

Cboe Global Markets Reports Results for Second Quarter 2018

Second Quarter 2018 Highlights

- Diluted EPS of \$0.73, a 22 Percent Increase
- Adjusted Diluted EPS of \$1.05¹, up 21 Percent
- Net Revenue of \$283.5 Million, up 6 Percent
- Raised Quarterly Dividend by 15 Percent, to \$0.31 Per Share, Effective For Third Quarter of 2018; Increased Share Repurchase Authorization by \$100 Million

CHICAGO, IL – August 3, 2018 - Cboe Global Markets, Inc. (Cboe: CBOE | Nasdaq: CBOE) today reported financial results for the second quarter of 2018.

Consolidated results for year-to-date 2017 include Bats Global Markets (Bats) for the period March 1 through June 30, 2017. Cboe completed its acquisition of Bats on February 28, 2017.

"We are pleased to report another strong quarter of year-over-year top-line growth despite some headwinds following a dramatic shift in market volatility. While trading in VIX options and futures were down year-over-year in the second quarter, SPX options trading grew by 18 percent and we continued to demonstrate strong growth in our European Equities and FX businesses," said Edward T. Tilly, Cboe Global Markets Chairman and Chief Executive Officer. "Additionally, we continued to lay the groundwork for future growth and profitability with innovative new products, such as our planned rollout of Cboe iBoxx iShares Corporate Bond Index futures later this quarter, and by advancing our technology migration. We remain confident that our market-leading businesses and solid financial condition leave us well positioned to drive sustainable long-term growth and shareholder value."

"We delivered solid earnings growth and generated strong cash flow again this quarter," said Brian N. Schell, Cboe Global Markets Executive Vice President and Chief Financial Officer. "Our financial performance and strong balance sheet afforded us the flexibility to shift our capital deployment this quarter to share repurchases, in addition to ongoing dividend payments. We utilized more than \$48 million to repurchase our common stock during the quarter and \$31 million to pay dividends. In addition, earlier this week our Board increased our share repurchase authorization by \$100 million and raised our quarterly cash dividend for the eighth consecutive year to \$0.31, an increase of 15 percent, a reflection of our steady growth and ongoing commitment to returning capital to shareholders."

(1) A full reconciliation of our non-GAAP results to our GAAP results is included in the attached tables. See "Non-GAAP Information" in the accompanying financial tables.



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Consolidated Second Quarter Results - Table 1

Table 1 below presents summary selected unaudited condensed consolidated financial information for the company as reported and on an adjusted basis for the three months ended June 30, 2018 and 2017.

Table 1						
Consolidated Second Quarter Results (\$ in millions except per share)	2Q18	2Q17	Change	2Q18 Adjusted¹	2Q17 Adjusted¹	Change
Total Revenues Less Cost of Revenues	\$ 283.5	\$ 266.9	6 %	\$ 283.5	\$ 266.9	6 %
Total Operating Expenses	\$ 154.4	\$ 149.1	4 %	\$ 106.1	\$ 101.3	5 %
Operating Income	\$ 129.1	\$ 117.8	10 %	\$ 177.4	\$ 165.6	7 %
Operating Margin %	45.5 %	44.1 %	140 bps	62.6 %	62.0 %	60 bps
Net Income Allocated to Common Stockholders	\$ 82.4	\$ 67.3	22 %	\$ 118.2	\$ 98.0	21 %
Diluted EPS	\$ 0.73	\$ 0.60	22 %	\$ 1.05	\$ \$ 0.87	21 %
EBITDA ¹	\$ 178.9	\$ 173.7	3 %	\$ 187.5	\$ 178.9	5 %
EBITDA Margin % 1	63.1 %	65.1 %	(200)bps	66.1 %	67.0 %	(90)bps

- Total revenues less cost of revenues (referred to as "net revenue") were \$283.5 million, up 6 percent from \$266.9 million in the prior-year period, driven primarily by higher net transaction fees¹ and market data revenue.
- Total operating expenses were \$154.4 million versus \$149.1 million in the second quarter of 2017. Adjusted operating expenses were \$106.1 million versus \$101.3 million in the prior-year second quarter, primarily driven by an increase in compensation and benefits expenses.
- The operating margin for the second quarter was 45.5 percent. The adjusted operating margin¹ for the quarter was 62.6 percent, up 60 basis points from 2017's second quarter.
- The effective tax rate for the second quarter of 2018 was 30.8 percent. The effective tax rate on adjusted earnings¹ in the second quarter of 2018 was 29.4 percent.
- Diluted EPS for the second quarter of 2018 was \$0.73. Adjusted diluted EPS¹ was \$1.05, up 21 percent compared to adjusted diluted EPS¹ of \$0.87 for 2017's second quarter.

