3]	$233	$250	*(7)%*
Other Revenue	$—	$50	*(100)%*
Net Revenues[3]	**$634**	**$666**	***(5)%***
Operating Expenses	$322	$353	*(9)%*
Operating Income	$312	$313	*—%*
Operating Margin	49%	47%	—
Net Income	**$204**	**$207**	***(1)%***
Diluted EPS	**$1.22**	**$1.22**	***—%***
Diluted Shares Outstanding	167.0	169.0	*(1)%*

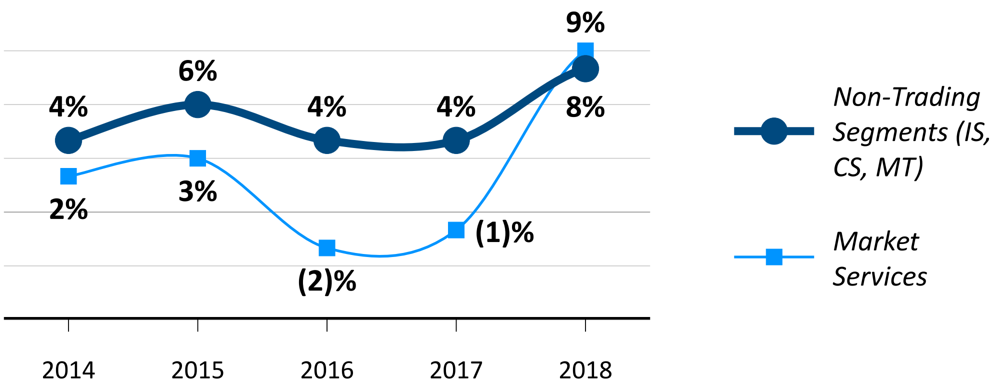
- 1Q19 net revenues[3] totaled $634 million
  - Revenues from non-trading segments[2] increased 10%, or $35 million y-o-y, with increases in Market Technology and Information Services.
  - Net revenues[3] from Market Services decreased 7%, or $17 million y-o-y.
  - Other revenues declined $50 million 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]





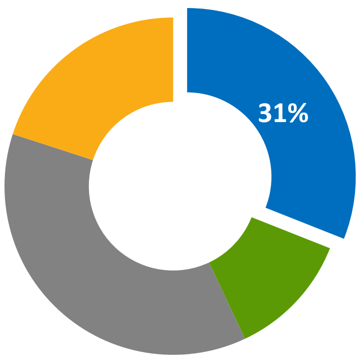
NASDAQ MEDIUM-TERM (3-5 YR) ORGANIC REVENUE GROWTH OUTLOOK

U.S. GDP[2]	Information Services	Market Technology	Corporate Services	Non-Trading Segments (IS, CS, MT)
2.0% - 2.4%	5% - 7%	8% - 11%	3% - 5%	**5% - 7%**

1. Please refer to pages 15, 26 and 27 for a reconciliation of organic revenue growth.
2. GDP forecasts for 2019 and 2020 according to Consensus Economics Inc.

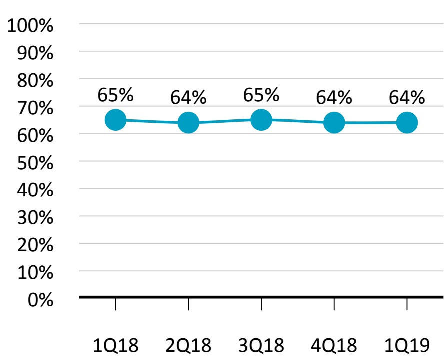
INFORMATION SERVICES

IS 1Q19 Net Revenue Contribution

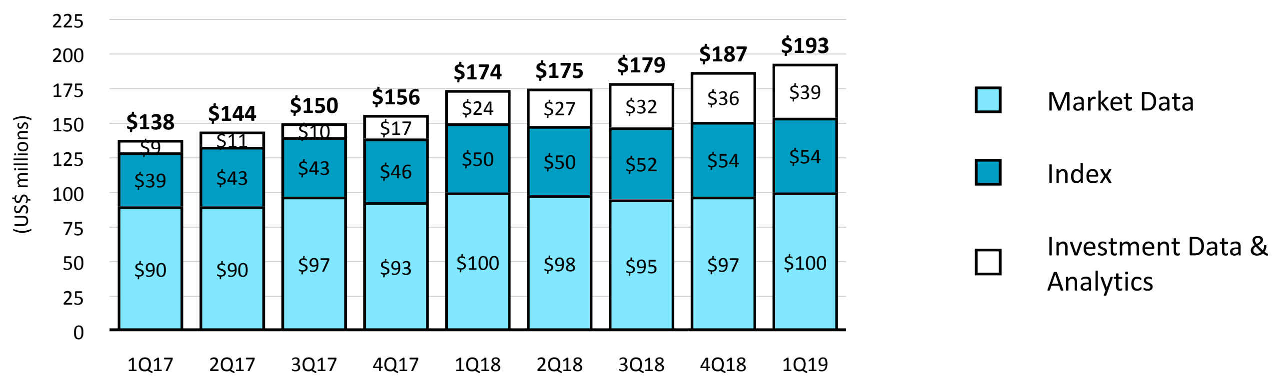


Information Services Performance Summary				
	1Q19	**1Q18**	**% Δ**	
Net Revenue	**$193M**	**$174M**	*11%*	• **Unchanged Market Data revenues:** *Primarily due to higher U.S. tape revenues from under-reported usage offset by unfavorable changes in foreign exchange rates.* • **8% increase in Index revenues:** *Primarily driven by higher licensing revenue from futures trading linked to the Nasdaq 100 Index, higher average assets under management (AUM) in exchange traded products (ETPs) linked to Nasdaq indexes and higher index data revenues.* • **$15 million increase in Investment Data & Analytics revenues:** *Due to increase in eVestment revenues resulting from an $11 million purchase price adjustment on deferred revenue in the first quarter of 2018 and organic growth.*
Operating Income	**$124M**	**$113M**	*10%*	
Operating Income Margin	*64%*	*65%*		

Operating Income Margin [(1)]



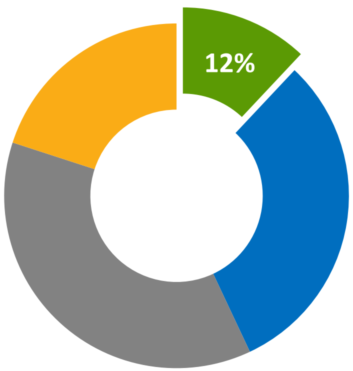
INFORMATION SERVICES NET REVENUES



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 1Q19 Net Revenue Contribution

