MARKETAXESS HOLDINGS INC
Form 10-Q
July 26, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission File Number 001-34091

MARKETAXESS HOLDINGS INC.

(Exact name of registrant as specified in its charter)

Delaware	52-2230784
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

299 Park Avenue, 10th Floor New York, New York	10171
(Address of principal executive offices)	(Zip Code)

(212) 813-6000

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	Accelerated filer
Non-accelerated filer	Smaller reporting company
	Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of July 24, 2018, the number of shares of the Registrant's voting common stock outstanding was 37,570,970.

MARKETAXESS HOLDINGS INC.

FORM 10-Q FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2018

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PART I — Financial Information

Item 1. Financial Statements

MARKETAXESS HOLDINGS INC.

CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION

(Unaudited)

	As of June 30, 2018	December 31, 2017
	(In thousands, except share and per share amounts)	
ASSETS		
Cash and cash equivalents	$170,686	$ 167,014
Investments, at fair value	249,591	239,521
Accounts receivable, net of allowance of $74 and $178 as of June 30, 2018 and December 31, 2017, respectively	61,883	52,636
Goodwill and intangible assets, net of accumulated amortization	62,867	63,059
Furniture, equipment, leasehold improvements and capitalized software, net of accumulated depreciation and amortization	50,088	38,548
Prepaid expenses and other assets	21,030	18,717
Deferred tax assets, net	1,453	1,737
Total assets	$617,598	$ 581,232
LIABILITIES AND STOCKHOLDERS' EQUITY		
Liabilities		
Accrued employee compensation	$23,612	$ 36,502
Income and other tax liabilities	12,972	13,061
Deferred revenue	3,595	2,660
Accounts payable, accrued expenses and other liabilities	20,041	14,241
Total liabilities	60,220	66,464
Commitments and Contingencies (Note 10)		
Stockholders' equity		
Preferred stock, $0.001 par value, 4,855,000 shares authorized, no shares issued and outstanding as of June 30, 2018 and December 31, 2017	—	—

Series A Preferred Stock, $0.001 par value, 110,000 shares authorized, no shares issued and outstanding as of June 30, 2018 and December 31, 2017	—	—
Common stock voting, $0.003 par value, 110,000,000 shares authorized, 40,420,215 shares and 40,402,059 shares issued and 37,578,970 shares and 37,620,736 shares outstanding as of June 30, 2018 and December 31, 2017, respectively	121	121
Common stock non-voting, $0.003 par value, 10,000,000 shares authorized, no shares issued and outstanding as of June 30, 2018 and December 31, 2017	—	—
Additional paid-in capital	331,056	331,081
Treasury stock - Common stock voting, at cost, 2,841,245 and 2,781,323 shares as of June 30, 2018 and December 31, 2017, respectively	(172,695)	(159,791)
Retained earnings	410,419	353,583
Accumulated other comprehensive loss	(11,523)	(10,226)
Total stockholders' equity	557,378	514,768
Total liabilities and stockholders' equity	$617,598	$ 581,232

The accompanying notes are an integral part of these consolidated financial statements.

MARKETAXESS HOLDINGS INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
	(In thousands, except share and per share amounts)			
Revenues				
Commissions	$96,113	$87,015	$198,885	$181,037
Information services	6,930	6,497	13,996	12,682
Post-trade services	3,620	2,489	8,196	4,945
Other	301	313	601	614
Total revenues	106,964	96,314	221,678	199,278
Expenses				
Employee compensation and benefits	26,199	25,319	55,033	52,603
Depreciation and amortization	5,790	4,790	11,059	9,483
Technology and communications	5,793	4,822	11,572	9,407
Professional and consulting fees	5,426	4,086	10,483	8,365
Occupancy	3,467	1,422	6,804	2,826
Marketing and advertising	3,535	2,782	5,600	4,668
Clearing costs	2,012	1,517	3,737	2,844
General and administrative	2,708	2,591	5,183	4,939
Total expenses	54,930	47,329	109,471	95,135
Operating income	52,034	48,985	112,207	104,143
Other income (expense)				
Investment income	1,383	840	2,551	1,587
Other, net	(207)	(252)	(535)	(550)
Total other income	1,176	588	2,016	1,037
Income before income taxes	53,210	49,573	114,223	105,180
Provision for income taxes	12,723	11,550	25,796	24,694
Net income	$40,487	$38,023	$88,427	$80,486
Net income per common share				
Basic	$1.10	$1.03	$2.39	$2.18
Diluted	$1.07	$1.00	$2.33	$2.11
Cash dividends declared per common share	$0.42	$0.33	$0.84	$0.66
Weighted average shares outstanding				
Basic	36,950	36,853	36,952	36,852
Diluted	37,862	38,077	37,874	38,095

The accompanying notes are an integral part of these consolidated financial statements.

MARKETAXESS HOLDINGS INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
	(In thousands)			
Net income	$40,487	$38,023	$88,427	$80,486
Net cumulative translation adjustment and foreign currency exchange hedge, net of tax of $1,328, $(1,106), $506 and $(1,634), respectively	(1,288)	1,325	(1,020)	960
Net unrealized gain (loss) on securities available-for-sale, net of tax of $18, $(20), $(89) and $(6), respectively	57	(33)	(277)	(10)
Comprehensive income	$39,256	$39,315	$87,130	$81,436

The accompanying notes are an integral part of these consolidated financial statements.

MARKETAXESS HOLDINGS INC.

CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY

(Unaudited)

	Common Stock Voting	Additional Paid-In Capital	Treasury Stock - Common Stock Voting	Retained Earnings	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	(In thousands)					
Balance at December 31, 2017	$121	$331,081	$(159,791)	$353,583	$(10,226)	$514,768
Net income	—	—	—	88,427	—	88,427
Cumulative translation adjustment and foreign currency exchange hedge, net of tax	—	—	—	—	(1,020)	(1,020)
Unrealized net loss on securities available-for-sale, net of tax	—	—	—	—	(277)	(277)
Stock-based compensation	—	7,601	—	—	—	7,601
Exercise of stock options	—	371	—	—	—	371
Withholding tax payments on restricted stock vesting and stock option exercises	—	(7,997)	—	—	—	(7,997)
Repurchases of common stock	—	—	(12,904)	—	—	(12,904)
Cash dividend on common stock	—	—	—	(31,591)	—	(31,591)
Balance at June 30, 2018	$121	$331,056	$(172,695)	$410,419	$(11,523)	$557,378

The accompanying notes are an integral part of these consolidated financial statements.

MARKETAXESS HOLDINGS INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

	Six Months Ended June 30, 2018	2017
	(In thousands)	
Cash flows from operating activities		
Net income	$88,427	$80,486
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	11,059	9,483
Stock-based compensation expense	7,601	7,468
Deferred taxes	1,448	1,399
Other	1,014	740
Changes in operating assets and liabilities:		
(Increase) in accounts receivable	(9,350)	(4,669)
(Increase) in prepaid expenses and other assets	(2,330)	(9,407)
(Increase) in corporate debt trading investments	(3,288)	(111)
(Increase) in mutual funds held in rabbi trust	(1,203)	(1,620)
(Decrease) in accrued employee compensation	(12,890)	(11,703)
(Decrease) in income and other tax liabilities	(1,164)	(3,068)
Increase in deferred revenue	935	561
Increase (decrease) in accounts payable, accrued expenses and other liabilities	5,559	(441)
Net cash provided by operating activities	85,818	69,118
Cash flows from investing activities		
Available-for-sale investments		
Proceeds from maturities and sales	152,335	101,354
Purchases	(159,192)	(143,214)
Purchases of furniture, equipment and leasehold improvements	(16,035)	(5,777)
Capitalization of software development costs	(6,536)	(6,667)
Other	16	(33)
Net cash (used in) investing activities	(29,412)	(54,337)
Cash flows from financing activities		
Cash dividend on common stock	(31,350)	(24,535)
Exercise of stock options	371	1,338
Withholding tax payments on restricted stock vesting and stock option exercises	(7,997)	(8,111)
Repurchases of common stock	(12,904)	(24,147)
Net cash (used in) financing activities	(51,880)	(55,455)
Effect of exchange rate changes on cash and cash equivalents	(854)	574
Cash and cash equivalents		
Net increase (decrease) for the period	3,672	(40,100)
Beginning of period	167,014	168,243

End of period	$170,686	$128,143

The accompanying notes are an integral part of these consolidated financial statements.

MARKETAXESS HOLDINGS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

1. Organization and Principal Business Activity

MarketAxess Holdings Inc. (the “Company” or “MarketAxess”) was incorporated in the State of Delaware on April 11, 2000. Through its subsidiaries, MarketAxess operates a leading electronic trading platform that enables fixed-income market participants to efficiently trade corporate bonds and other types of fixed-income instruments using MarketAxess' patented trading technology. Over 1,400 institutional investor and broker-dealer firms are active users of the MarketAxess trading platform, accessing global liquidity in U.S. high-grade corporate bonds, emerging markets and high-yield bonds, European bonds, U.S. agency bonds, municipal bonds, credit default swaps and other fixed-income securities. Through its Open Trading™ protocols, MarketAxess executes certain bond transactions between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller in trades which then settle through a third-party clearing broker. MarketAxess also offers a number of trading-related products and services, including: market data to assist clients with trading decisions; connectivity solutions that facilitate straight-through processing; technology services to optimize trading environments; and execution services for exchange-traded fund managers and other clients. Through its Trax® division, MarketAxess also offers a range of pre- and post-trade services, including trade matching, trade publication, regulatory transaction reporting and market and reference data, across a range of fixed-income and other products.

2. Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany transactions and balances have been eliminated. These consolidated financial statements are unaudited and should be read in conjunction with the audited consolidated financial statements included in the Company’s Annual Report on Form 10-K, as amended, for the year ended December 31, 2017. The consolidated financial information as of December 31, 2017 has been derived from audited financial statements not included herein. These unaudited consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles (“GAAP”) and the rules and regulations of the U.S. Securities and Exchange Commission (“SEC”) with respect to Form 10-Q and reflect all adjustments that, in the opinion of management, are normal and recurring, and that are necessary for a fair statement of the results for the interim periods presented. In accordance with such rules and regulations, certain disclosures that are normally included in annual financial statements have been omitted. Interim period operating results may not be indicative of the operating results for a full year.

Accounting Pronouncements, Recently Adopted

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2014-09, “Revenue from Contracts with Customers” (“ASU 2014-09”) requiring an entity to recognize revenue for the transfer of goods or services equal to the amount that it expects to be entitled to receive for those goods or services. The standard also requires new disclosure concerning contracts with customers, including the significant judgments made when applying the guidance. The Company adopted ASU 2014-09 effective January 1, 2018 using the modified retrospective transition approach. The Company completed its analysis and the adoption of this guidance did not have a material impact on the Company’s Consolidated Financial Statements.