Business Segment Information:

Table 2			
Total Revenues Less Cost of Revenues by Business Segment (in millions)	2Q18	2Q17	Change
Options	\$ 136.4	\$ 126.7	8 %
U.S. Equities	77.6	74.4	4 %
Futures	31.4	36.2	(13)%
European Equities	23.4	18.5	26 %
Global FX	14.5	10.9	33 %
Corporate	0.2	0.2	0 %
Total	\$ 283.5	\$ 266.9	6 %

^[1] A full reconciliation of our non-GAAP results to our GAAP results is included in the attached tables. See "Non-GAAP Information" in the accompanying financial tables.



Discussion of Results by Business Segment:

Options:

- Options net revenue of \$136.4 million was up 8 percent from the second quarter of 2017, primarily due to an increase in net transaction fees¹, largely driven by an increase in index options revenue per contract (RPC). The RPC increase was primarily due to a shift in mix of index options traded and pricing changes implemented at the beginning of the year.
- Total options average daily volume (ADV) increased 1 percent and the average RPC increased 7 percent for the second quarter, as a result of higher RPC achieved in both multiply-listed options and index options.

U.S. Equities:

- U.S. Equities net revenue of \$77.6 million was up \$3.2 million as a result of increases in market data fees and exchange services and other fees.
- Cboe's U.S. Equities business maintained its position as the second-largest market operator for the second quarter of 2018, with market share of 18.9 percent.

Futures:

- Futures net revenue of \$31.4 million decreased \$4.8 million or 13 percent, primarily due to lower net transaction fees¹ offset somewhat by increases in market data fees and exchange services and other fees.
- Net transaction fees¹ decreased \$7.1 million or 21 percent, due to a 16 percent decrease in VIX futures ADV and a 7 percent decline in futures RPC, which reflects a shift in the mix of trading volume.

European Equities:

- Net revenue for European Equities increased 26 percent, reflecting growth in both net transaction fees¹ and non-transaction revenue. The increase also reflects a benefit from foreign currency translation. In local currency, net revenue grew 12 percent.
- Cboe Europe's Periodic Auctions volume set several new records during the second quarter of 2018, including a new one-day record for average daily notional value (ADNV) traded of €1.5 billion on May 2, record monthly ADNV of €1.1 billion in June and record quarterly ADNV of €1.0 billion.
- For the second quarter of 2018, Cboe Europe Equities retained its position as the largest Pan-European stock exchange with 22.2 percent market share, up from 21.3 percent in the second quarter of 2017.

Global FX:

- Global FX net revenue of \$14.5 million increased 33 percent from \$10.9 million, primarily due to higher net transaction fees¹ compared with the second quarter of 2017. ADNV traded on the Cboe FX platform was \$38.4 billion for the quarter, up 38 percent from last year's second quarter.
- Cboe FX market share increased to 14.9 percent from 12.9 percent in the second quarter of 2017.

⁽¹⁾ A full reconciliation of our non-GAAP results to our GAAP results is included in the attached tables. See "Non-GAAP Information" in the accompanying financial tables.