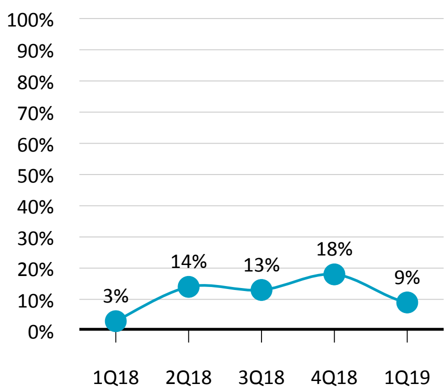


Market Technology Performance Summary

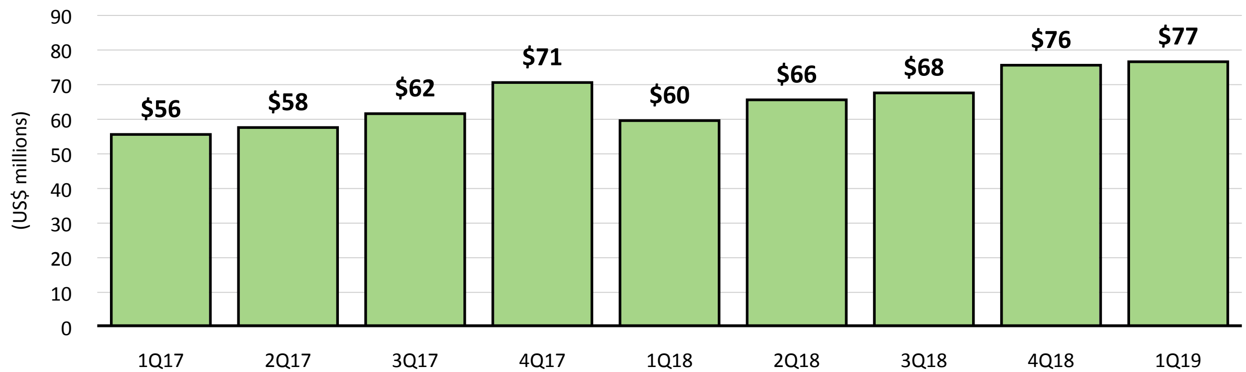
	1Q19	1Q18	% Δ
Net Revenue	**$77M**	**$60M**	*28%*
Operating Income	**$7M**	**$2M**	*250%*
Operating Income Margin	*9%*	*3%*	

- **28% growth in Market Technology revenues:** *Primarily due to an increase in the size and number of software delivery projects, an increase in software as a service, and the acquisition of Cinnober, partially offset by an unfavorable impact from foreign exchange rates.*
- *$54 million new order intake in 1Q19 and a 16% y-o-y increase in total order value to $820 million at 1Q19.*
- *The operating margin totaled 9%, up 6 percentage points y-o-y reflecting the impact of the acquisition of Cinnober, the net impact from changes in foreign exchange rates, and organic growth.*

Operating Income Margin



MARKET TECHNOLOGY NET REVENUES



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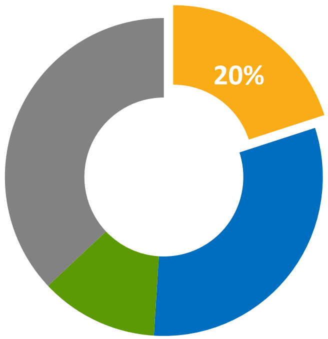
CORPORATE SERVICES

CS 1Q19 Net Revenue Contribution

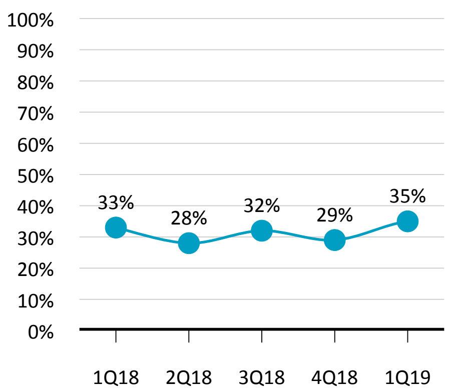


Corporate Services Performance Summary

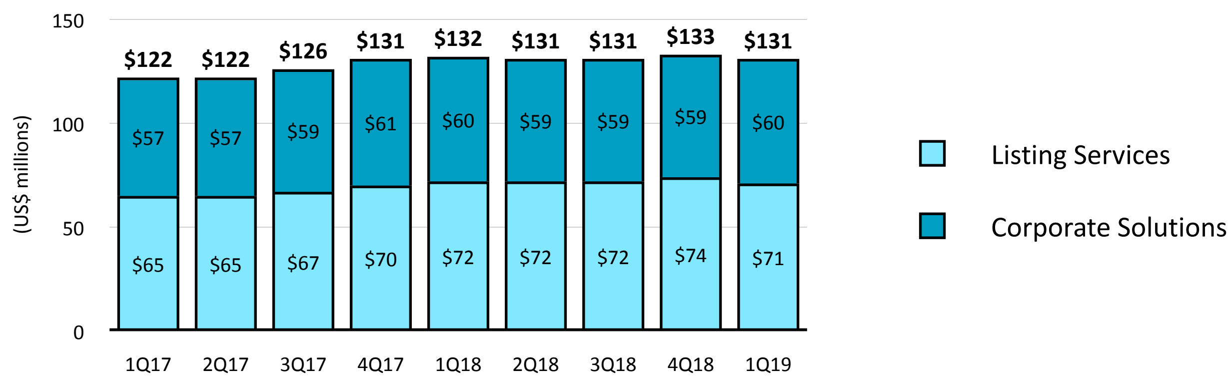
	1Q19	1Q18	% Δ
Net Revenue	**$131M**	**$132M**	*(1)%*
Operating Income	**$46M**	**$43M**	*7%*
Operating Income Margin	*35%*	*33%*	

- **Unchanged Corporate Solutions revenues:** *Reflecting an increase in governance solutions (formerly referred to as board and leadership) revenues offset by an unfavorable impact from changes in foreign exchange rates.*
- **1% decrease in Listing Services revenues:** *Reflecting the run-off of fees earned from listing of additional shares and an unfavorable impact from changes in foreign exchange rates million, partially offset by an increase in the number of listed companies.*
- *59 new U.S. listings including 37 IPOs in 1Q19, and an 88% U.S. IPO win rate. European new listings totaled 9 in 1Q19.*