Accounting Pronouncements, Not Yet Adopted as of June 30, 2018

In February 2016, the FASB issued ASU 2016-02, “Leases” (“ASU 2016-02”) requiring lessees to recognize right-of-use assets and lease liabilities on the balance sheet for those leases previously classified as operating leases with lease terms greater than 12 months. ASU 2016-02 will be effective for the Company beginning January 1, 2019 and early adoption is permitted. The Company is currently evaluating the adoption implications and expects that there will be a material impact to its Consolidated Statements of Financial Condition when the Company recognizes new right-of-use assets and lease liabilities associated with the future minimum payments required under operating leases. The presentation of occupancy expense and the pattern of expense recognition within the Consolidated Financial Statements of Operations and Consolidated Statements of Cash Flows is expected to be consistent with the current lease accounting guidance.

In January 2017, the FASB issued ASU 2017-04, “Intangibles-Goodwill and Other” (“ASU 2017-04”). ASU 2017-04 simplifies the testing for goodwill impairment. The guidance will be effective for the Company beginning January 1, 2020 and early adoption is permitted and should be applied prospectively. The adoption of this guidance is not expected to have a material effect on the Company’s Consolidated Financial Statements.

Cash and Cash Equivalents

Cash and cash equivalents includes cash and money market instruments that are primarily maintained at one major global bank. Given this concentration, the Company is exposed to certain credit risk in relation to its deposits at this bank. The Company defines cash equivalents as short-term interest-bearing investments with maturities at the time of purchase of three months or less.

Investments

The Company determines the appropriate classification of securities at the time of purchase which are recorded in the Consolidated Statements of Financial Condition on the trade date. Securities are classified as available-for-sale or trading. The Company’s available-for-sale and trading investments are comprised of investment grade corporate debt securities. Available-for-sale investments are carried at fair value with the unrealized gains or losses reported in accumulated other comprehensive loss in the Consolidated Statements of Financial Condition. Trading investments are carried at fair value, with realized and unrealized gains or losses included in other, net in the Consolidated Statements of Operations.

The Company assesses whether an other-than-temporary impairment loss on the available-for-sale investments has occurred due to declines in fair value or other market conditions. The portion of an other-than-temporary impairment related to credit loss is recorded as a charge in the Consolidated Statements of Operations. The remainder is recognized in accumulated other comprehensive loss if the Company does not intend to sell the security and it is more likely than not that the Company will not be required to sell the security prior to recovery. No charges for other-than-temporary losses were recorded during the six months ended June 30, 2018 and 2017.

Fair Value Financial Instruments

Fair value is defined as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.” A three-tiered hierarchy for determining fair value has been established that prioritizes inputs to valuation techniques used in fair value calculations. The three levels of inputs are defined as Level 1 (unadjusted quoted prices for identical assets or liabilities in active markets), Level 2 (inputs that are observable in the marketplace other than those inputs classified in Level 1) and Level 3 (inputs that are unobservable in the marketplace). The Company’s financial assets and liabilities measured at fair value on a recurring basis consist of its money market funds, securities available-for-sale, trading securities and foreign currency forward contracts. All other financial instruments are short-term in nature and the carrying amount is reported on the Consolidated Statements of Financial Condition at approximate fair value.

Allowance for Doubtful Accounts

All accounts receivable have contractual maturities of less than one year and are derived from trading-related fees and commissions and revenues from products and services. The Company continually monitors collections and payments from its customers and maintains an allowance for doubtful accounts. The allowance for doubtful accounts is based upon the historical collection experience and specific collection issues that have been identified. Additions to the allowance for doubtful accounts are charged to bad debt expense, which is included in general and administrative expense in the Company’s Consolidated Statements of Operations.

Depreciation and Amortization

Fixed assets are carried at cost less accumulated depreciation. The Company uses the straight-line method of depreciation over three to seven years. The Company amortizes leasehold improvements on a straight-line basis over the lesser of the life of the improvement or the remaining term of the lease.

Software Development Costs

The Company capitalizes certain costs associated with the development of internal use software, including among other items, employee compensation and related benefits and third party consulting costs at the point at which the conceptual formulation, design and testing of possible software project alternatives have been completed. Once the product is ready for its intended use, such costs are amortized on a straight-line basis over three years. The Company reviews the amounts capitalized for impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable.

Cash Provided as Collateral

Cash is provided as collateral for broker-dealer clearing accounts. Cash provided as collateral is included in prepaid expenses and other assets in the Consolidated Statements of Financial Condition.

Foreign Currency Translation and Forward Contracts

Assets and liabilities denominated in foreign currencies are translated using exchange rates at the end of the period; revenues and expenses are translated at average monthly rates. Gains and losses on foreign currency translation are a component of accumulated other comprehensive loss in the Consolidated Statements of Financial Condition. Transaction gains and losses are recorded in other, net in the Consolidated Statements of Operations.

The Company enters into foreign currency forward contracts to hedge its net investment in its U.K. subsidiaries. Gains and losses on these transactions are included in accumulated other comprehensive loss in the Consolidated Statements of Financial Condition.

Revenue Recognition

On January 1, 2018, the Company adopted ASU 2014-09 using the modified retrospective approach. The adoption of ASU 2014-09 did not have a material impact on the measurement or recognition of revenue in any prior or current reporting periods.

The Company's classification of revenues in the Consolidated Statement of Operations represents revenues from contracts with customers disaggregated by type of revenue.

The Company has four revenue streams as described below.

Commission Revenue. The Company charges its broker-dealer clients variable transaction fees for trades executed on its platform and, under certain plans, distribution fees or monthly minimum fees to use the platform for a particular product area. Variable transaction fees are generally calculated as a percentage of the notional dollar volume of bonds traded on the platform and vary based on the type, size, yield and maturity of the bond traded. Under the Company's disclosed trading transaction fee plans, bonds that are more actively traded or that have shorter maturities are generally charged lower commissions, while bonds that are less actively traded or that have longer maturities generally command higher commissions. Variable transaction fees, distribution fees and unused monthly fee commitments are invoiced and recorded on a monthly basis.