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2018 Fiscal Year Financial Guidance

The company updated or reaffirmed its financial guidance for the 2018 fiscal year as follows:

- Depreciation and amortization expense, which is included in adjusted operating expenses below, is now expected to be in the range of \$43 to \$48 million, excluding the amortization of acquired intangible assets of \$157 million, a decrease from the previous guidance of \$53 to \$58 million.
- Capital expenditures are now expected to be in the range of \$35 to \$40 million, a decrease from the previous guidance of \$45 to \$50 million. This includes the company's ongoing investments in technology, including Cboe's migration to Bats technology.
- Reaffirmed that adjusted operating expenses are expected to be in a range of \$420 to \$428 million. The guidance excludes the
 amortization of acquired intangible assets of \$157 million, which the company plans to include in its non-GAAP reconciliation.¹
- Reaffirmed that the effective tax rate¹ on adjusted earnings for the full year is expected to be in the range of 26.5 to 28.5 percent. However, the company noted that it expects the tax rate to be at the higher end of the guidance range for the third and fourth quarters. Significant changes in trading volume, expenses, federal, state and local tax laws or rates and other items could materially impact this expectation.

(1) Specific quantifications of the amounts that would be required to reconcile the company's adjusted operating expenses guidance and adjusted effective tax rate guidance are not available. The company believes that there is uncertainty and unpredictability with respect to certain of its GAAP measures, primarily related to acquisition-related expenses that would be required to reconcile to GAAP operating expenses and GAAP effective tax rate, which preclude the company from providing accurate guidance on certain forward-looking GAAP to non-GAAP reconciliations. The company believes that providing estimates of the amounts that would be required to reconcile the range of the company's adjusted operating expenses and adjusted effective tax rate would imply a degree of precision that would be confusing or misleading to investors for the reasons identified above.

Capital Management

As announced on August 1, 2018, the Cboe Board of Directors increased the Company's share repurchase authorization by \$100 million and declared an increased dividend of \$0.31 per share for the third quarter of 2018, a 15 percent increase compared to the prior quarter's dividend of \$0.27 per share. The third-quarter dividend is payable September 14, 2018, to stockholders of record as of August 31, 2018.

The company paid cash dividends of \$30.6 million, or \$0.27 per share, during the second quarter of 2018 and utilized \$48.3 million to repurchase 468,913 shares of its common stock under its share repurchase program at an average price of \$102.92 per share. As of August 1, 2018, the company had approximately \$225 million of availability remaining under its existing share repurchase authorizations.

At June 30, 2018, the company had adjusted cash and financial investments of \$116.0 million, which excludes \$155.8 million of cash collected for Section 31 fees. Long-term debt as of June 30, 2018 was \$1.2 billion.

Earnings Conference Call

Executives of Cboe Global Markets will host a conference call to review its second-quarter financial results today, August 3, 2018, at 8:30 a.m. ET/7:30 a.m. CT. The conference call and any accompanying slides will be publicly available via live webcast from the Investor Relations section of the company's website at www.cboe.com under Events & Presentations. Participants may also listen via telephone by dialing (877) 255-4313 from the United States, (866) 450-4696 from Canada or (412) 317-5466 for international callers. Telephone participants should place calls 10 minutes prior to the start of the call. The webcast will be archived on the company's website for replay. A telephone replay of the earnings call also will be available from approximately 11:00 a.m. CT, August 3, 2018, through



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11:00 p.m. CT, August 10, 2018, by calling (877) 344-7529 from the U.S., (855) 669-9658 from Canada or (412) 317-0088 for international callers, using replay code 10121028.

About Choe Global Markets

Cboe Global Markets, Inc. (Cboe: CBOE | Nasdaq: CBOE) is one of the world's largest exchange holding companies, offering cutting-edge trading and investment solutions to investors around the world. The company is committed to relentless innovation, connecting global markets with world-class technology, and providing seamless solutions that enhance the customer experience.

Cboe offers trading across a diverse range of products in multiple asset classes and geographies, including options, futures, U.S. and European equities, exchange-traded products (ETPs), global foreign exchange (FX) and multi-asset volatility products based on the Cboe Volatility Index (VIX Index), the world's barometer for equity market volatility.

Cboe's trading venues include the largest options exchange in the U.S. and the largest stock exchange by value traded in Europe. In addition, the company is the second-largest stock exchange operator in the U.S. and a leading market globally for ETP trading.

The company is headquartered in Chicago with offices in Kansas City, New York, London, San Francisco, Singapore, Hong Kong and Ecuador. For more information, visit www.cboe.com.