Operating Income Margin



CORPORATE SERVICES NET REVENUES



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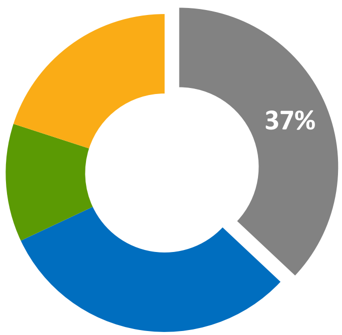
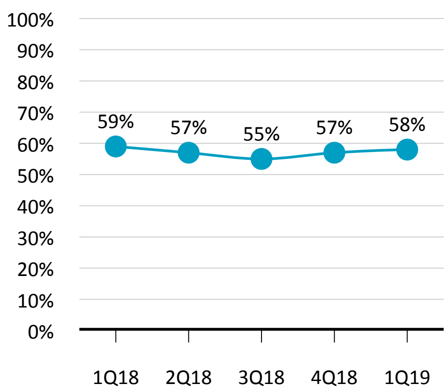
MARKET SERVICES

MS 1Q19
Net Revenue
Contribution

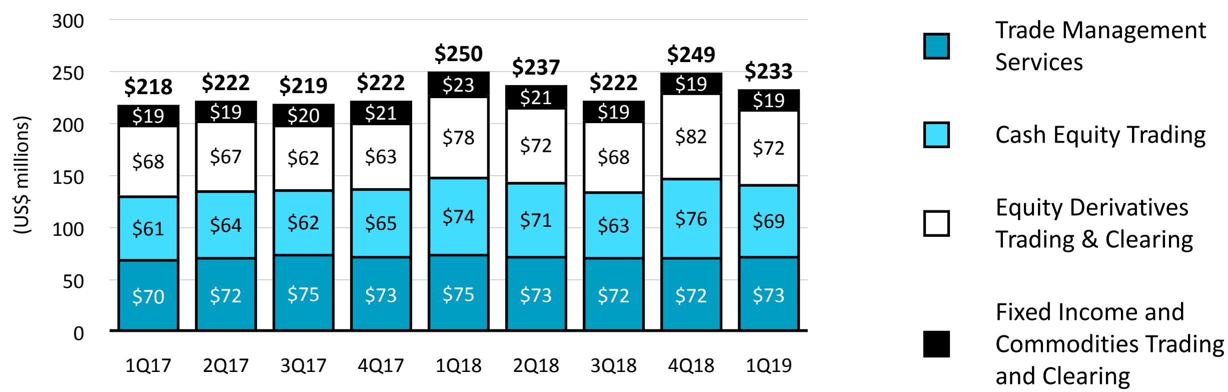


Market Services Performance Summary				
	1Q19	**1Q18**	**% ∆**	
Net Revenue	**$233M**	**$250M**	*(7)%*	● **8% decrease in Equity Derivative Trading and Clearing revenues:** *Reflects lower U.S. options industry trading volumes and a lower European net capture rate.* ● **7% decrease in Cash Equity Trading revenues:** *Primarily reflects lower European equity industry trading volumes and an unfavorable impact from changes in foreign exchange rates of $3 million. Net U.S. cash equities revenues were unchanged.* ● **17% decrease in Fixed Income and Commodities Trading and Clearing revenues:** *Reflects primarily a decrease in U.S. fixed income revenues and unfavorable changes in foreign exchange rates.* ● **3% decrease in Trade Management Services revenues:** *Due to lower Nordic broker services revenues and unfavorable changes in foreign exchange rates.*
Operating Income	**$135M**	**$147M**	*(8)%*	
Operating Income Margin	*58%*	*59%*		

Operating Income Margin



MARKET SERVICES NET REVENUES

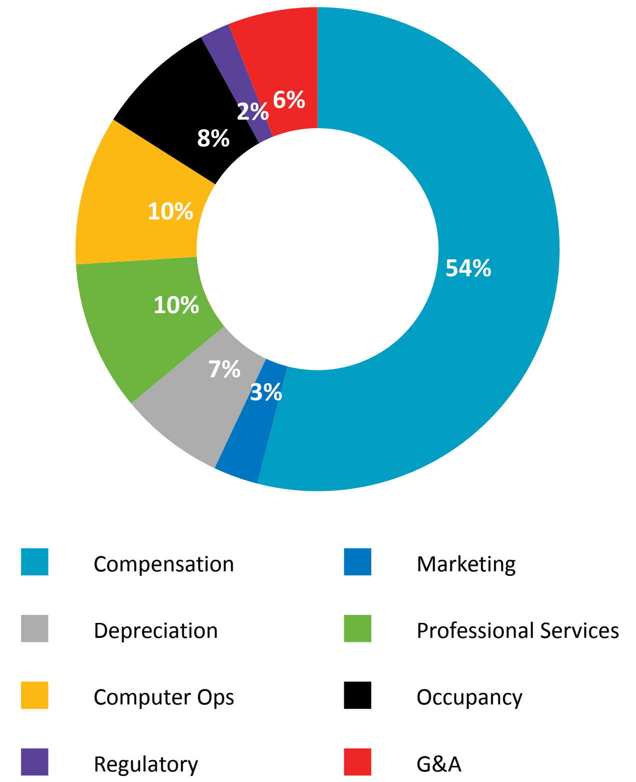


NON-GAAP OPERATING EXPENSES[1]

(US$ millions)

Total Non-GAAP operating expenses	1Q19	4Q18	1Q18
Compensation and benefits	175	179	197
Professional and contract services (2)	32	35	37
Computer operations and data communications	33	33	32
Occupancy (2)	24	23	24
General, admin. & other (2)	19	16	22
Marketing and advertising	10	11	9
Depreciation and amortization (2)	22	25	24
Regulatory	7	8	8
Total non-GAAP operating expenses	**322**	**330**	**353**

1Q19 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 1Q19 and 4Q18, professional and contract services, and general, administrative and other expense was adjusted. For 1Q18, occupancy expense was adjusted. Refer to slides 22-24 for the amounts and details of the adjustments for all periods presented.