For trades that the Company executes between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller, the Company earns its commission through the difference in price between the two trades. The commission is collected upon settlement of the trade, which typically occurs within one to two trading days after the trade date. The following table presents commission revenue by fee type for the three and six months ended June 30, 2018 and 2017:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017

	(In thousands)			
Commission revenue by fee type				
Variable transaction fees				
Disclosed trading	$56,463	$59,367	$122,716	$125,270
Open Trading™ - matched principal trading	15,191	11,216	28,715	23,161
Total variable transaction fees	71,654	70,583	151,431	148,431
Distribution fees and unused minimum fees	24,459	16,432	47,454	32,606
Total commissions	$96,113	$87,015	$198,885	$181,037

Information services – Information services includes data licensed to the Company's broker-dealer clients, institutional investor clients and data-only subscribers; professional and consulting services; technology software licenses; and maintenance and support services. The nature and timing of each performance obligation may vary as these contracts are either subscription based services transferred over time or one-time services that are transferred at a point in time. Revenues for services transferred over time are recognized ratably over the contract period as the Company's performance obligation is met whereas revenues for services transferred at a point in time are recognized in the period the services are provided. Customers are generally billed monthly, quarterly, or annually; revenues billed in advance are deferred and recognized ratably over the contract period. The following table presents information services revenue by timing of recognition for the three and six months ended June 30, 2018 and 2017:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
	(In thousands)			
Information services revenue by timing of recognition				
Services transferred over time	$6,829	$6,287	$13,623	$12,332
Services transferred at a point in time	101	210	373	350
Total information services revenues	$6,930	$6,497	$13,996	$12,682

Post-trade services – Post-trade services revenue is generated from regulatory transaction reporting, trade publication and trade matching services. Customers are generally billed monthly in arrears and revenue is recognized in the period transactions are processed. Revenues billed in advance are deferred and recognized ratably over the contract period. The Company also generates one-time implementation fees for onboarding clients which are invoiced and recognized in the period the implementation is completed. The following table presents post-trade services revenue by timing of recognition for the three and six months ended June 30, 2018 and 2017:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
	(In thousands)			
Post-trade services revenue by timing of recognition				
Services transferred over time	$3,620	$2,470	$7,907	$4,919
Services transferred at a point in time	—	19	289	26
Total post-trade services revenues	$3,620	$2,489	$8,196	$4,945

Other revenues – Other revenues primarily includes revenue from telecommunications line charges to broker-dealer clients.

Contract liabilities consist of deferred revenues that the Company records when cash payments are received or due in advance of services to be performed. The revenue recognized from contract liabilities and the remaining balance is shown below:

	December 31, 2017	Payments received in advance of services to be performed	Revenue recognized for services performed during the period	Foreign Currency Translation	June 30, 2018
	(In thousands)				
Information services	$ 1,763	$ 3,752	$ (3,312)	$ —	$ 2,203
Post-trade services	897	6,423	(5,908)	(20)	1,392
Total deferred revenue	$ 2,660	$ 10,175	$ (9,220)	$ (20)	$ 3,595

The majority of the Company's contracts are short-term in nature with durations of less than one-year. For contracts extending beyond one year, the aggregate amount of the transaction price allocated to remaining performance obligations was $11.4 million as of June 30, 2018. The Company expects to recognize revenue associated with the remaining performance obligations over the next 22 months.

Stock-Based Compensation

The Company measures and recognizes compensation expense for all share-based payment awards based on their estimated fair values measured as of the grant date. These costs are recognized as an expense in the Consolidated Statements of Operations over the requisite service period, which is typically the vesting period, with an offsetting increase to additional paid-in capital. Forfeitures are recognized as they occur.

Income Taxes

Income taxes are accounted for using the asset and liability method. Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when such differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is recognized against deferred tax assets if it is more likely than not that such assets will not be realized in future years. The Company recognizes interest and penalties related to unrecognized tax benefits in general and administrative expenses in the Consolidated Statements of Operations. Effective upon the Company’s adoption of ASU 2016-09, all tax effects related to share-based payments are recorded through tax expense in the periods during which the awards are exercised or vest.

On December 22, 2017, the SEC issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (“SAB 118”) to address the application of U.S. generally accepted accounting principles (“GAAP”) related to the enactment of the Tax Cuts and Jobs Act (the “Tax Act”). SAB 118 allows the Company to record a provisional amount when it does not have the necessary information available, prepared, or analyzed in reasonable detail to complete its accounting for the change in the tax law. The measurement period ends when the Company has obtained, prepared and analyzed the information necessary to finalize its accounting, but cannot extend beyond one year. The Company expects to complete its analysis within the measurement period in accordance with SAB 118.

Business Combinations, Goodwill and Intangible Assets

Business combinations are accounted for under the purchase method of accounting. The total cost of an acquisition is allocated to the underlying net assets based on their respective estimated fair values. The excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Determining the fair value of certain assets acquired and liabilities assumed is judgmental in nature and often involves the use of significant estimates and assumptions, including assumptions with respect to future cash flows, discount rates, growth rates and asset lives.

The Company operates as a single reporting unit. Subsequent to an acquisition, goodwill no longer retains its identification with a particular acquisition, but instead becomes identifiable with the entire reporting unit. As a result, all of the fair value of the Company is available to support the value of goodwill. An impairment review of goodwill is performed on an annual basis, at year-end, or more frequently if circumstances change. Intangible assets with definite lives, including purchased technologies, customer relationships and other intangible assets, are amortized on a straight-line basis over their estimated useful lives, ranging from three to 15 years. Intangible assets are assessed for impairment when events or circumstances indicate the existence of a possible impairment.

