



# 4Q19 Earnings Presentation

January 29, 2020

# NASDAQ 4Q19 HIGHLIGHTS

Driving Accelerating Growth, Creating Sustainable Value

## Non-Trading Segments Organic Revenue Growth<sup>1</sup>

4Q19: +6% Y-o-Y

2019: +8% Y-o-Y

## Market Technology Organic Revenue Growth<sup>1</sup>

4Q19: +12% Y-o-Y

2019: +11% Y-o-Y

## Information Services Organic Revenue Growth<sup>1</sup>

4Q19: +4% Y-o-Y

2019: +9% Y-o-Y

## Corporate Services Organic Revenue Growth<sup>1</sup>

4Q19: +5% Y-o-Y

2019: +3% Y-o-Y

## Non-GAAP Operating Margin<sup>2</sup>

49% in 2019

versus

48% in 2018

## Capital Returned to Shareholders

\$505 million in 2019,  
including \$200 million  
in share repurchases

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

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

# 4Q19 NON-GAAP SUMMARY<sup>(1)</sup>

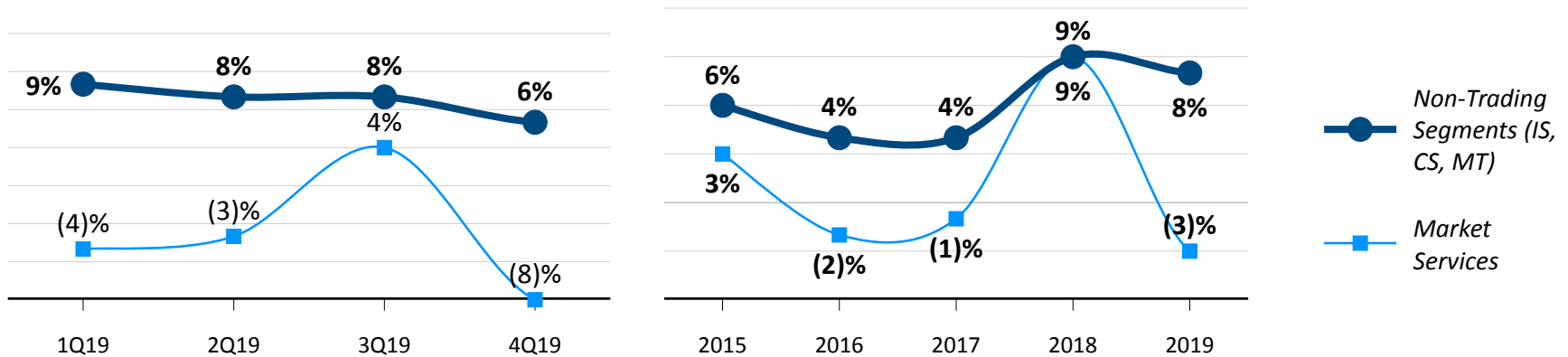
<i>(US\$ millions, except per share)</i>	4Q19	4Q18	% Δ
Revenue from non-trading segments <sup>(2)</sup>	\$421	\$386	9%
Market Services Net Revenue <sup>(3)</sup>	\$225	\$249	(10)%
Other Revenue	\$—	\$10	(100)%
<b>Net Revenues<sup>(3)</sup></b>	<b>\$646</b>	<b>\$645</b>	<b>—%</b>
Operating Expenses	\$335	\$330	2%
Operating Income	\$311	\$315	(1)%
Operating Margin	48%	49%	—
<b>Net Income</b>	<b>\$215</b>	<b>\$207</b>	<b>4%</b>
<b>Diluted EPS</b>	<b>\$1.29</b>	<b>\$1.24</b>	<b>4%</b>
Diluted Shares Outstanding	166.8	167.1	—%

- 4Q19 net revenues<sup>(3)</sup> totaled \$646 million.
  - Revenues from non-trading segments<sup>(2)</sup> increased 9%, or \$35 million y-o-y, with increases in Information Services, Market Technology and Corporate Services.
  - Net revenues<sup>(3)</sup> from Market Services decreased 10%, or \$24 million y-o-y.
  - Other revenues declined \$10 million y-o-y, due to 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<sup>(1)</sup>



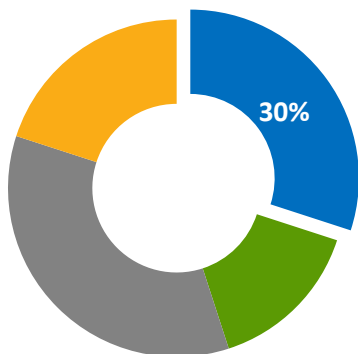
## NASDAQ MEDIUM-TERM (3-5 YR) ORGANIC REVENUE GROWTH OUTLOOK

U.S. GDP <sup>(2)</sup>	Information Services	Market Technology	Corporate Services	Non-Trading Segments (IS, CS, MT)
1.9%	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 2020 and 2021 according to Consensus Economics Inc.

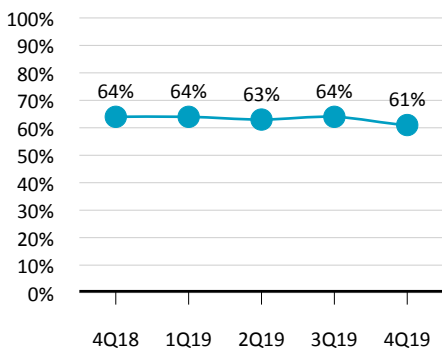
# INFORMATION SERVICES

IS 4Q19  
Net Revenue  
Contribution

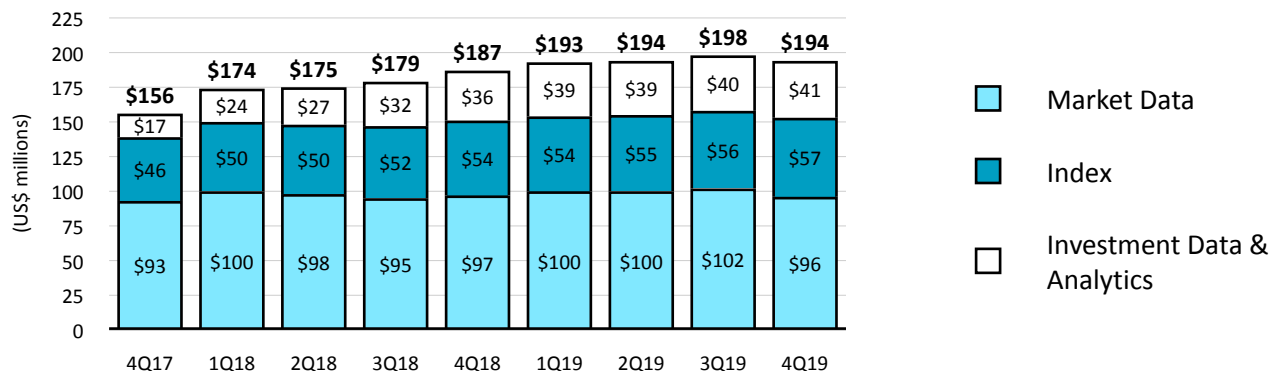


Information Services Performance Summary				
	4Q19	4Q18	% Δ	
Net Revenue	\$194M	\$187M	4%	<ul style="list-style-type: none"> <li>• <b>1% decrease in Market Data revenues:</b> Primarily due to unfavorable changes in foreign exchange rates.</li> </ul>
Operating Income	\$118M	\$120M	(2)%	<ul style="list-style-type: none"> <li>• <b>6% increase in Index revenues:</b> Primarily driven by higher licensing revenue from higher average assets under management (AUM) in exchange traded products (ETPs) linked to Nasdaq indexes.</li> </ul>
Operating Income Margin	61%	64%		<ul style="list-style-type: none"> <li>• <b>14% increase in Investment Data &amp; Analytics revenues:</b> Primarily due to organic growth in eInvestment.</li> </ul>