2019 NON-GAAP EXPENSE AND TAX GUIDANCE[1]

	Initial Guidance	***April 24, 2019 Update (Reflects BWise sale, and exclusion of OCC income)***
Core Non-GAAP Operating Expenses	*$1,240-$1,280 Million*	*$1,205-$1,235 Million*
R&D Expenses	*$85-$95 Million*	*$85-$95 Million*
Total Non-GAAP Operating Expenses	*$1,325-$1,375 Million*	*$1,290-$1,330 Million*
Non-GAAP Tax Rate	*25% - 27%*	*26% - 27%*

[1]U.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

Plan to De-Lever to Mid-2X

- Issued 1.75% €600M 10-year Euro bond on April 1, 2019. Proceeds will be primarily used to call the 5.55% $600M January 2020 bond on May 1, 2019.
- 1Q19 debt decreased by $264M vs. 4Q18 primarily due to a net reduction in short-term borrowings and a $30M decrease in Euro bonds book values caused by a weaker Euro. The maturing $500M floating rate note was refinanced with commercial paper issuances and cash.
- 1Q19 Total debt to EBITDA declined to 2.8x compared to 3.0x in 4Q18. Plan to de-lever to mid-2x leverage ratio by mid-2019.
- 1Q19 net interest expense was $34M, $2M lower than in 1Q18, primarily due to lower debt balances.

$3.1B Net Debt

(US$ millions)	3/31/2019	12/31/2018	Maturity Date
Commercial Paper	540	275	Various
Revolver (Libor + 117.5 bps) (2)	(3)	(4)	Apr 2022
Term Loan (Libor + 150 bps)	100	100	Nov 2019
Floating rate note (Libor + 39 bps)	—	500	Mar 2019
5.55% Bond	599	599	Jan 2020
3.88% Euro Bond	671	686	Jun 2021
1.75% Euro Bond	667	682	May 2023
4.25% Bond	497	497	Jun 2024
3.85% Bond	496	496	Jun 2026
Total Debt Obligations	**$3,567**	**$3,831**	
Less Cash and Cash Equivalents (3)	(472)	(545)	
Net Debt	$3,095	$3,286	

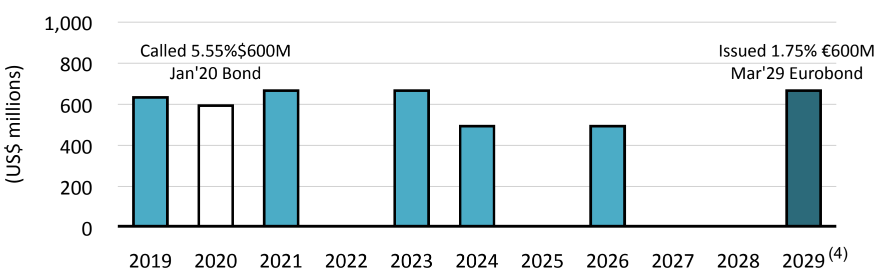
Leverage Ratios

Net Debt to EBITDA (1) = 2.4x

Total Debt to EBITDA (1) = 2.8x

LTM EBITDA (1) = $1,289M

Well Laddered Debt Maturities



1. See Appendix for EBITDA reconciliation.
2. Includes debt issuance costs of $3M at March 31, 2019 and $4M at December 31, 2018.
3. Excludes $67M of restricted cash in 1Q19 and $41M in 4Q18.
4. 2029 represents 1.75% €600M 10-year Eurobond which was issued in April 2019

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RECAST NON-GAAP QUARTERLY RESULTS (BWISE DIVESTITURE and EXCLUSION OF OCC NET INCOME)[(1)(2)]

($s in millions, except per share amounts)

		1Q18	2Q18	3Q18	4Q18	FY 2018	1Q19
Market Services	Net Revenues	$ 250	$ 237	$ 222	$ 249	$ 958	$ 233
	Expense	103	103	101	107	414	98
	Operating income	147	134	121	142	544	135
Information Services	Revenue	174	175	179	187	714	193
	Expense	61	63	62	67	254	69
	Operating Income	113	112	117	120	460	124
Corporate Services [(1)]	Listings	72	72	72	74	290	71
	Corporate Solutions	50	48	49	49	197	50
	Total revenue	122	120	121	123	487	121
	Expense	80	86	81	86	332	76
	Operating income	42	34	40	37	155	45
Market Technology	Revenue	60	66	68	76	270	77
	Expense	58	57	59	62	236	70
	Operating income	2	9	9	14	34	7
Corporate & Other [(1)]	Revenue	60	17	10	10	97	10
	Expense	51	16	8	8	84	9
	Operating income	9	1	2	2	13	1
Total Company	**Net revenue**	**666**	**615**	**600**	**645**	**2,526**	**634**
	Total expense	**353**	**325**	**311**	**330**	**1,320**	**322**
	Non-GAAP operating income	**313**	**290**	**289**	**315**	**1,206**	**312**
	Operating margin	*47.0%*	*47.2%*	*48.2%*	*48.8%*	*47.7%*	*49.2%*
	Net interest / other income [(2)]	(36)	(26)	(34)	(36)	(131)	(34)
	Pre-tax earnings	**277**	**264**	**255**	**279**	**1,075**	**278**
	Income tax provision	70	70	66	72	278	74
	Net income attributable to Nasdaq	**$ 207**	**$ 194**	**$ 189**	**$ 207**	**$ 797**	**$ 204**
	Average diluted shares outstanding	169.0	167.4	167.3	167.1	167.7	167.0
	Diluted earnings per share	$ 1.22	$ 1.16	$ 1.13	$ 1.24	$ 4.75	$ 1.22
	Diluted earnings per share as reported	$ 1.24	$ 1.18	$ 1.15	$ 1.26	$ 4.84	N/A

(1) In March 2019, we sold our BWise enterprise governance, risk and compliance software platform. Recast quarterly non-GAAP results reflect the exclusion of historical revenue and expenses of BWise from the Corporate Solutions business, which is part of our Corporate Services segment, to corporate items for segment reporting purposes. This change will be reflected beginning in Q2 2019 results.
(2) Recast quarterly non-GAAP results reflect the exclusion of historical net income relating to our share of OCC's net income. For further discussion, see the reconciliations of U.S. GAAP to non-GAAP results that can be found in the attachments to our press release and this presentation that is available on our website at ir.nasdaq.com.

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	$337	$3,050
Capital expenditure	(134)	(144)	(111)	(20)	(409)
Free cash flow	**642**	**765**	**917**	**317**	**2,641**
Section 31 fees, net [2]	(4)	(9)	9	57	53
Free cash flow ex. Section 31 fees	**$638**	**$756**	**$926**	**$374**	**$2,694**
Uses of cash flow					
Share repurchases	$100	$203	$394	$—	$697
Net repayment/(borrowing) of debt	(1,300)	(411)	320	235	(1,156)
Acquisitions, net of dispositions and other	1,460	776	(380)	85	1,941
Dividends paid	200	243	280	73	796
Total uses of cash flow	**$460**	**$811**	**$614**	**$393**	**$2,278**

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; $17 million in 2019 YTD; and $19 million in 2016 - 2019 YTD.