Earnings Per Share

Basic earnings per share is computed by dividing the net income attributable to common stock by the weighted-average number of shares of common stock outstanding during the period. For purposes of computing diluted earnings per share, the weighted-average shares outstanding of common stock reflects the dilutive effect that could occur if convertible securities or other contracts to issue common stock were converted into or exercised for common stock.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications

Certain reclassifications have been made to the prior period's Consolidated Financial Statements in order to conform to the current year presentation. The Company reclassified certain revenue line items on the consolidated statements of operations to separately reflect information service revenues and post-trade service revenues. The Company also revised the format of the Consolidated Statement of Operations to separately present non-operating activities. Such activities include investment income, unrealized and realized gains (losses) on trading securities, foreign exchange gains (losses), investment advisory fees and other miscellaneous non-operating activities. Accordingly, the Company reclassified these amounts from the various revenue and expense line items to Other income (expense). The reclassifications had no effect on previously reported income before income taxes or net income.

3. Net Capital Requirements

Certain U.S. subsidiaries of the Company are registered as a broker-dealer or swap execution facility and therefore are subject to the applicable rules and regulations of the SEC and the Commodity Futures Trading Commission ("CFTC"). These rules contain minimum net capital requirements, as defined in the applicable regulations, and also may require a significant part of the registrants' assets be kept in relatively liquid form. Certain of the Company's foreign subsidiaries are regulated by the Financial Conduct Authority in the U.K. or other foreign regulators and must maintain financial resources, as defined in the applicable regulations, in excess of the applicable financial resources requirement. As of June 30, 2018, each of the Company's subsidiaries that are subject to these regulations had net capital or financial resources in excess of their minimum requirements. As of June 30, 2018, the Company's subsidiaries maintained aggregate net capital and financial resources that was $140.7 million in excess of the required levels of $14.9 million.

Each of the Company's U.S. and foreign regulated subsidiaries are subject to local regulations which generally prohibit repayment of borrowings from the Company or affiliates, paying cash dividends, making loans to the Company or affiliates or otherwise entering into transactions that result in a significant reduction in regulatory net capital or financial resources without prior notification to or approval from such regulated entity's principal regulator.

4. Fair Value Measurements

The following table summarizes the valuation of the Company's assets and liabilities measured at fair value as categorized based on the hierarchy described in Note 2.

	Level 1	Level 2	Level 3	Total
	(In thousands)			
June 30, 2018				
Money market funds	$101,896	$—	$ —	$101,896
Securities available-for-sale				
Corporate debt	—	151,019	—	151,019
Trading securities				
Corporate debt	—	94,202	—	94,202
Mutual funds held in rabbi trust	—	4,370	—	4,370
Foreign currency forward position	—	(262)	—	(262)
Total	$101,896	$249,329	$ —	$351,225

December 31, 2017				
Money market funds	$88,562	$—	$ —	$88,562
Securities available-for-sale				
Corporate debt	—	145,052	—	145,052
Trading securities				
Corporate debt	—	91,302	—	91,302
Mutual funds held in rabbi trust	—	3,167	—	3,167
Foreign currency forward position	—	(702)	—	(702)
Total	$88,562	$238,819	$ —	$327,381

Securities classified within Level 2 were valued using a market approach utilizing prices and other relevant information generated by market transactions involving comparable assets. The foreign currency forward contracts are classified within Level 2 as the valuation inputs are based on quoted market prices. The mutual funds held in a rabbi trust represent investments associated with the deferred cash incentive plan (see Note 14). There were no financial assets classified within Level 3 during the six months ended June 30, 2018 and 2017.

The Company enters into foreign currency forward contracts to hedge the net investment in the Company's U.K. subsidiaries. The Company designates each foreign currency forward contract as a hedge and assesses the risk management objective and strategy, including identification of the hedging instrument, the hedged item and the risk exposure and how effectiveness is to be assessed prospectively and retrospectively. These hedges are for a one-month period and are used to limit exposure to foreign currency exchange rate fluctuations. The fair value of the asset is included in prepaid expenses and other assets and the fair value of the liability is included in accounts payable, accrued expenses and other liabilities in the Consolidated Statements of Financial Condition. Gains or losses on foreign currency forward contracts designated as hedges are included in accumulated other comprehensive loss in the Consolidated Statements of Financial Condition. A summary of the Company's foreign currency forward position is as follows:

	As of June 30, 2018	December 31, 2017
	(In thousands)	
Notional value	$89,568	$ 84,422
Fair value of notional	89,830	85,124
Fair value of the (liability)	$(262)	$ (702)

The following is a summary of the Company's investments:

	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
	(In thousands)			
As of June 30, 2018				
Securities available-for-sale				
Corporate debt	$151,861	$ 12	$ (854)	$151,019
Trading securities				
Corporate debt	94,808	17	(623)	94,202
Mutual funds held in rabbi trust	4,347	—	23	4,370
Total trading securities	99,155	17	(600)	98,572
Total investments	$251,016	$ 29	$ (1,454)	$249,591

December 31, 2017				
Securities available-for-sale				
Corporate debt	$145,526	$ 9	$ (483)	$145,052
Trading securities				
Corporate debt	91,578	30	(306)	91,302
Mutual funds held in rabbi trust	2,729	438	—	3,167
Total trading securities	94,307	468	(306)	94,469
Total investments	$239,833	$ 477	$ (789)	$239,521

The following table summarizes the fair value of the investments based upon the contractual maturities:

	As of June 30, 2018	December 31, 2017
	(In thousands)	
Less than one year	$153,318	$ 130,738
Due in 1 - 5 years	96,273	108,783
Total	$249,591	$ 239,521

Proceeds from the sales and maturities of investments during the six months ended June 30, 2018 and 2017 were $184.8 million and $116.9 million, respectively.