Operating Income Margin <sup>(1)</sup>



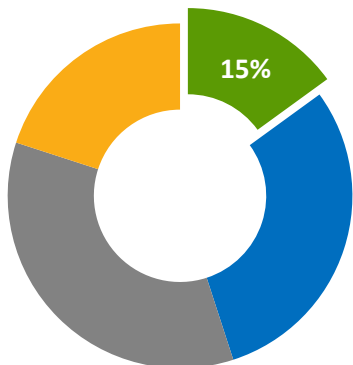
INFORMATION SERVICES NET REVENUES



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.

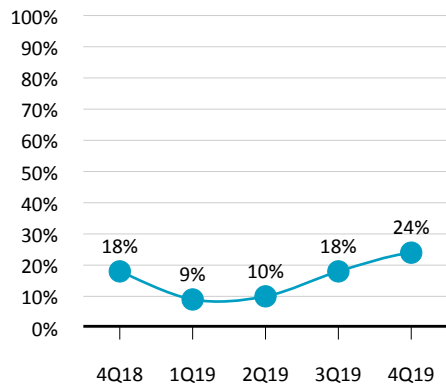
# MARKET TECHNOLOGY

MT 4Q19  
Net Revenue  
Contribution

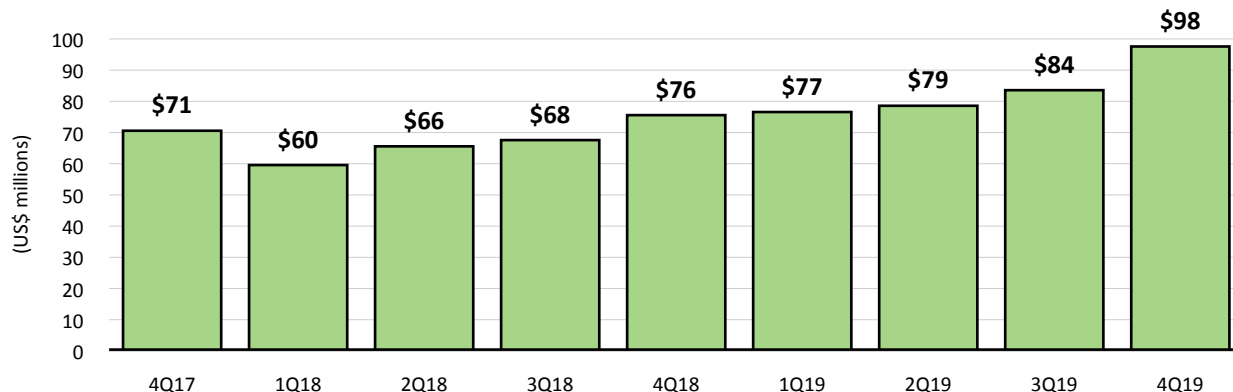


Market Technology Performance Summary				
	4Q19	4Q18	% Δ	
Net Revenue	\$98M	\$76M	29%	<ul style="list-style-type: none"> <li>• <b>29% growth in Market Technology revenues:</b> <i>Primarily due the impact of the Cinnober acquisition, an increase in change request revenues, software as a service (SaaS) surveillance revenues and an increase in the size and number of software delivery projects.</i></li> <li>• <b>\$204 million new order intake and \$260 million in annualized recurring revenue, or ARR, in 4Q19, the latter an increase of 17% from the prior year period.</b></li> </ul>
Operating Income	\$24M	\$14M	71%	
Operating Income Margin	24%	18%		

Operating Income Margin

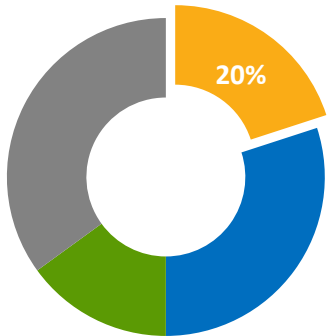


MARKET TECHNOLOGY NET REVENUES



# CORPORATE SERVICES

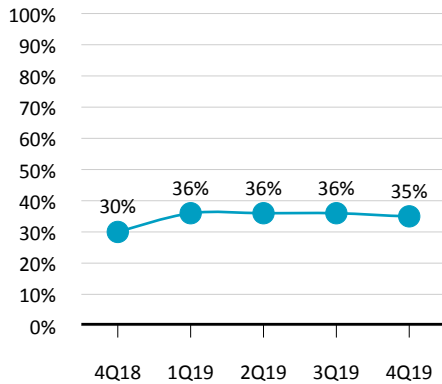
CS 4Q19  
Net Revenue  
Contribution



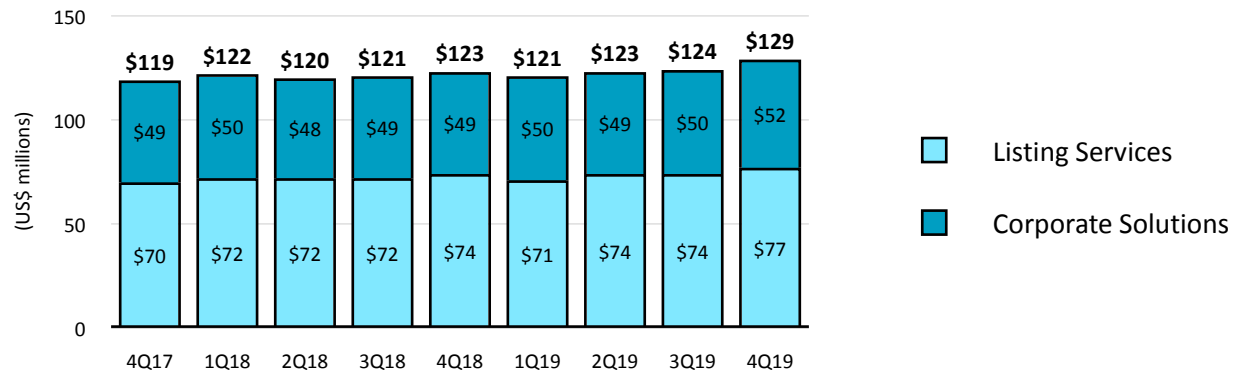
Corporate Services Performance Summary			
	4Q19	4Q18	% Δ
Net Revenue	\$129M	\$123M	5%
Operating Income	\$45M	\$37M	22%
<b>Operating Income Margin</b>	35%	30%	

- **4% increase in Listing Services revenues:** Reflecting higher listings revenues due to an increase in the number of listed companies.
- **6% increase Corporate Solutions revenues:** Reflecting an increase in IR intelligence revenues.
- 107 new U.S. listings including 50 IPOs in 4Q19, and a 82% U.S. IPO win rate. European new listings totaled 17 in 4Q19.