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TOTAL VARIANCE NET IMPACTS: 1Q19

			Total Variance		Organic Impact		Net Acquisition & Divestiture Impact[2]		FX Impact (Prior Year Rates)	
All figures in US$ Millions	1Q19 actual	1Q18 actual	$M	%	$M	%	$M	%	$M	%
Market Services	$233	$250	($17)	(7)%	($10)	(4)%	$—	— %	($7)	(3)%
Corporate Services	131	132	(1)	(1)%	2	2 %	—	— %	(3)	(2)%
Information Services	193	174	19	11 %	20	11 %	1	1 %	(2)	(1)%
Market Technology	77	60	17	28 %	10	17 %	10	17 %	(3)	(5)%
Other	—	50	(50)	(100)%	—	— %	(50)	(100)%	—	— %
Total Non-trading Segment Revenue[1]	**401**	**366**	**35**	**10 %**	**32**	**9 %**	**11**	**3 %**	**(8)**	**(2)%**
Total Revenue less transaction expenses	**634**	**666**	**(32)**	**(5)%**	**22**	**3 %**	**(39)**	**(6)%**	**(15)**	**(2)%**
Non-GAAP Operating Expenses	**322**	**353**	**(31)**	**(9)%**	**3**	**1 %**	**(22)**	**(6)%**	**(12)**	**(3)%**
Non-GAAP Operating Income	**312**	**313**	**(1)**	**— %**	**19**	**6 %**	**(17)**	**(5)%**	**(3)**	**(1)%**
Non-GAAP Operating Margin	**49%**	**47%**	**—**	**—**	**—**	**—**	—	—	**—**	**—**

[1]Represents our Corporate Services, Information Services and Market Technology segments.
[2]Reflects the impact of the Cinnober and Quandl acquisitions 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.

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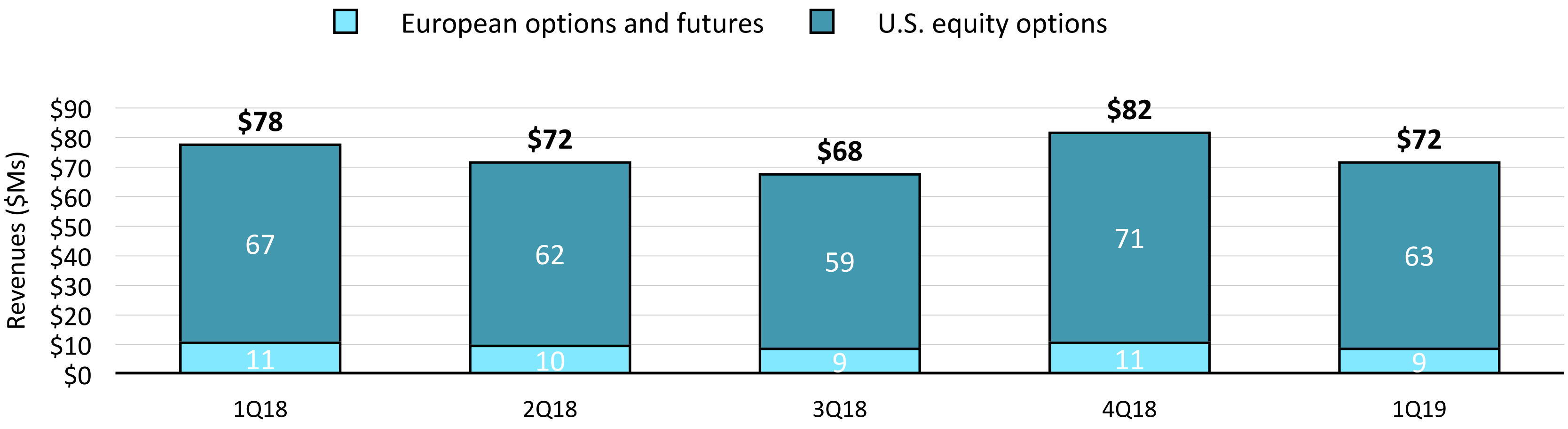
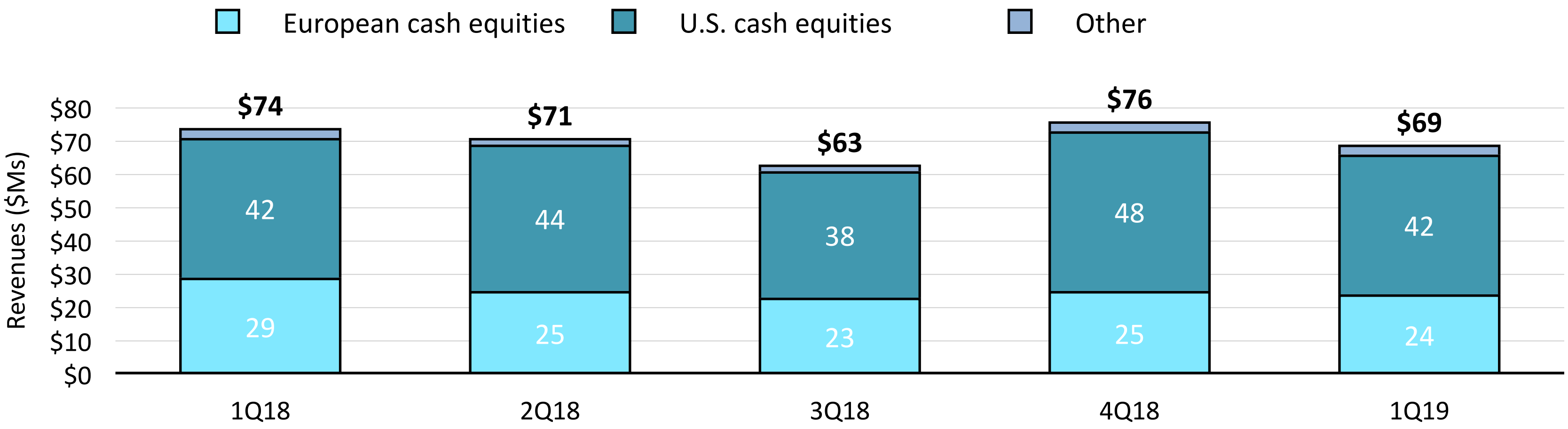
EQUITY DERIVATIVE TRADING AND CLEARING