The following table provides fair values and unrealized losses on investments and by the aging of the securities' continuous unrealized loss position as of June 30, 2018 and December 31, 2017:

	Less than Twelve Months		Twelve Months or More		Total	
	Estimated fair value	Gross unrealized losses	Estimated fair value	Gross unrealized losses	Estimated fair value	Gross unrealized losses
	(In thousands)					
As of June 30, 2018						
Corporate debt	$146,203	$ (1,159)	$27,179	$ (318)	$173,382	$ (1,477)
As of December 31, 2017						
Corporate debt	$177,114	$ (536)	$26,476	$ (253)	$203,590	$ (789)

5. Goodwill and Intangible Assets

Goodwill and intangible assets with indefinite lives was $59.7 million as of both June 30, 2018 and December 31, 2017. Intangible assets that are subject to amortization, including the related accumulated amortization, are comprised of the following:

June 30, 2018	December 31, 2017

	Cost	Accumulated amortization	Net carrying amount	Cost	Accumulated amortization	Net carrying amount
	(In thousands)					
Technology	$5,770	$ (5,770)	$ —	$5,770	$ (5,770)	$ —
Customer relationships	5,642	(2,487)	3,155	5,647	(2,301)	3,346
Non-competition agreements	380	(380)	—	380	(380)	—
Tradenames	370	(370)	—	370	(370)	—
Total	$12,162	$ (9,007)	$ 3,155	$12,167	$ (8,821)	$ 3,346

Amortization expense associated with identifiable intangible assets was $0.2 million for each of the six months ended June 30, 2018 and 2017, respectively. Estimated total amortization expense is $0.4 million for each year from 2018 through 2022.

6. Income Taxes

The provision for income taxes consists of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Current:				
Federal	$8,792	$9,030	$16,762	$17,345
State and local	2,077	1,470	3,997	2,928
Foreign	2,415	1,498	3,529	3,043
Total current provision	13,284	11,998	24,288	23,316
Deferred:				
Federal	(505)	(479)	341	1,060
State and local	(101)	(72)	29	94
Foreign	45	103	1,138	224
Total deferred provision	(561)	(448)	1,508	1,378
Provision for income taxes	$12,723	$11,550	$25,796	$24,694

The Company recognized excess tax benefits on share-based payments of $0.1 million and $5.3 million through the provision for income taxes, for the three months ended June 30, 2018 and 2017, respectively, and $2.0 million and $11.0 million for the six months ended June 30, 2018 and 2017, respectively.

On December 22, 2017, the Tax Act was enacted into law. The Tax Act significantly revised the U.S. corporate income tax regime by, among other things, lowering the U.S. federal corporate income tax rate from 35% to 21%, implementing a territorial tax system and imposing a repatriation tax on deemed earnings of foreign subsidiaries. The Company has made a reasonable estimate of the impact of the Tax Act and recorded a provisional tax charge in 2017 of $11.7 million, composed of $6.7 million to re-measure U.S. deferred tax assets and $5.0 million for the repatriation tax on accumulated undistributed foreign earnings. The final impact of the Tax Act may differ materially from the provisional tax charge recognized in 2017 due to, among other things, changes in interpretations and assumptions the Company has made, guidance that may be issued by the U.S. Department of the Treasury and actions the Company may take as a result of the Tax Act.

The Company or one of its subsidiaries files U.S. federal, state and foreign income tax returns. Income tax returns for U.S. Federal (through 2013), New York City (through 2003) and state (through 2009) and Connecticut state (through 2003) have been audited. An examination of the Company's New York State income tax returns for 2010 through 2013 is currently underway. The Company cannot estimate when the examination will conclude or the impact such examination will have on the Company's Consolidated Financial Statements, if any.

Pursuant to the Tax Act, all previously undistributed foreign earnings have now been subject to U.S. tax. Notwithstanding the U.S. taxation of these amounts, the Company considers its undistributed foreign earnings to be indefinitely reinvested outside of the U.S. and does not expect to incur any significant additional taxes related to such amounts.

7. Stock-Based Compensation Plans

Stock-based compensation expense for the three and six months ended June 30, 2018 and 2017 was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
	(In thousands)			
Employees	$3,393	$3,292	$7,085	$6,993
Non-employee directors	257	232	516	475
Total stock-based compensation	$3,650	$3,524	$7,601	$7,468

The Company records stock-based compensation expense for employees in employee compensation and benefits and for non-employee directors in general and administrative expenses in the Consolidated Statements of Operations.

During the six months ended June 30, 2018, the Company granted to employees a total of 46,545 shares of restricted stock or restricted stock units, 19,693 options to purchase shares of common stock and performance-based shares with an expected pay-out at target of 10,479 shares of common stock. The fair value of the restricted stock and performance-based share awards was based on a weighted-average fair value per share at the grant date of $203.67 and $202.04, respectively. Based on the Black-Scholes option pricing model, the weighted-average fair value for each option granted was $56.11 per share.

As of June 30, 2018, the total unrecognized compensation cost related to all non-vested awards was $27.2 million. That cost is expected to be recognized over a weighted-average period of 1.8 years.