Operating Income Margin

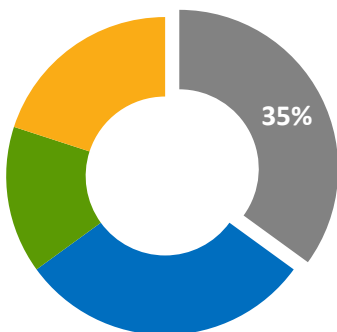


## CORPORATE SERVICES NET REVENUES

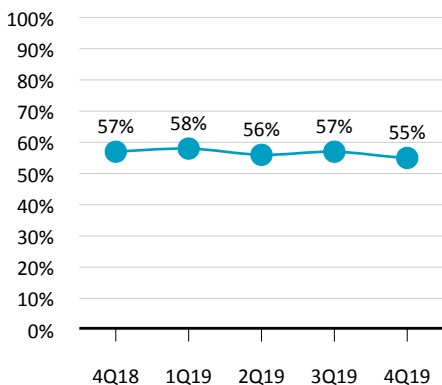


# MARKET SERVICES

MS 4Q19  
Net Revenue  
Contribution



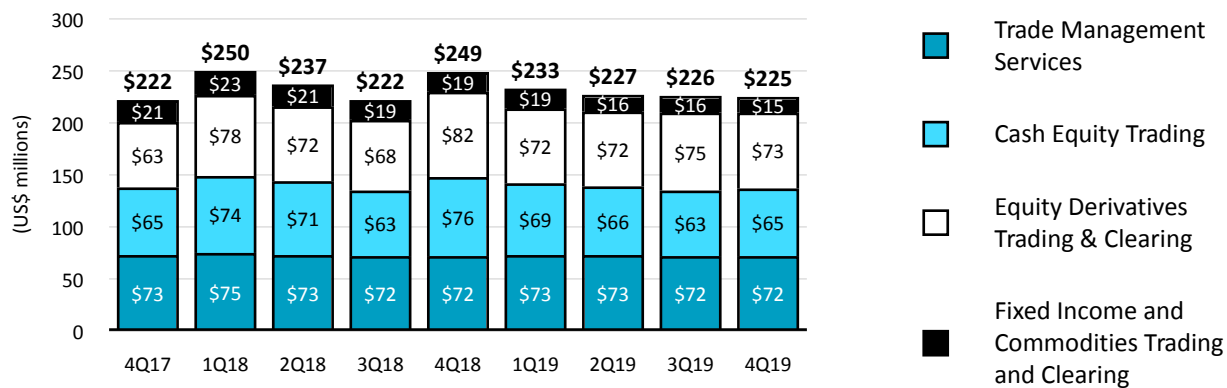
Operating Income Margin



## Market Services Performance Summary

	4Q19	4Q18	% Δ	
Net Revenue	\$225M	\$249M	(10)%	<ul style="list-style-type: none"> <li>• <b>11% decrease in Equity Derivative Trading and Clearing revenues:</b> Primary reflects lower U.S. industry trading volumes versus an active 2018 period.</li> <li>• <b>14% decrease in Cash Equity Trading revenues:</b> Primarily reflects lower industry volumes versus an active 2018 period and lower overall matched market share executed on Nasdaq's U.S. exchanges, partially offset by a higher net capture rate.</li> <li>• <b>21% decrease in Fixed Income and Commodities Trading and Clearing revenues:</b> The decrease in revenues was primarily driven by lower net revenues due to the sale of the core assets of our NFX business and lower volumes in U.S. fixed income products.</li> <li>• <b>Unchanged Trade Management Services revenues.</b></li> </ul>
Operating Income	\$124M	\$142M	(13)%	
Operating Income Margin	55%	57%		

## MARKET SERVICES NET REVENUES



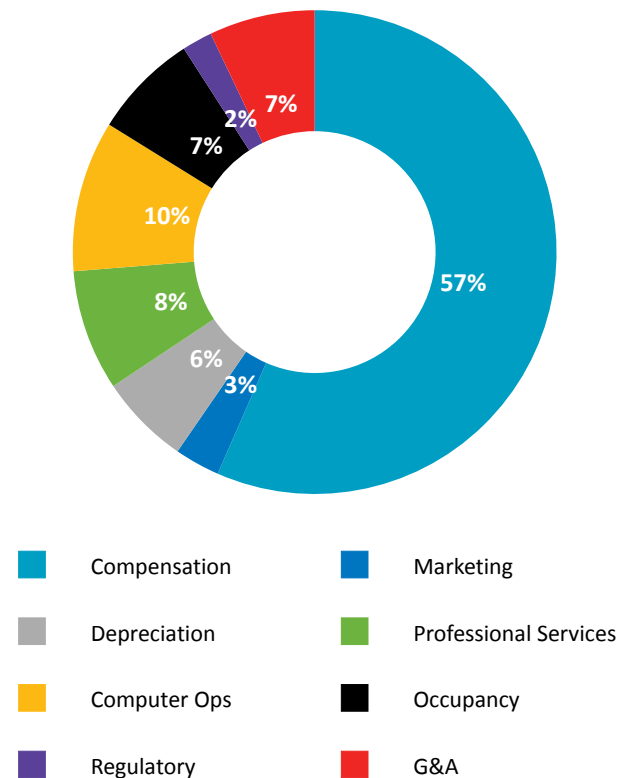


# NON-GAAP OPERATING EXPENSES<sup>1</sup>

(US\$ millions)

Total Non-GAAP operating expenses	4Q19	3Q19	4Q18
Compensation and benefits	189	175	179
Professional and contract services <sup>(2)</sup>	27	30	35
Computer operations and data communications	35	33	33
Occupancy <sup>(2)</sup>	23	24	23
General, admin. & other <sup>(2)</sup>	22	17	16
Marketing and advertising	10	8	11
Depreciation and amortization <sup>(2)</sup>	21	22	25
Regulatory	8	8	8
<b>Total non-GAAP operating expenses</b>	<b>335</b>	<b>317</b>	<b>330</b>

4Q19 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. For 4Q19, occupancy expense was also adjusted. Refer to slides 21-23 for the amounts and details of the adjustments for all periods presented.