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Cautionary Statements Regarding Forward-Looking Information

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve a number of risks and uncertainties. You can identify these statements by forward-looking words such as "may," "might," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential" or "continue," and the negative of these terms and other comparable terminology. All statements that reflect our expectations, assumptions or projections about the future other than statements of historical fact are forward-looking statements. These forward-looking statements, which are subject to known and unknown risks, uncertainties and assumptions about us, may include projections of our future financial performance based on our growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from those expressed or implied by the forward-looking statements.

We operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible to predict all risks and uncertainties, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Some factors that could cause actual results to differ include: the loss of our right to exclusively list and trade certain index options and futures products; economic, political and market conditions; compliance with legal and regulatory obligations; price competition and consolidation in our industry; decreases in trading volumes, market data fees or a shift in the mix of products traded on our exchanges; legislative or regulatory changes; increasing competition by foreign and domestic entities; our dependence on and exposure to risk from third parties; our index providers' ability to maintain the quality and integrity of their indexes and to perform under our agreements; our ability to operate our business without violating the intellectual property rights of others and the costs associated with protecting our intellectual property rights; our ability to attract and retain skilled management and other personnel, including those experienced with post-acquisition integration; our ability to accommodate trading volume and transaction traffic, including significant increases, without failure or degradation of performance of our systems; our ability to protect our systems and communication networks from security risks, including cyber-attacks and unauthorized disclosure of confidential information; challenges to our use of open source software code; our ability to meet our compliance obligations, including managing potential conflicts between our regulatory responsibilities and our forprofit status; damage to our reputation; the ability of our compliance and risk management methods to effectively monitor and manage our risks; our ability to manage our growth and strategic acquisitions or alliances effectively; unanticipated difficulties or expenditures relating to the acquisition of Bats Global Markets, Inc., including, without limitation, difficulties that result in the failure to realize expected synergies, accretion, efficiencies and cost savings from the acquisition within the expected time period (if at all), whether in connection with integration, migrating trading platforms, broadening distribution of product offerings or otherwise; restrictions imposed by our debt obligations; our ability to maintain an investment grade credit rating; potential difficulties in our migration of trading platforms and our ability to retain employees as a result of the acquisition; and the accuracy of our estimates and expectations. More detailed information about factors that may affect our actual results to differ may be found in our filings with the SEC, including in our Annual Report on Form 10-K for the year ended December 31, 2017 and other filings made from time to time with the SEC.

We do not undertake, and we expressly disclaim, any duty to update any forward-looking statement whether as a result of new information, future events or otherwise, except as required by law. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof.

The condensed consolidated statements of income and balance sheets are unaudited and subject to reclassification.

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Cboe Global Markets, Inc. Key Performance Statistics by Business Segment

	2	Q 2018	10	2018	4	1Q 2017	3	Q 2017	2	Q 2017
Options (ADV in thousands)										
Total industry ADV		18,807		22,407		17,347		16,182		16,676
Total company Options ADV		7,095		9,092		7,029		6,751		7,035
Multiply-listed options		5,264		6,286		4,971		4,685		5,188
Index options		1,831		2,806		2,058		2,066		1,847
Total Options Market Share		37.7 %		40.6 %		40.5 %		41.7 %		42.2 %
Total Options RPC:	\$	0.241	\$	0.261	\$	0.239	\$	0.247	\$	0.225
Multiply-listed options	\$	0.063	\$	0.061	\$	0.056	\$	0.059	\$	0.060
Index options	\$	0.753	\$	0.710	\$	0.682	\$	0.669	\$	0.694
U.S. Equities										
Total industry ADV (shares in billions)		6.9		7.6		6.4		6.1		6.9
Market share %		18.9 %		19.4 %		18.5 %		19.2 %		19.2 %
Net capture (per 100 touched shares)	\$	0.023	\$	0.023	\$	0.022	\$	0.022	\$	0.023
Futures										
ADV (in thousands)		258		368		285		331		307
RPC	\$	1.633	\$	1.727	\$	1.799	\$	1.752	\$	1.762
European Equities										
Total industry ADNV (Euros - in billions)	€	47.4	€	50.8	€	43.8	€	41.1	€	48.6
Market share %		22.2 %		21.2 %		20.3 %		21.1 %		21.3 %
Net capture (bps)		0.183		0.190		0.177		0.168		0.162
Global FX										
Market share %		14.9 %		15.3 %		14.9 %		12.9 %		12.9 %
ADNV (\$ in billions)	\$	38.4	\$	41.6	\$	32.4	\$	29.0	\$	27.9
Net capture (per one million shares traded)	\$	2.56	\$	2.45	\$	2.57	\$	2.63	\$	2.65

ADV = average daily volume; ADNV = average daily notional value.