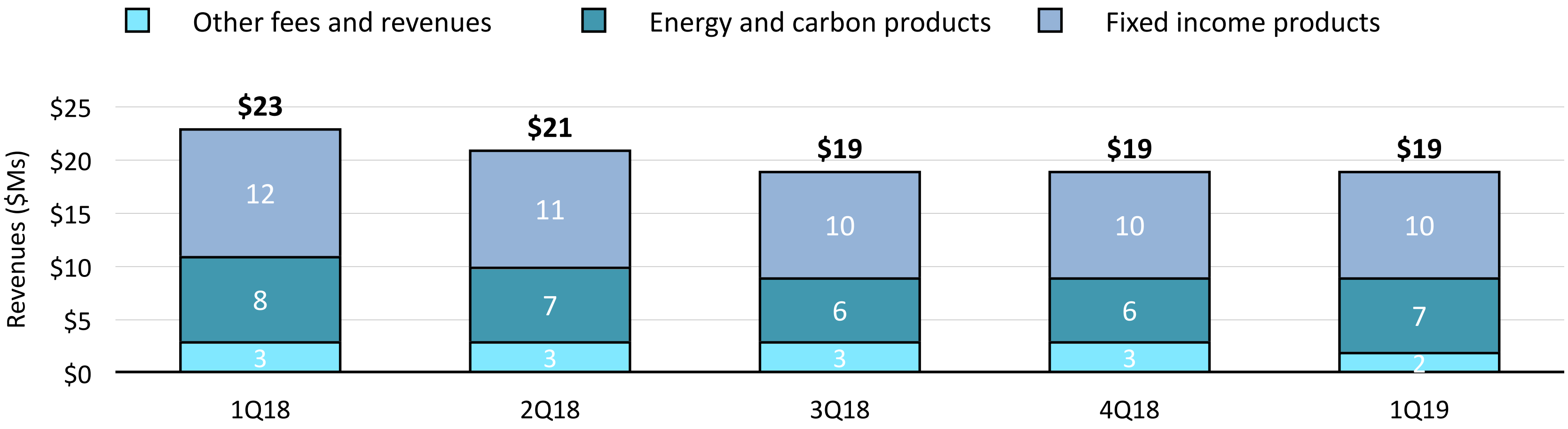
	1Q18	2Q18	3Q18	4Q18	1Q19
Net Revenues (US$ in Millions)					
U.S. equity options	67	62	59	71	63
European options and futures	11	10	9	11	9
Equity Derivatives	**78**	**72**	**68**	**82**	**72**
Nasdaq Volumes					
U.S. equity options (millions of contracts)	474	417	407	482	406
European options and futures (millions of contracts)	22.3	21.9	18.1	22.6	22.4
Revenue Capture					
U.S. equity options (RPC)	$ 0.14	$ 0.15	$ 0.15	$ 0.15	$ 0.15
European options and futures (RPC)	$ 0.47	$ 0.44	$ 0.48	$ 0.49	$ 0.42
SEK/US$ average	*$ 0.123*	*$ 0.115*	*$ 0.112*	*$ 0.111*	*$ 0.109*
Euro/US$ average	*$ 1.229*	*$ 1.191*	*$ 1.163*	*$ 1.141*	*$ 1.136*

CASH EQUITY TRADING



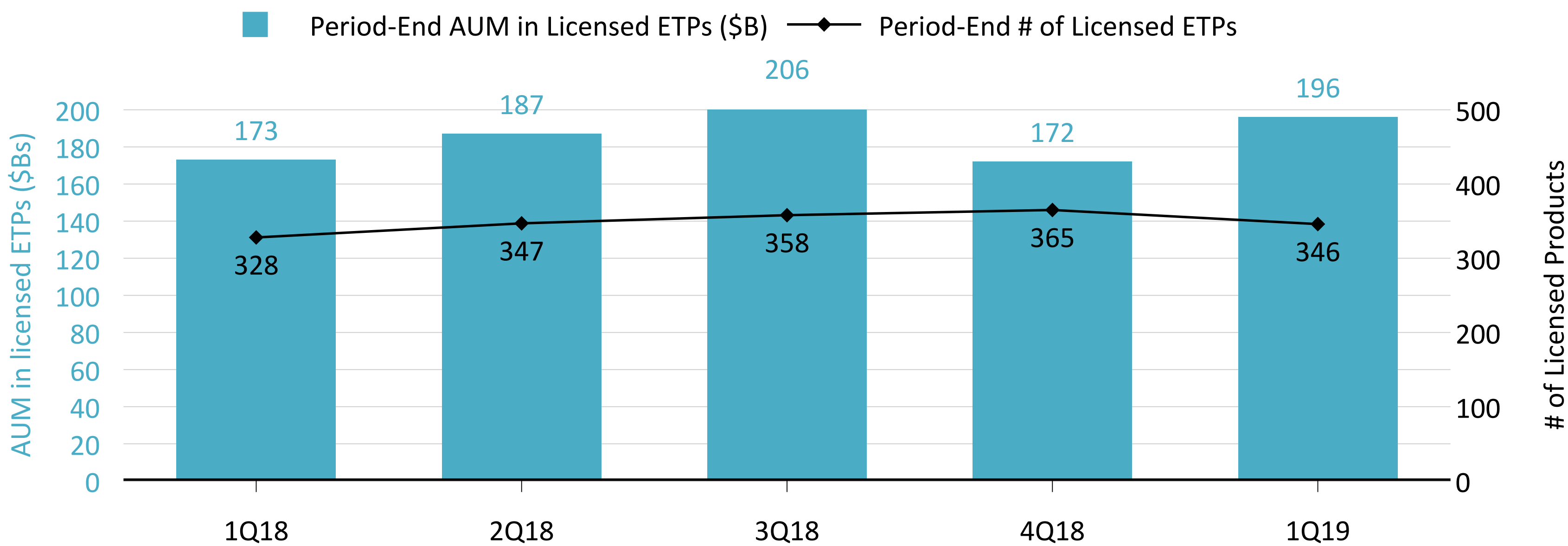
	1Q18	2Q18	3Q18	4Q18	1Q19
Net Revenues (US$ in Millions)					
U.S. cash equities	42	44	38	48	42
European cash equities	29	25	23	25	24
Other	3	2	2	3	3
Cash Equity Trading	**74**	**71**	**63**	**76**	**69**
Nasdaq Volumes					
U.S. cash equities (billions of shares)	88.6	83.8	77.8	108.3	90.6
European cash equities value shares traded ($B)	260	232	204	220	211
Revenue Capture					
U.S. cash equities revenue capture per 1000 shares	$ 0.48	$ 0.52	$ 0.48	$ 0.45	$ 0.47
European cash equities revenue capture per $1000 traded	$ 0.11	$ 0.11	$ 0.12	$ 0.11	$ 0.11
SEK/US$ average	*$ 0.123*	*$ 0.115*	*$ 0.112*	*$ 0.111*	*$ 0.109*
Euro/US$ average	*$ 1.229*	*$ 1.191*	*$ 1.163*	*$ 1.141*	*$ 1.136*