# 2020 NON-GAAP EXPENSE AND TAX GUIDANCE<sup>1</sup>

## Nasdaq Non-GAAP Operating Expense Guidance

Core Non-GAAP  
Operating Expenses

*\$1,220-\$1,250 Million*

R&D Expenses

*\$90-\$110 Million*

**Total Non-GAAP  
Operating Expenses**

*\$1,310-\$1,360 Million*

**Non-GAAP Tax Rate**

*25.5% - 27.5%*

<sup>1</sup>U.S. GAAP operating expense and tax rate guidance are 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

- 4Q19 total debt decreased \$91M versus 3Q19 primarily due to net payment of \$148M of commercial paper partially offset by a \$56M increase in Euro Notes book value caused by a stronger Euro.
- 4Q19 Total debt to EBITDA remained at 2.6x as compared to 3Q19.
- 4Q19 net interest expense was \$26M, \$9M lower than in 4Q18, primarily due to lower debt balances and refinancing the 5.55% \$600M Notes with a new 1.75% €600M Notes.

## \$3.1B Net Debt

(US\$ millions)	12/31/2019	9/30/2019	Maturity Date
Commercial Paper	391	539	Various
Revolver (Libor + 117.5 bps) <sup>(2)</sup>	(2)	(3)	Apr 2022
3.88% Euro Notes	671	652	Jun 2021
1.75% Euro Notes	668	649	May 2023
4.25% Notes	497	497	Jun 2024
3.85% Notes	497	497	Jun 2026
1.75% Euro Notes	665	647	Mar 2029
<b>Total Debt Obligations</b>	<b>\$3,387</b>	<b>\$3,478</b>	
Less Cash and Cash Equivalents <sup>(3)</sup>	(332)	(304)	
<b>Net Debt</b>	<b>\$3,055</b>	<b>\$3,174</b>	

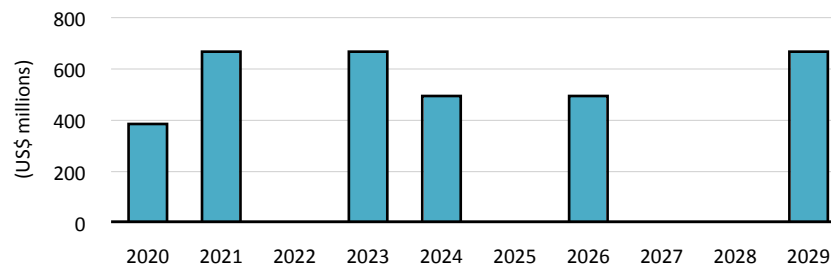
## Leverage Ratios

Net Debt to EBITDA <sup>(1)</sup> = 2.3x

Total Debt to EBITDA <sup>(1)</sup> = 2.6x

LTM EBITDA <sup>(1)</sup> = \$1,327M

## Well Laddered Debt Maturities



1. See Appendix for EBITDA reconciliation.
2. Includes debt issuance costs of \$2M at Dec 31, 2019 and \$3M at Sep 30, 2019
3. Excludes \$30M of restricted cash in 4Q19 and \$29M in 3Q19.

# APPENDIX

# HISTORICAL CASH FLOW/ USES OF CASH FLOW

Free Cash Flow Calculation (US\$ millions)	2016	2017	2018	2019	2016-2019
Cash flow from operations	\$776	\$909	\$1,028	\$963	\$3,676
Capital expenditure	(134)	(144)	(111)	(127)	(516)
<b>Free cash flow</b>	<b>642</b>	<b>765</b>	<b>917</b>	<b>836</b>	<b>3,160</b>
Section 31 fees, net <sup>(1)</sup>	(4)	(9)	9	(14)	(18)
<b>Free cash flow ex. Section 31 fees</b>	<b>\$638</b>	<b>\$756</b>	<b>\$926</b>	<b>\$822</b>	<b>\$3,142</b>
<b>Uses of cash flow</b>					
Share repurchases	\$100	\$203	\$394	\$200	\$897
Net repayment/(borrowing) of debt	(1,300)	(411)	320	430	(961)
Acquisitions, net of dispositions and other	1,460	776	(380)	63	1,919
Dividends paid	200	243	280	305	1,028
<b>Total uses of cash flow</b>	<b>\$460</b>	<b>\$811</b>	<b>\$614</b>	<b>\$998</b>	<b>\$2,883</b>

1. Net of change in Section 31 fees receivables of \$1 million in 2016; \$11 million in 2017; \$(10) million in 2018; \$9 million in 2019; and \$11 million in 2016-2019.

# TOTAL VARIANCE NET IMPACTS: 4Q19 AND 2019

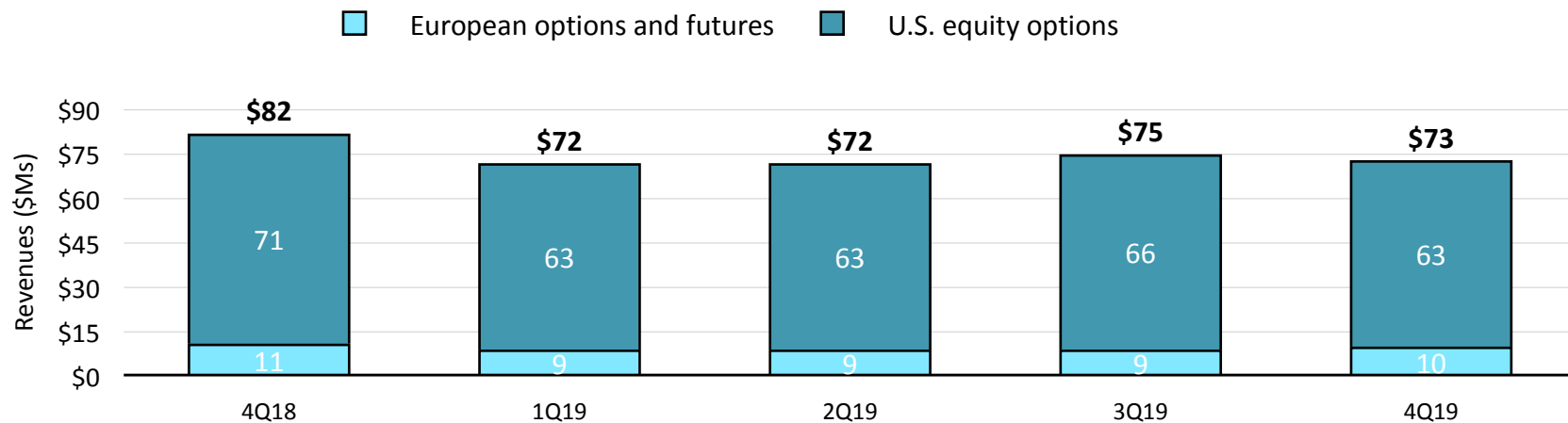
All figures in US\$ Millions	4Q19	4Q18	Total Variance		Organic Impact		Net Acquisition & Divestiture Impact <sup>2</sup>		FX Impact (Prior Year Rates)	
			\$M	%	\$M	%	\$M	%	\$M	%
Market Services	\$225	\$249	(\$24)	(10)%	(\$21)	(8)%	\$—	— %	(\$3)	(1)%
Corporate Services	129	123	6	5 %	6	5 %	1	1 %	(1)	(1)%
Information Services	194	187	7	4 %	7	4 %	1	1 %	(1)	(1)%
Market Technology	98	76	22	29 %	9	12 %	13	17 %	—	— %
Other	—	10	(10)	(100)%	—	— %	(10)	(100)%	—	— %
<b>Total Non-trading Segment Revenue<sup>1</sup></b>	<b>421</b>	<b>386</b>	<b>35</b>	<b>9 %</b>	<b>22</b>	<b>6 %</b>	<b>15</b>	<b>4 %</b>	<b>(2)</b>	<b>(1)%</b>
<b>Total Revenue less transaction expenses</b>	<b>646</b>	<b>645</b>	<b>1</b>	<b>— %</b>	<b>1</b>	<b>— %</b>	<b>5</b>	<b>1 %</b>	<b>(5)</b>	<b>(1)%</b>
<b>Non-GAAP Operating Expenses</b>	<b>335</b>	<b>330</b>	<b>5</b>	<b>2 %</b>	<b>8</b>	<b>2 %</b>	<b>1</b>	<b>— %</b>	<b>(4)</b>	<b>(1)%</b>
<b>Non-GAAP Operating Income</b>	<b>311</b>	<b>315</b>	<b>(4)</b>	<b>(1)%</b>	<b>(7)</b>	<b>(2)%</b>	<b>4</b>	<b>1 %</b>	<b>(1)</b>	<b>— %</b>
<b>Non-GAAP Operating Margin</b>	<b>48%</b>	<b>49%</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