RPC, average revenue per contract, for options and futures represents total net transaction fees recognized for the period divided by total contracts traded during the period.

U.S. Equities, "net capture per 100 touched shares" refers to transaction fees less liquidity payments and routing and clearing costs divided by the product of one-hundredth ADV of touched shares on BZX, BYX, EDGX and EDGA and the number of trading days.

European Equities, "net capture per matched notional value" refers to transaction fees less liquidity payments in British pounds divided by the product of matched ADNV in British pounds and the number of trading days.

Global FX, "net capture per one million dollars traded" refers to net transaction fees divided by the product of one-thousandth of ADNV traded on the Cboe FX market and the number of trading days, divided by two, which represents the buyer and seller that are both charged on the transaction. Market Share represents Cboe FX volume divided by the total volume of publicly reporting spot FX venues (Cboe FX, NEX, Reuters/FXall, and FastMatch).

Average transaction fees per contract can be affected by various factors, including exchange fee rates, volume-based discounts and transaction mix by contract type and product type.



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Cboe Global Markets, Inc. and Subsidiaries Consolidated Statements of Income (Unaudited) Three Months and Six Months Ended June 30, 2018 and 2017

	Three Months	Ended J	Six Months Ended June 30,						
(in millions, except per share amounts)	2018		2017	2018		2017			
Revenue:									
Transaction fees	\$ 464.8	\$	453.9	\$ 1,011.9	\$	710.3			
Access fees	31.2		29.7	59.8		47.5			
Exchange services and other fees	21.0		19.9	43.0		35.3			
Market data fees	52.5		48.0	106.7		70.5			
Regulatory fees	89.3		83.3	205.6		121.6			
Other revenue	8.7		6.0	18.2		11.8			
Total Revenues	667.5		640.8	1,445.2		997.0			
Cost of Revenue									
Liquidity payments	271.1		266.5	574.0		371.8			
Routing and clearing	9.8		12.2	20.1		18.5			
Section 31 fees	81.1		74.6	189.9		104.6			
Royalty fees	22.0		20.6	49.2		41.8			
Total Cost of Revenue	384.0		373.9	833.2		536.7			
Revenues Less Cost of Revenues	283.5		266.9	612.0		460.3			
Operating Expenses:									
Compensation and benefits	57.4		50.0	116.3		97.8			
Depreciation and amortization	50.4		55.8	104.6		80.9			
Technology support services	11.8		12.0	23.9		19.5			
Professional fees and outside services	17.3		16.9	35.3		31.3			
Travel and promotional expenses	3.5		4.2	7.2		7.5			
Facilities costs	2.9		2.7	5.3		4.8			
Acquisition-related costs	8.6		4.7	17.4		69.9			
Other expenses	2.5		2.8	5.2		4.7			
Total Operating Expenses	154.4		149.1	315.2		316.4			
Operating Income	129.1		117.8	296.8		143.9			
Other Income/(Expense):									
Interest expense, net	(9.3)		(12.5)	(18.9)		(20.4)			
Other income	0.0		0.8	1.3		0.9			
Total Other Income	(9.3)		(11.7)	(17.6)		(19.5)			
Income Before Income Taxes	119.8		106.1	279.2		124.4			
Income tax provision	36.8		38.1	78.1		41.2			
Net Income	83.0		68.0	201.1		83.2			
Net loss attributable to redeemable noncontrolling interest	0.3		0.3	0.6		0.6			
Net Income Excluding Redeemable Noncontrolling Interest	83.3		68.3	201.7		83.8			
Change in redemption value of redeemable noncontrolling interest	(0.3)		(0.3)	(0.6)		(0.6)			
Net income allocated to participating securities	(0.6)		(0.7)	(1.4)		(0.8)			
Net Income Allocated to Common Stockholders	\$ 82.4	\$	67.3	\$ 199.7	\$	82.4			
Net Income Per Share Allocated to Common Stockholders:									
Basic earnings per share	\$ 0.74	\$	0.60	\$ 1.78	\$	0.81			
Diluted earnings per share	0.73		0.60	1.77		0.81			
Weighted average shares used in computing income per share:			440 :			40-			
Basic	112.0		112.1	112.2		102.1			
Diluted	112.3		112.5	112.6		102.3			