8. Earnings Per Share

The following table sets forth the computation of basic and diluted earnings per common share:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
	(In thousands, except per share amounts)			
Basic weighted average shares outstanding	36,950	36,853	36,952	36,852
Dilutive effect of stock options and restricted stock	912	1,224	922	1,243
Diluted weighted average shares outstanding	37,862	38,077	37,874	38,095

Stock options and restricted stock totaling 19,984 shares and 50,817 shares for the three months ended June 30, 2018 and 2017, respectively, and 48,858 shares and 55,364 shares for the six months ended June 30, 2018 and 2017, respectively, were excluded from the computation of diluted earnings per share because their effect would have been antidilutive. The computation of diluted shares can vary among periods due, in part, to the change in the average price of the Company’s common stock.

9. Credit Agreement

In October 2015, the Company entered into a two-year amended and restated credit agreement (the “Credit Agreement”) that provided for revolving loans and letters of credit up to an aggregate of $100.0 million. The Company amended the Credit Agreement in October 2017 and extended the maturity date to October 2018. The amended Credit Agreement also provides for two additional one-year extension options and modified certain borrowing terms and covenants. Subject to satisfaction of certain specified conditions, the Company is permitted to upsize the borrowing capacity under the Credit Agreement by an additional $50.0 million. As of June 30, 2018, the Company had $1.7 million in letters of credit outstanding and $98.3 million in available borrowing capacity under the Credit Agreement.

Borrowings under the Credit Agreement will bear interest at a rate per annum equal to the base rate or adjusted LIBOR plus an applicable margin that varies with the Company’s consolidated total leverage ratio. The Credit Agreement requires that the Company satisfies certain covenants, which includes leverage ratios and minimum earnings before interest, tax, depreciation and amortization (“EBITDA”) requirements. The Company was in compliance with all applicable covenants at June 30, 2018 and December 31, 2017.

The Company’s existing and future domestic subsidiaries (other than any regulated subsidiary) have guaranteed the Company’s obligations under the Credit Agreement. Subject to customary exceptions and exclusions, the Company’s borrowings under the Credit Agreement are collateralized by first priority pledges (subject to permitted liens) of substantially all of the Company’s personal property assets and the personal property assets of the Company’s domestic subsidiaries that have guaranteed the Credit Agreement, including the equity interests of the Company’s domestic subsidiaries and the equity interests of certain of the Company’s foreign subsidiaries (limited, in the case of the voting equity interests of the foreign subsidiaries, to a pledge of 65% of those equity interests).

If an event of default occurs, including failure to pay principal or interest due on the loan balance, a voluntary or involuntary proceeding seeking liquidation, change in control of the Company, or one or more material judgments against the Company in excess of $10.0 million, the lenders would be entitled to accelerate the borrowings under the Credit Agreement and take various other actions, including all actions permitted to be taken by a secured creditor. If certain bankruptcy events of default occur, the borrowings under the Credit Agreement will automatically accelerate.

10. Commitments and Contingencies

Lease Commitments

The Company leases office space under non-cancelable lease agreements expiring at various dates through 2033. Office space leases are subject to escalation based on certain costs incurred by the landlord. Minimum rental commitments as of June 30, 2018 under such operating leases were as follows (in thousands):

Remainder of 2018	$2,422
2019	9,626
2020	10,741
2021	10,135
2022	9,104
2023 and thereafter	99,067
	$141,095

Rental expense was $6.3 million and $2.5 million for the six months ended June 30, 2018 and 2017, respectively, and is included in occupancy expense in the Consolidated Statements of Operations. Rental expense has been recorded based on the total minimum lease payments after giving effect to rent abatement and concessions, which are being amortized on a straight-line basis over the life of the lease. The Company is contingently obligated for standby letters of credit amounting to $1.7 million that were issued to landlords for office space.

During 2016, the Company entered into a fifteen-year lease agreement for its new global headquarters in New York City. The Company expects to relocate its headquarters to approximately 83,000 square feet of newly built office space at 55 Hudson Yards upon the building's completion in late 2018. Rent expense recognition commenced upon acceptance of the premises in January 2018.

The Company has assigned a lease agreement on a leased property to a third party and is contingently liable should the assignee default on future lease obligations through the November 2020 lease termination date. The aggregate amount of the future lease obligation under this arrangement is approximately $0.6 million as of June 30, 2018.

Legal

In the normal course of business, the Company and its subsidiaries included in the consolidated financial statements may be involved in various lawsuits, proceedings and regulatory examinations. The Company assesses its liabilities and contingencies in connection with outstanding legal proceedings, if any, utilizing the latest information available. For matters where it is probable that the Company will incur a material loss and the amount can be reasonably estimated, the Company will establish an accrual for the loss. Once established, the accrual will be adjusted to reflect any relevant developments. When a loss contingency is not both probable and estimable, the Company does not establish an accrual.

Based on currently available information, the outcome of the Company's outstanding matters is not expected to have a material adverse impact on the Company's financial position. It is not presently possible to determine the ultimate exposure to these matters and there is no assurance that the resolution of the outstanding matters will not significantly exceed any reserves accrued by the Company.

Other

The Company, through two regulated subsidiaries, executes certain bond transactions between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller in trades which settle through third-party clearing brokers. Settlement typically occurs within one to two trading days after the trade date. Cash settlement of the transaction occurs upon receipt or delivery of the underlying instrument that was traded. For the six months ended June 30, 2018 and 2017, revenues from matched principal trading were approximately $28.7 million and $23.2 million, respectively. Under securities clearing agreements with third party clearing brokers, the Company maintains collateral deposits with each clearing broker in the form of cash. As of June 30, 2018 and 2017, the amount of the collateral deposits included in prepaid expenses and other assets in the Consolidated Statements of Financial Condition was $1.2 million and $1.1 million, respectively. For the six months ended June 30, 2018 and 2017, clearing expenses associated with matched principal transactions were $3.7 million and $2.8 million, respectively, and are classified under clearing costs on the Consolidated Statements of Operations. The Company is exposed to credit risk in the event a counterparty does not fulfill its obligation to complete a transaction or if there is a miscommunication or other error in executing a matched principal transaction. Pursuant to the terms of the securities clearing agreements, each third-party clearing broker has the right to charge the Company for any losses they suffer resulting from a counterparty's failure on any of the Company's trades. The Company did not record any liabilities or losses with regard to this right for the six months ended June 30, 2018 and 2017.