All figures in US\$ Millions	2019	2018	Total Variance		Organic Impact		Net Acquisition & Divestiture Impact <sup>2</sup>		FX Impact (Prior Year Rates)	
			\$M	%	\$M	%	\$M	%	\$M	%
Market Services	\$912	\$958	(\$46)	(5)%	(\$29)	(3)%	\$—	— %	(\$17)	(2)%
Corporate Services	496	487	9	2 %	15	3 %	1	— %	(7)	(1)%
Information Services	779	714	65	9 %	67	9 %	3	— %	(5)	(1)%
Market Technology	338	270	68	25 %	30	11 %	44	16 %	(6)	(2)%
Other	10	97	(87)	(90)%	—	—	(87)	(90)%	—	— %
<b>Total Non-trading Segment Revenue<sup>1</sup></b>	<b>1,613</b>	<b>1,471</b>	<b>142</b>	<b>10 %</b>	<b>112</b>	<b>8 %</b>	<b>48</b>	<b>3 %</b>	<b>(18)</b>	<b>(1)%</b>
<b>Total Revenue less transaction expenses</b>	<b>2,535</b>	<b>2,526</b>	<b>9</b>	<b>— %</b>	<b>83</b>	<b>3 %</b>	<b>(39)</b>	<b>(2)%</b>	<b>(35)</b>	<b>(1)%</b>
<b>Non-GAAP Operating Expenses</b>	<b>1,295</b>	<b>1,320</b>	<b>(25)</b>	<b>(2)%</b>	<b>28</b>	<b>2 %</b>	<b>(23)</b>	<b>(2)%</b>	<b>(30)</b>	<b>(2)%</b>

<sup>1</sup>Represents our Corporate Services, Information Services and Market Technology segments.

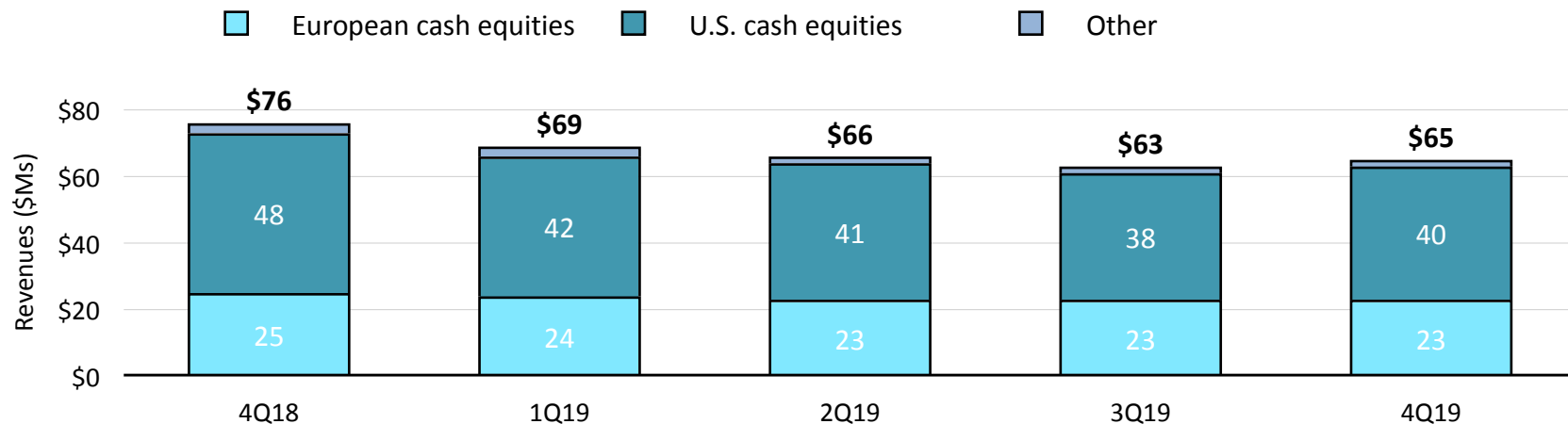
<sup>2</sup>Reflects the impact of the Cinnober and Quandl acquisitions, the sale of the Bwise enterprise governance, risk and compliance software platform in March 2019, and the sale of the Public Relations Solutions and Digital Media Services businesses in mid-April 2018.