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Cboe Global Markets, Inc. and Subsidiaries Condensed Consolidated Balance Sheets (Unaudited) June 30, 2018 and December 31, 2017

(in millions)	June 30, 2018	December 31, 2017
Assets		
Current Assets:		
Cash and cash equivalents	\$ 140.0	\$ 143.5
Financial investments	131.8	47.3
Accounts receivable, net	252.2	217.3
Income taxes receivable	46.9	17.2
Other current assets	13.1	9.4
Total Current Assets	584.0	434.7
Investments	88.7	82.7
Land	4.9	4.9
Property and equipment, net	65.4	73.9
Goodwill	2,701.3	2,707.4
Intangible assets, net	1,813.0	1,902.6
Other assets, net	59.6	59.5
Total	\$ 5,316.9	\$ 5,265.7
Liabilities, Redeemable Noncontrolling Interest and Stockholders' Equity Current Liabilities: Accounts payable and accrued liabilities Section 31 fees payable Current portion of long-term debt Deferred revenue Income taxes payable Contingent consideration liabilities Total Current Liabilities Long-term debt Income taxes Deferred income taxes Other non-current liabilities Total Liabilities	\$ 170.9 189.9 299.5 17.4 - 2.2 679.9 914.6 81.1 473.5 8.8 2,157.9	\$ 153.8 105.6
Redeemable Noncontrolling Interest	9.4	9.4
Stockholders' Equity:		
Preferred stock	-	_
Common stock	1.2	1.2
Treasury stock at cost	(665.9)	(558.3
Additional paid-in-capital	2,646.1	2,623.7
Retained earnings Accumulated other comprehensive income (loss), net	1,134.0 34.2	993.3 50.7
Total Stockholders' Equity	3,149.6	3,110.6
Total	\$ 5,316.9	\$ 5,265.7



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Non-GAAP Information

In addition to disclosing results determined in accordance with GAAP, Cboe Global Markets has disclosed certain non-GAAP measures of operating performance. These measures are not in accordance with, or a substitute for, GAAP, and may be different from or inconsistent with non-GAAP financial measures used by other companies. The non-GAAP measures provided in this press release include net transaction fees, adjusted operating expenses, adjusted operating income, adjusted operating margin, adjusted net income allocated to common stockholders and adjusted diluted earnings per share, adjusted tax rate, EBITDA, EBITDA margin, adjusted EBITDA and adjusted EBITDA margin.

Management believes that the non-GAAP financial measures presented in this press release, including adjusted net revenue and adjusted operating expenses, provide additional and comparative information to assess trends in our core operations and a means to evaluate period-to-period comparisons. Non-GAAP financial measures disclosed by management are provided as additional information to investors in order to provide them with an alternative method for assessing our financial condition and operating results.

Amortization expense of acquired intangible assets: We amortize intangible assets acquired in connection with various acquisitions. Amortization of intangible assets is inconsistent in amount and frequency and is significantly affected by the timing and size of our acquisitions. As such, if intangible asset amortization is included in performance measures, it is more difficult to assess the day-to-day operating performance of the businesses, the relative operating performance of the businesses between periods and the earnings power of the company. Therefore, we believe performance measures excluding intangible asset amortization expense provide investors with an additional basis for comparison across accounting periods.