FIXED INCOME AND COMMODITIES TRADING & CLEARING



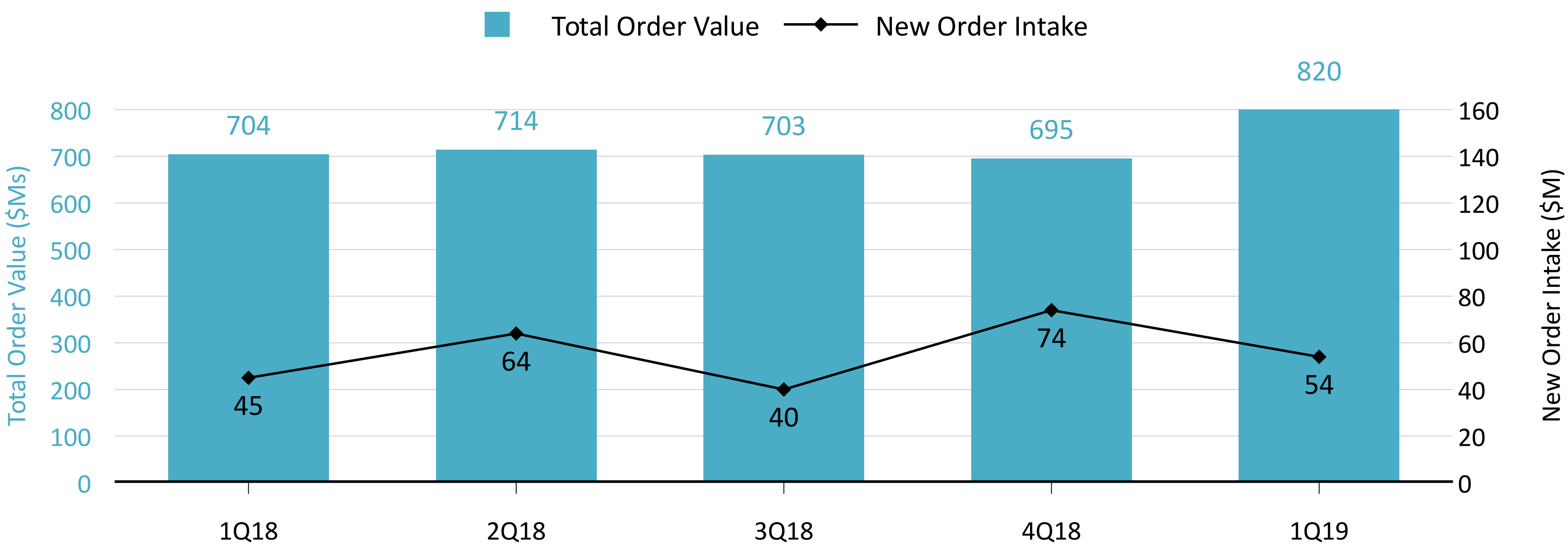
	1Q18	2Q18	3Q18	4Q18	1Q19
Net Revenues (US$ in Millions)					
Fixed income products	12	11	10	10	10
Energy and carbon products	8	7	6	6	7
Other fees and revenues	3	3	3	3	2
Fixed Income and Commodities Trading and Clearing	**23**	**21**	**19**	**19**	**19**
Nasdaq Volumes					
U.S. Fixed income trading volume (billions of $ notional)	5,156	4,134	3,194	3,499	2,715
European Fixed income products (millions of contracts)	8.3	7.5	7.9	9.4	7.3
Energy trading and clearing (TWh)	397	451	404	303	367
Revenue Capture					
European Fixed Income (RPC)	$ 0.65	$ 0.58	$ 0.48	$ 0.42	$ 0.61
Energy trading and clearing ($1000 per TWh traded and cleared)	$ 20.3	$ 16.7	$ 15.6	$ 19.9	$ 18.8
SEK/US$ average	*$ 0.123*	*$ 0.115*	*$ 0.112*	*$ 0.111*	*$ 0.109*
Euro/US$ average	*$ 1.229*	*$ 1.191*	*$ 1.163*	*$ 1.141*	*$ 1.136*

INDEX



	1Q18	2Q18	3Q18	4Q18	1Q19
Period-End # of Licensed ETPs	**328**	**347**	**358**	**365**	**346**
Period-End AUM in Licensed ETPs ($B)	**173**	**187**	**206**	**172**	**196**
Index Revenues ($M)	**50**	**50**	**52**	**54**	**54**

MARKET TECHNOLOGY



	1Q18	2Q18	3Q18	4Q18	1Q19
New Order Intake ($M)	**45**	**64**	**40**	**74**	**54**
Total Order Value ($M)	**704**	**714**	**703**	**695**	**820**
Net Revenue ($M)	**60**	**66**	**68**	**76**	**77**

RECONCILIATIONS OF U.S. GAAP to NON-GAAP

NON-GAAP ADJUSTMENTS

(US$ millions)	1Q19	4Q18	3Q18	2Q18	1Q18	2018	2017	2016
Amortization expense of acquired intangible assets [1]	$ 26	$ 26	$ 27	$ 28	$ 28	$ 109	$ 92	$ 82
Merger and strategic initiatives expense [2]	9	14	6	(10)	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]	—	—	—	—	—	—	10	—
Net gain on divestiture of businesses [8]	(27)	—	8	(41)	—	(33)	—	—
Clearing default [9]	—	23	8	—	—	31	—	—
Net income from unconsolidated investees [10]	(45)	(5)	(5)	(4)	(2)	(16)	(13)	(1)
Other [11]	2	11	2	3	2	17	3	(1)
Gain on sale of investment security [12]	—	(118)	—	—	—	(118)	—	—
Total Non-GAAP adjustments	**(35)**	**(49)**	**46**	**(24)**	**38**	**11**	**136**	**793**
Non-GAAP adjustment to the income tax (benefit) provision [13]	(4)	15	(16)	15	(8)	6	(66)	(313)
Impact of enacted U.S. tax legislation [14]	—	289	(4)	—	5	290	(89)	—
Excess tax benefits related to employee share-based compensation[15]	(4)	(4)	—	—	(5)	(9)	(40)	—
Reversal of Swedish tax benefits[16]	—	—	—	41	—	41	—	—
Reversal of Finnish tax benefits[17]	—	—	—	—	—	—	—	27
Total Non-GAAP tax adjustments	**(8)**	**300**	**(20)**	**56**	**(8)**	**328**	**(195)**	**(286)**
Total Non-GAAP Adjustments, net of tax	**$ (43)**	**$ 251**	**$ 26**	**$ 32**	**$ 30**	**$ 339**	**$ (59)**	**$ 507**

Please see pages 23-24 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) 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 year ended December 31, 2017, primarily included a make-whole redemption price premium paid on the early extinguishment of previously outstanding debt. This charge was recorded in general, administrative and other expense in our Consolidated Statements of Income.