# EQUITY DERIVATIVE TRADING AND CLEARING



	4Q18	1Q19	2Q19	3Q19	4Q19
<b>Net Revenues (US\$ in Millions)</b>					
U.S. equity options	71	63	63	66	63
European options and futures	11	9	9	9	10
<b>Equity Derivatives</b>	<b>82</b>	<b>72</b>	<b>72</b>	<b>75</b>	<b>73</b>
<b>Nasdaq Volumes</b>					
U.S. equity options (millions of contracts)	482	406	420	434	434
European options and futures (millions of contracts)	22.6	22.4	22.7	21.8	24.8
<b>Revenue Capture</b>					
U.S. equity options (RPC)	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.14
European options and futures (RPC)	\$ 0.49	\$ 0.42	\$ 0.40	\$ 0.39	\$ 0.40
<i>SEK/US\$ average</i>	\$ 0.111	\$ 0.109	\$ 0.106	\$ 0.104	\$ 0.104
<i>Euro/US\$ average</i>	\$ 1.141	\$ 1.136	\$ 1.124	\$ 1.111	\$ 1.107

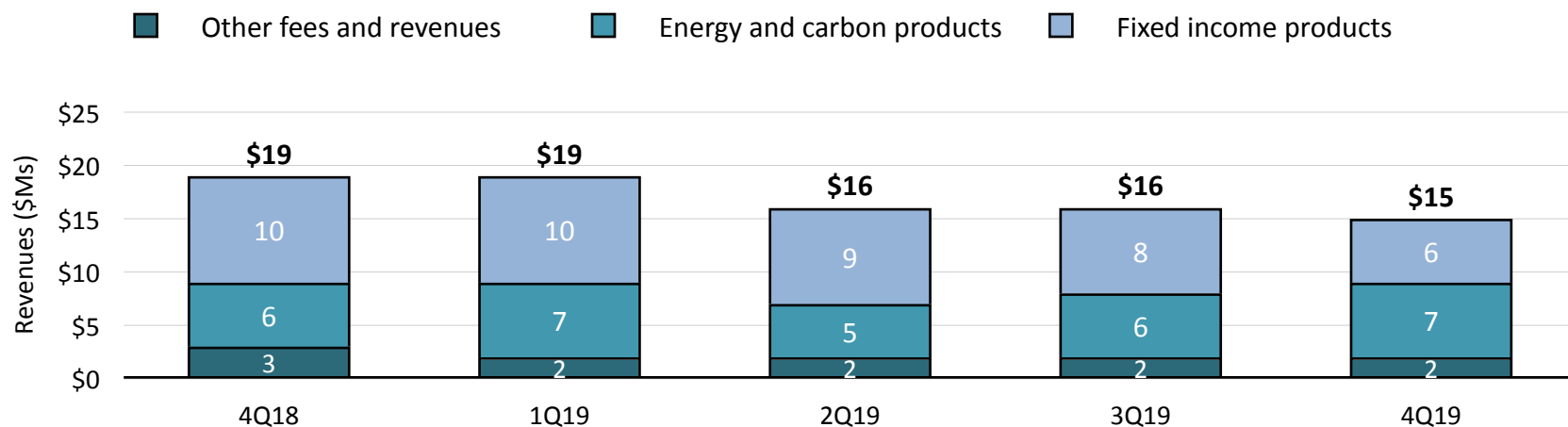
# CASH EQUITY TRADING



	4Q18	1Q19	2Q19	3Q19	4Q19
<b>Net Revenues (US\$ in Millions)</b>					
U.S. cash equities	48	42	41	38	40
European cash equities	25	24	23	23	23
Other	3	3	2	2	2
<b>Cash Equity Trading</b>	<b>76</b>	<b>69</b>	<b>66</b>	<b>63</b>	<b>65</b>
<b>Nasdaq Volumes</b>					
U.S. cash equities (billions of shares)	108.3	90.6	87.7	90.2	79.5
European cash equities value shares traded (\$B)	220	211	189	192	202
<b>Revenue Capture</b>					
U.S. cash equities revenue capture per 1000 shares	\$ 0.45	\$ 0.47	\$ 0.46	\$ 0.42	\$ 0.50
European cash equities revenue capture per \$1000 traded	\$ 0.11	\$ 0.11	\$ 0.12	\$ 0.12	\$ 0.12
<i>SEK/US\$ average</i>	\$ 0.111	\$ 0.109	\$ 0.106	\$ 0.104	\$ 0.104
<i>Euro/US\$ average</i>	\$ 1.141	\$ 1.136	\$ 1.124	\$ 1.111	\$ 1.107