Acquisition-related expenses: From time to time, we have pursued small bolt-on acquisitions and in 2017 completed a larger transformative acquisition, which have resulted in expenses which would not otherwise have been incurred in the normal course of the company's business operations. These expenses include integration costs, as well as legal, due diligence and other third party transaction costs. The frequency and the amount of such expenses vary significantly based on the size, timing and complexity of the transaction. Accordingly, we exclude these costs for purposes of calculating non-GAAP measures which provide an additional analysis of Cboe's ongoing operating performance or comparisons in Cboe's performance between periods.

Other significant items: We have excluded certain other charges that are the result of other non-comparable events to measure operating performance. For 2017, other significant items primarily included interest and other borrowing costs incurred prior to the close of the Bats transaction and accelerated stock-based compensation that was incurred due to a change in the vesting schedule for equity award grants.

The tables below show the reconciliation of each financial measure from GAAP to non-GAAP. The non-GAAP financial measures exclude the impact of those items detailed below and are referred to as adjusted financial measures.



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Reconciliation of GAAP and non-GAAP Information

Table 4		Three Mor		nded		Six Mont June		ded
(in millions, except per share amounts)		2018		2017		2018		2017
Reconciliation of Net Income Allocated to Common Stockholders to Non-GAAP (As shown on Table 1)		,						
Net income allocated to common stockholders	\$	82.4	\$	67.3	\$	199.7	\$	82.4
Non-GAAP adjustments								
Compensation and benefits (1)		_		_		_		9.1
Acquisition-related expenses (2)		8.6		4.7		17.4		69.9
Amortization of acquired intangible assets (3)		39.7		42.6		81.8		57.0
Change in contingent consideration		_		0.5		_		0.7
Debt issuance costs		_		_		_		0.9
Change in redemption value of noncontrolling interests		0.3		0.3		0.6		0.6
Interest and other borrowing costs (4)		_		0.9		_		4.3
Total Non-GAAP adjustments		48.6		49.0		99.8		142.5
Income tax expense related to the items above		(12.6)		(18.0)		(25.6)		(54.0)
Net income allocated to participating securities - effect on reconciling items		(0.2)		(0.3)		(0.5)		(0.7)
Adjusted net income allocated to common stockholders	\$	118.2	\$	98.0	\$	273.4	\$	170.2
Reconciliation of Diluted EPS to Non-GAAP								
Diluted earnings per common share	\$	0.73	\$	0.60	\$	1.77	\$	0.81
Per share impact of non-GAAP adjustments noted above		0.32		0.27		0.65		0.86
Adjusted diluted earnings per common share	\$	1.05	\$	0.87	\$	2.43	\$	1.66
Reconciliation of Operating Margin to Non-GAAP								
Revenue less cost of revenue	\$	283.5	\$	266.9	\$	612.0	\$	460.3
Non-GAAP adjustments noted above		_		_		_		_
Adjusted revenue less cost of revenue	\$	283.5	\$	266.9	\$	612.0	\$	460.3
Operating expenses	\$	154.4	\$	149.1	\$	315.2	\$	316.4
Non-GAAP adjustments noted above		48.3	·	47.8		99.2	·	136.7
Adjusted operating expenses	\$	106.1	\$	101.3	\$	216.0	\$	179.7
Operating income	Ś	129.1	\$	117.8	\$	296.8	Ś	143.9
Non-GAAP adjustments noted above	·	48.3	•	47.8	·	99.2	•	136.7
Adjusted operating income	Ś	177.4	Ś	165.6	Ś	396.0	\$	280.6
Adjusted operating margin (5)	_	62.6 %	, <u> </u>	62.0 %	· <u> </u>	64.7 %	_	61.0 %
Reconciliation of Income Tax Rate to Non-GAAP								
Income before income taxes		119.8		106.1		279.2		124.4
Non-GAAP adjustments noted above		48.6		49.0		99.8		142.5
Adjusted income before income taxes	\$	168.4	\$	155.1	\$	379.0	\$	266.9
Income tax (benefit) expense		36.8		38.1		78.1		41.2
Non-GAAP adjustments noted above		12.6		18.0		25.6		54.0
Adjusted income tax (benefit) expense	Ś	49.4	Ś	56.1	Ś	103.7	Ś	95.2
Adjusted income tax (benefit) expense	-	29.4 %	<u>+</u>	36.2 %	<u></u>	27.6 %	<u>~</u>	35.7 %
Aujusteu income tax rate		23.4 70	, —	30.2 %		21.0 70		33.1 70