(8) In March 2019, we completed the sale of our 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 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. In 2018, we recorded $16 million of income relating to our share of OCC’s net income. We were not able to determine the impact of the disapproval of the OCC capital plan on OCC's 2018 net income until March 2019, when OCC's 2018 financial statements were made available to us. As a result, in March 2019, we recognized an additional $36 million of income relating to our share of OCC's net income for the year ended December 31, 2018. In March 2019, we also recognized our share of OCC's first quarter 2019 net income of $9 million. We will 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. See footnote 10 above for further discussion.

(14) For the three months and year ended December 31, 2018, we recorded an increase to tax expense of $289 million and $290 million, respectively. In the fourth quarter of 2018, we finalized the provisional estimate related to the Tax Cuts and Jobs Act, resulting in an increase to expense of $289 million and a reduction to deferred tax assets related to foreign currency translation. For the three months ended September 30, 2018, we recorded a decrease to tax expense due to the remeasurement of certain deferred tax assets and liabilities. For the three months ended March 31, 2018, we recorded an increase to tax expense which reflects the reduced federal tax benefit associated with state unrecognized tax benefits. For the three months and year ended December 31, 2017, we recorded a decrease to 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.

(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 (LOSS) AND DILUTED EARNINGS (LOSS) PER COMMON SHARE

(US$ millions, except per share)	1Q19	4Q18	1Q18	2018	2017	2016
U.S. GAAP operating expenses:	**$359**	**$404**	**$393**	**$1,498**	**$1,420**	**$1,440**
Total Non-GAAP adjustments:	(37)	(74)	(40)	(178)	(149)	(216)
Non-GAAP operating expenses:	**$322**	**$330**	**$353**	**$1,320**	**$1,271**	**$1,224**
U.S. GAAP operating income:	**$275**	**$241**	**$273**	**$1,028**	**$991**	**$836**
Total Non-GAAP adjustments:	37	74	40	178	149	216
Non-GAAP operating income:	**$312**	**$315**	**$313**	**$1,206**	**$1,140**	**$1,052**
Revenues less transaction based expenses	**$634**	**$645**	**$666**	**$2,526**	**$2,411**	**$2,276**
U.S.-GAAP operating margin (1)	**43%**	**37%**	**41%**	**41%**	**41%**	**37%**
Non-GAAP operating margin (2)	**49%**	**49%**	**47%**	**48%**	**47%**	**46%**
U.S. GAAP net income (loss) attributable to Nasdaq:	**$247**	**($44)**	**$177**	**$458**	**$729**	**$106**
Total Non-GAAP Adjustments, net of tax:	(43)	251	30	339	(59)	507
Non-GAAP net income attributable to Nasdaq:	**$204**	**$207**	**$207**	**$797**	**$670**	**$613**
U.S. GAAP diluted earnings (loss) per share (3)**:**	**$1.48**	**($0.27)**	**$1.05**	**$2.73**	**$4.30**	**$0.63**
Total adjustments from non-GAAP net income above:	(0.26)	1.51	0.17	2.02	(0.35)	3.00
Non-GAAP diluted earnings per share:	**$1.22**	**$1.24**	**$1.22**	**$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.
3. Due to the net loss for the quarter ended December 31, 2018, the diluted earnings (loss) per share calculation excludes 3.2 million of employee stock awards as they were anti-dilutive.

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	$	%	$	%	$	%
1Q19[2]	$401	$366	35	10%	32	9%	3	1 %
4Q18[2]	396	358	38	11%	36	10%	2	1 %
3Q18[2]	378	338	40	12%	21	6%	19	6 %
2Q18[2]	372	324	48	15%	27	8%	21	6 %
2018[2]	$1,512	$1,336	176	13%	113	8%	63	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. 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$ Millions	Current Period	Prior-year Period	$	%	$	%	$	%
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)%
2Q18	237	222	15	7 %	13	6 %	2	1 %
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.

Nasdaq

EBITDA: EARNINGS BEFORE INTEREST, TAXES, DEPRECIATION AND AMORTIZATION

(US$ millions)	TTM	1Q19	4Q18	3Q18	2Q18
GAAP net income (loss) attributable to Nasdaq:	**$528**	**$247**	**($44)**	**$163**	**$162**
Income tax provision	610	66	372	46	126
Net income from unconsolidated investees	(60)	(45)	(4)	(6)	(5)
Other investment income	(8)	—	—	—	(8)
Net gain on the sale of businesses	(60)	(27)	—	8	(41)
Gain on sale of investment security	(118)	—	(118)	—	—
Net interest expense	139	34	35	35	35
GAAP operating income:	**$1,031**	**$275**	**$241**	**$246**	**$269**
Non-GAAP Adjustments [1]	175	37	74	43	21
Non-GAAP operating income:	**$1,206**	**$312**	**$315**	**$289**	**$290**
Depreciation and amortization of tangibles (Nasdaq)	98	22	25	26	25
EBITDA of BWise and Public Relations Solutions and Digital Media Services business pre-divestiture; and Cinnober and Quandl pre-acquisition	(15)	—	(5)	(3)	(7)
EBITDA pro forma for acquisitions and divestitures:	**$1,289**	**$334**	**$335**	**$312**	**$308**

1. Please see slides 22-24 for reconciliation of GAAP operating income to non-GAAP operating income.

Nasdaq

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

	Three Months Ended Mar 31, 2019		
(US$ millions, except effective tax rate)	U.S. GAAP	Non-GAAP Adjustments [1]	Non-GAAP
Income before income taxes	**$313**	**($35)**	**$278**
Income tax provision	66	8	74
Net Income	**$247**	**($43)**	**$204**
Effective tax rate	**21%**	**(23)%**	**27%**

1. Please see slides 22-24 for details of non-GAAP adjustments and non-GAAP adjustment to the income tax provision.

Nasdaq

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.

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 factos 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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