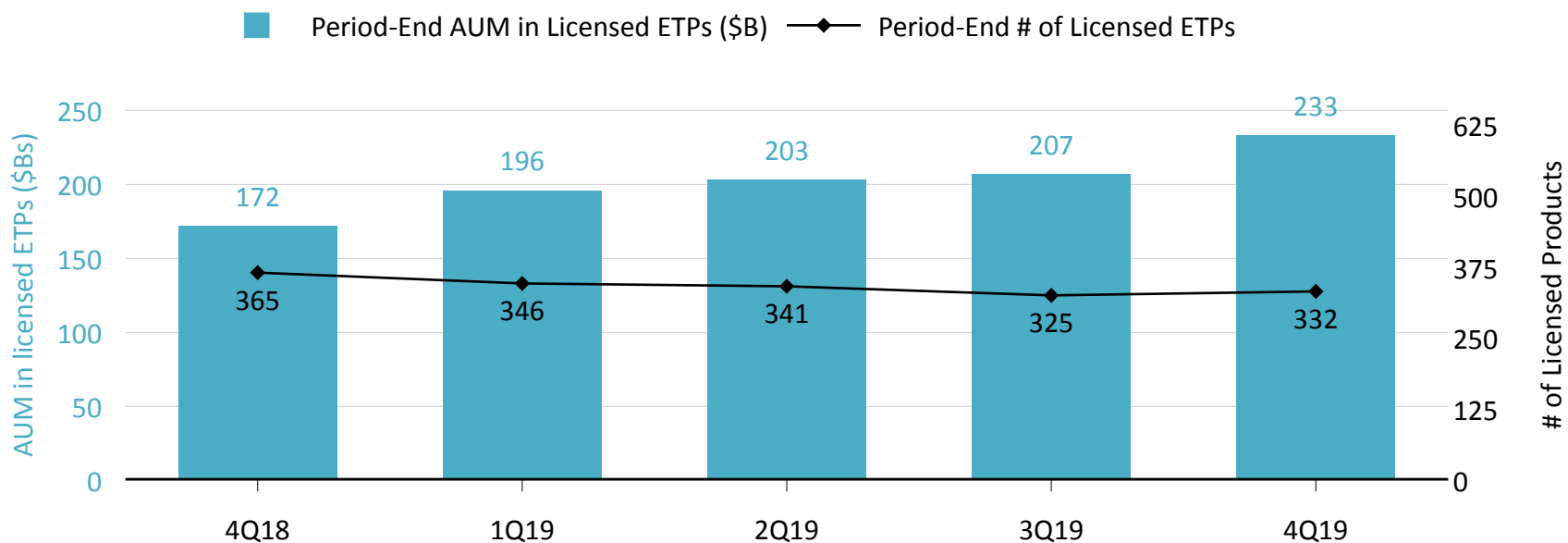


# FIXED INCOME AND COMMODITIES TRADING & CLEARING



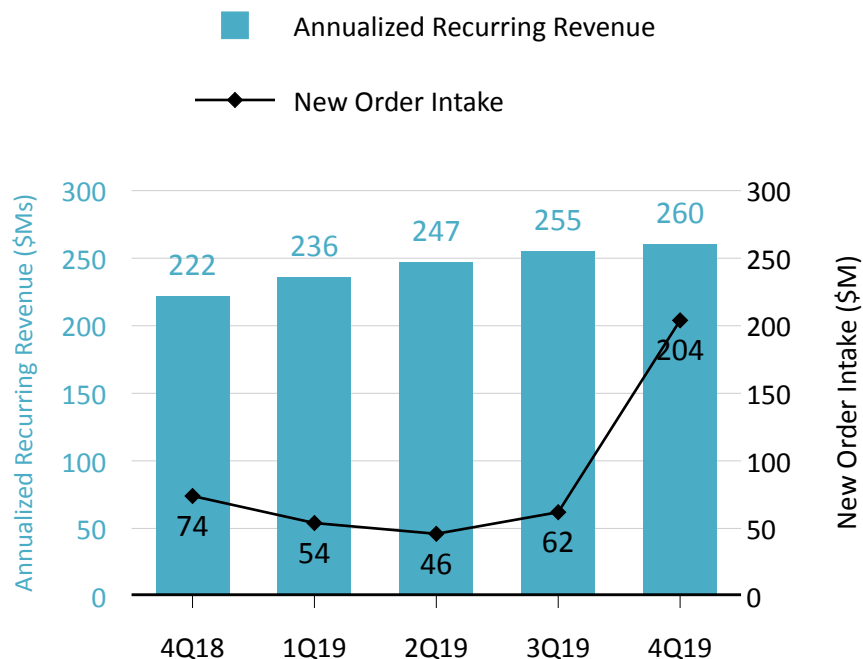
	4Q18	1Q19	2Q19	3Q19	4Q19
<b>Net Revenues (US\$ in Millions)</b>					
Fixed income products	10	10	9	8	6
Energy and carbon products	6	7	5	6	7
Other fees and revenues	3	2	2	2	2
<b>Fixed Income and Commodities Trading and Clearing</b>	<b>19</b>	<b>19</b>	<b>16</b>	<b>16</b>	<b>15</b>
<b>Nasdaq Volumes</b>					
U.S. Fixed income trading volume (billions of \$ notional)	3,499	2,715	2,921	3,033	1,796
European Fixed income products (millions of contracts)	9.4	7.3	7.5	6.9	6.5
Energy trading and clearing (TWh)	303	367	254	290	341
<b>Revenue Capture</b>					
European Fixed Income (RPC)	\$ 0.42	\$ 0.61	\$ 0.51	\$ 0.52	\$ 0.52
Energy trading and clearing (\$1000 per TWh traded and cleared)	\$ 19.9	\$ 18.8	\$ 19.3	\$ 19.4	\$ 19.0
<i>SEK/US\$ average</i>	\$ 0.111	\$ 0.109	\$ 0.106	\$ 0.104	\$ 0.104
<i>Euro/US\$ average</i>	\$ 1.141	\$ 1.136	\$ 1.124	\$ 1.111	\$ 1.107

# INDEX



	4Q18	1Q19	2Q19	3Q19	4Q19
Period-End # of Licensed ETPs	365	346	341	325	332
Period-End AUM in Licensed ETPs (\$B)	172	196	203	207	233
Index Revenues (\$M)	54	54	55	56	57

# MARKET TECHNOLOGY



## Annualized Recurring Revenue<sup>1</sup> (ARR)

- ARR is the total annualized revenue of active software support and SaaS subscription revenues.
- ARR represented 66% of Market Technology annualized revenues in 4Q19.
- 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 4Q19 versus the prior year period.

	4Q18	1Q19	2Q19	3Q19	4Q19
<b>New Order Intake (\$M)</b>	74	54	46	62	204
<b>Annualized Recurring Revenue<sup>1</sup> (\$M)</b>	222	236	247	255	260
<b>Net Revenue (\$M)</b>	76	77	79	84	98

<sup>1</sup>Annualized 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>	4Q19	3Q19	2Q19	1Q19	4Q18	2019	2018	2017
Amortization expense of acquired intangible assets <sup>(1)</sup>	\$ 25	\$ 25	\$ 26	\$ 26	\$ 26	\$ 101	\$ 109	\$ 92
Merger and strategic initiatives expense <sup>(2)</sup>	5	10	5	9	14	30	21	44
Restructuring charges <sup>(3)</sup>	9	30	—	—	—	39	—	—
Extinguishment of debt <sup>(4)</sup>	—	—	11	—	—	11	—	10
Net gain on divestiture of businesses <sup>(5)</sup>	—	—	—	(27)	—	(27)	(33)	—
Clearing default <sup>(6)</sup>	—	—	—	—	23	—	31	—
Provision for notes receivable <sup>(7)</sup>	—	20	—	—	—	20	—	—
Net income from unconsolidated investees <sup>(8)</sup>	(14)	(15)	(9)	(45)	(5)	(82)	(16)	(13)
Other <sup>(9)</sup>	8	4	3	2	11	17	17	3
Gain on sale of investment security <sup>(10)</sup>	—	—	—	—	(118)	—	(118)	—
<b>Total Non-GAAP adjustments</b>	<b>33</b>	<b>74</b>	<b>36</b>	<b>(35)</b>	<b>(49)</b>	<b>109</b>	<b>11</b>	<b>136</b>
Non-GAAP adjustment to the income tax (benefit) provision <sup>(11)</sup>	(19)	(12)	(7)	(4)	15	(43)	6	(66)
Impact of enacted U.S. tax legislation <sup>(12)</sup>	—	—	—	—	289	—	290	(89)
Excess tax benefits related to employee share-based compensation	(1)	—	—	(4)	(4)	(5)	(9)	(40)
Reversal of Swedish tax benefits <sup>(13)</sup>	—	—	—	—	—	—	41	—
<b>Total Non-GAAP tax adjustments</b>	<b>(20)</b>	<b>(12)</b>	<b>(7)</b>	<b>(8)</b>	<b>300</b>	<b>(48)</b>	<b>328</b>	<b>(195)</b>
<b>Total Non-GAAP Adjustments, net of tax</b>	<b>\$ 13</b>	<b>\$ 62</b>	<b>\$ 29</b>	<b>\$ (43)</b>	<b>\$ 251</b>	<b>\$ 61</b>	<b>\$ 339</b>	<b>\$ (59)</b>

Please see pages 22-23 for 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 realignment of certain business areas. Charges associated with this plan represent a fundamental shift in our strategy and technology as well as executive re-alignment and will be excluded for purposes of calculating non-GAAP measures as they are not reflective of ongoing operating performance or comparisons in Nasdaq's performance between periods. For the three months ended December 31, 2019, we recorded \$9 million in charges primarily related to severance and employee-related costs. For the three months ended September 30, 2019, we recorded \$30 million in charges primarily related to asset impairment charges mainly related to capitalized software that was retired.

(4) For 2019 and 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.

(5) For 2019, represents the pre-tax gain on the sale of the Bwise enterprise governance, risk and compliance software platform and for 2018, represents the pre-tax gain on the sale of the Public Relations Solutions and Digital Media Services businesses.

(6) Represents charges associated with the clearing default which occurred in 2018. These charges are recorded in general, administrative and other expense in our Consolidated Statements of Income.