- (*) Includes Bats for the period March 1 through June 30, 2017.
- (1) For the six months ended June 30, 2017, this amount includes \$9.1 million for accelerated stock-based compensation expense.
- (2) This amount includes professional fees and outside services, severance, and other costs related to the company's acquisition of Bats.
- (3) This amount represents the amortization of acquired intangible assets for Bats.
- (4) This amount represents interest and other borrowing costs incurred prior to the close of the Bats acquisition.
- (5) Adjusted operating margin represents adjusted operating income divided by adjusted revenue less cost of revenue.



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EBITDA Reconciliations

EBITDA (earnings before interest, income taxes, depreciation and amortization) is a widely used non-GAAP financial measure of operating performance. EBITDA margin represents EBITDA divided by revenues less cost of revenues (net revenue). It is presented as supplemental information that the company believes is useful to investors to evaluate its results because it excludes certain items that are not directly related to the company's core operating performance. EBITDA is calculated by adding back to net income interest expense, income tax expense, depreciation and amortization. EBITDA should not be considered as substitutes either for net income, as an indicator of the company's operating performance, or for cash flow, as a measure of the company's liquidity. In addition, because EBITDA may not be calculated identically by all companies, the presentation here may not be comparable to other similarly titled measures of other companies. EBITDA margin represents EBITDA divided by net revenue.

Table 5

Table 5							
	Three Mo	nths E	nded		Six Montl	hs E	nded
(in millions)	 Jun	e 30,			June	<u>:</u> 30,)
Reconciliation of Net Income Allocated to Common Stockholders to EBITDA and Adjusted EBITDA (Per							
Table 1)	2018		2017		2018		2017
Net income allocated to common stockholders	\$ 82.4	\$	67.3	\$	199.7	\$	82.4
Interest	9.3		12.5		18.9		20.4
Income tax provision	36.8		38.1		78.1		41.2
Depreciation and amortization	50.4		55.8		104.6		80.9
EBITDA	\$ 178.9	\$	173.7	\$	401.3	\$	224.9
EBITDA Margin ¹	 63.1 %	6	65.1 %	6	65.6 %	′ _	48.9 %
Non-GAAP adjustments not included in above line items							
Compensation and benefits (accelerated stock-based compensation)	_		_		_		9.1
Acquisition-related expenses	8.6		4.7		17.4		69.9
Other	_		0.5		_		0.7
Adjusted EBITDA	\$ 187.5	\$	178.9	\$	418.7	\$	304.6
Adjusted EBITDA Margin ¹	66.1 %	6	67.0 %	6	68.4 %	,	66.2 %

^{*}Includes Bats for the period March 1 through June 30, 2017.

Reconciliation of Net Transaction Fees - Three Months Ended June 30, 2018 and 2017 - Table 6

	Consolidated Three Months Ended June 30,				Options Segment Three Months Ended June 30,					.S. Equition Three Mon June	Ended	Futures Segment Three Months Ended June 30,					ropean Eq Three Mo Jun			ment Ended				
		2018		2017		2018		2017		2018		2017		2018		2017		2018	2017		2018			2017
Transaction fees	\$	464.8	\$	453.9	\$	189.0	\$	181.2	\$	211.9	\$	208.3	\$	26.9	\$	34.0	\$	24.2	\$	20.8	\$	12.8	\$	9.6
Liquidity payments		(271.1)		(266.5)		(75.7)		(76.9)		(185.9)		(180.5)		-		_		(9.5)		(9.1)		_		_
Routing and clearing		(9.8)	_	(12.2)	_	(3.8)		(4.6)	_	(6.0)	_	(7.6)	_		_				_					_
Net transaction fees	\$	183.9	\$	175.2	\$	109.5	\$	99.7	\$	20.0	\$	20.2	\$	26.9	\$	34.0	\$	14.7	\$	11.7	\$	12.8	\$	9.6

¹EBITDA margin represents the respective EBITDA divided by the respective net revenue as shown in the non-GAAP reconciliations provided.