(7) For the three months ended September 30, 2019, we recorded a provision for notes receivable associated with the funding of technology development for the consolidated audit trail, which is recorded in general, administrative and other expense in our Consolidated Statements of Income.

(8) In the relevant periods, primarily represents net income recognized from our equity interest in OCC. The increase for the year ended December 31, 2019 primarily represents additional income recognized in 2019 due to the timing of information received from the OCC. In February 2019, due to the SEC disapproval of the OCC rule change that established OCC's 2015 capital plan, OCC suspended customer rebates and dividends to owners. 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. We also recognized our share of OCC's net income of \$48 million for the year ended December 31, 2019. 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.

# NON-GAAP ADJUSTMENTS FOOTNOTES

(9) For 2019, other charges included costs for a tax reserve for certain prior year examinations, which is recorded in general, administrative and other expense in our Consolidated Statements of Income and certain litigation costs which are recorded in professional and contract services expense in the Consolidated Statements of Income. For 2018, other charges included litigation costs which are recorded in professional and contract services expense in our Consolidated Statements of Income and 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.

(10) 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).

(11) The non-GAAP adjustment to the income tax provision primarily includes the tax impact of each non-GAAP adjustment. In addition, for the three months and year ended December 31, 2019, a tax benefit of \$10 million was recorded, primarily related to an adjustment to the 2018 federal and state tax returns. The year ended December 31, 2019 also includes a tax benefit of \$10 million related to capital distributions from the OCC recorded in March 2019. See footnote 8 above for further discussion of our OCC investment. In certain periods the adjustment may include the recognition of previously unrecognized tax benefits associated with positions taken in prior years.

(12) The impact of enacted U.S. tax legislation relates to the Tax Cuts and Jobs Act which was enacted on December 22, 2017. We were required to remeasure all of our U.S. deferred tax assets and liabilities 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.

(13) In 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.

# 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>	4Q19	3Q19	4Q18	2019	2018	2017
<b>U.S. GAAP operating expenses:</b>	\$386	\$406	\$404	\$1,518	\$1,498	\$1,420
Total Non-GAAP adjustments:	(51)	(89)	(74)	(223)	(178)	(149)
<b>Non-GAAP operating expenses:</b>	\$335	\$317	\$330	\$1,295	\$1,320	\$1,271
<b>U.S. GAAP operating income:</b>	\$260	\$226	\$241	\$1,017	\$1,028	\$991
Total Non-GAAP adjustments:	51	89	74	223	178	149
<b>Non-GAAP operating income:</b>	\$311	\$315	\$315	\$1,240	\$1,206	\$1,140
<b>Revenues less transaction based expenses</b>	\$646	\$632	\$645	\$2,535	\$2,526	\$2,411
<b>U.S. GAAP operating margin <sup>(1)</sup></b>	40%	36%	37%	40%	41%	41%
<b>Non-GAAP operating margin <sup>(2)</sup></b>	48%	50%	49%	49%	48%	47%
<b>U.S. GAAP net income attributable to Nasdaq:</b>	\$202	\$150	(\$44)	\$774	\$458	\$729
Total Non-GAAP Adjustments, net of tax:	13	62	251	61	339	(59)
<b>Non-GAAP net income attributable to Nasdaq:</b>	\$215	\$212	\$207	\$835	\$797	\$670
<b>U.S. GAAP diluted earnings per share:</b>	\$1.21	\$0.90	(\$0.27)	\$4.63	\$2.73	\$4.30
Total adjustments from non-GAAP net income above:	0.08	0.37	1.51	0.37	2.02	(0.35)
<b>Non-GAAP diluted earnings per share:</b>	\$1.29	\$1.27	\$1.24	\$5.00	\$4.75	\$3.95

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 <sup>(1)</sup>	
<i>All figures in US\$ Millions</i>	Current Period	Prior-year Period	\$	%	\$	%	\$	%
4Q19 <sup>2</sup>	\$421	\$386	35	9 %	22	6%	13	3 %
3Q19 <sup>2</sup>	406	368	38	10 %	29	8%	9	2 %
2Q19 <sup>2</sup>	396	361	35	10 %	30	8%	5	1 %
1Q19 <sup>2</sup>	391	356	35	10 %	32	9%	3	1 %
2019 <sup>2</sup>	\$1,613	\$1,471	142	10 %	112	8%	30	2 %
2018 <sup>2</sup>	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)%

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 <sup>(1)</sup>	
<i>All figures in US\$ Millions</i>	Current Period	Prior-year Period	\$	%	\$	%	\$	%
4Q19	\$225	\$249	(24)	(10)%	(21)	(8)%	(3)	(1)%
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)%
2019	\$912	\$958	(46)	(5)%	(29)	(3)%	(17)	(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)%

1. Other impact includes changes in FX rates.

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

<i>(US\$ millions)</i>	2019	4Q19	3Q19	2Q19	1Q19
<b>U.S. GAAP net income (loss) attributable to Nasdaq:</b>	<b>\$774</b>	<b>\$202</b>	<b>\$150</b>	<b>\$174</b>	<b>\$247</b>
Income tax provision	245	50	65	65	66
Net income from unconsolidated investees	(84)	(14)	(15)	(10)	(45)
Other income	(5)	(4)	—	(1)	—
Net gain on the sale of business	(27)	—	—	—	(27)
Net interest expense	114	26	26	28	34
<b>U.S. GAAP operating income:</b>	<b>\$1,017</b>	<b>\$260</b>	<b>\$226</b>	<b>\$256</b>	<b>\$275</b>
Non-GAAP Adjustments <sup>(1)</sup>	223	51	89	45	37
<b>Non-GAAP operating income:</b>	<b>\$1,240</b>	<b>\$311</b>	<b>\$315</b>	<b>\$301</b>	<b>\$312</b>
Depreciation and amortization of tangibles (Nasdaq)	87	21	22	22	22
<b>EBITDA pro forma for acquisitions and divestitures:</b>	<b>\$1,327</b>	<b>\$332</b>	<b>\$337</b>	<b>\$323</b>	<b>\$334</b>

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

	Three Months Ended Dec 31, 2019		
<i>(US\$ millions, except effective tax rate)</i>	U.S. GAAP	Non-GAAP Adjustments <sup>(1)</sup>	Non-GAAP
<b>Income before income taxes</b>	\$252	\$33	\$285
Income tax provision	50	20	70
<b>Net Income</b>	\$202	\$13	\$215
<b>Effective tax rate</b>	20%	61%	25%

	Twelve Months Ended Dec 31, 2019		
<i>(US\$ millions, except effective tax rate)</i>	U.S. GAAP	Non-GAAP Adjustments <sup>(1)</sup>	Non-GAAP
<b>Income before income taxes</b>	\$1,019	\$109	\$1,128
Income tax provision	245	48	293
<b>Net Income</b>	\$774	\$61	\$835
<b>Effective tax rate</b>	24%	44%	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.

# 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, ability to transition to new business models, 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, including artificial intelligence in market surveillance (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](http://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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