In the normal course of business, the Company enters into contracts that contain a variety of representations, warranties and indemnification provisions. The Company's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Company that have not yet occurred. However, based on experience, the Company expects the risk of loss to be remote.

11. Customer Concentration

During both the six months ended June 30, 2018 and 2017, no single client accounted for more than 10% of total revenue. One institutional investor client accounted for 10.4% and 13.2% of trading volumes during the six months ended June 30, 2018 and 2017, respectively.

12. Share Repurchase Program

In September 2017, the Board of Directors authorized a new fifteen-month share repurchase program for up to $100.0 million commencing in October 2017. For the six months ended June 30, 2018, the Company repurchased 62,400 shares of common stock at a cost of $12.9 million. Shares repurchased under the program will be held in treasury for future use.

13. Segment and Geographic Information

The Company operates an electronic multi-party platform for the trading of fixed-income securities and provides related data, analytics, compliance tools and post-trade services. The Company considers its operations to constitute a single business segment because of the highly integrated nature of these product and services, of the financial markets in which the Company competes and of the Company's worldwide business activities. The Company believes that results by geographic region or client sector are not necessarily meaningful in understanding its business.

For the six months ended June 30, 2018 and 2017, the U.K. was the only individual foreign country in which the Company had a subsidiary that accounted for 10% or more of the total revenues or total long-lived assets of the Company. Revenues and long-lived assets are attributed to a geographic area based on the location of the particular subsidiary. Long-lived assets are defined as furniture, equipment, leasehold improvements and capitalized software. Information regarding revenue for the three and six months ended June 30, 2018 and 2017 and long-lived assets as of June 30, 2018 and December 31, 2017 was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
	(In thousands)			
Revenues				
United States	$90,272	$81,682	$186,723	$168,539
United Kingdom	16,195	14,240	33,946	29,971
Other	497	392	1,009	768
Total	$106,964	$96,314	$221,678	$199,278

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	As of June 30, 2018	December 31, 2017
	(In thousands)	
Long-lived assets, as defined		
United States	$40,968	$ 27,990
United Kingdom	9,097	10,532
Other	23	26
Total	$50,088	$ 38,548

14. Retirement and Deferred Compensation Plans

The Company offers a non-qualified deferred cash incentive plan to certain officers and other employees. Under the plan, eligible employees may defer up to 100% of their annual cash incentive pay. The Company has elected to fund its deferred compensation obligations through a rabbi trust. The rabbi trust is subject to creditor claims in the event of insolvency but such assets are not available for general corporate purposes. Assets held in the rabbi trust are invested in mutual funds, as selected by the participants, which are designated as trading securities and carried at fair value. As of June 30, 2018 and 2017, the fair value of the mutual fund investments and deferred compensation obligations were $4.4 million and $2.9 million, respectively. Changes in the fair value of securities held in the rabbi trust and offsetting increases or decreases in the deferred compensation obligation are recognized in other, net in the Company's Consolidated Statements of Operations. For the six months ended June 30, 2018 and 2017, the trading gains or losses and changes in deferred compensation liability and expense were immaterial.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Forward-Looking Statements

This report contains certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by words such as “expects,” “intends,” “anticipates,” “plans,” “believes,” “seeks,” “estimates,” “will,” or words of similar meaning and include, but are not limited to, statements regarding the outlook for our future business and financial performance. Forward-looking statements are based on management’s current expectations and assumptions, which are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. It is routine for our internal projections and expectations to change as the year or each quarter in the year progresses, and therefore it should be clearly understood that the internal projections and beliefs upon which we base our expectations may change prior to the end of each quarter or the year. Although these expectations may change, we are under no obligation to revise or update any forward-looking statements contained in this report. Our company policy is generally to provide our expectations only once per quarter, and not to update that information until the next quarter. Actual future events or results may differ, perhaps materially from those contained in the projections or forward-looking statements. Factors that could cause or contribute to such differences include those discussed below and elsewhere in this report, particularly in the section captioned Part II, Item 1A, “Risk Factors.”

Executive Overview

MarketAxess operates a leading electronic trading platform that enables fixed-income market participants to efficiently trade corporate bonds and other types of fixed-income instruments using our patented trading technology. Over 1,400 institutional investor and broker-dealer firms are active users of our trading platform, accessing global liquidity in U.S. high-grade corporate bonds, emerging markets and high-yield bonds, European bonds, U.S. agency bonds, municipal bonds, credit default swaps and other fixed-income securities. Through our Open Trading™ protocols, we execute trades in certain bonds between and among institutional investor and broker-dealer clients in an all-to-all trading environment on a matched principal basis. We also offer a number of trading-related products and services, including: market data to assist clients with trading decisions; connectivity solutions that facilitate straight-through processing; technology services to optimize trading environments; and execution services for exchange-traded fund managers and other clients. Through our Trax® division, we also offer a range of pre- and post-trade services, including trade matching, trade publication, regulatory transaction reporting, and market and reference data across a range of fixed-income and other products.

Our platform’s innovative technology solutions are designed to increase the number of potential trading counterparties on our electronic trading platform and create a menu of solutions to address different trade sizes and bond liquidity characteristics. Our traditional request-for-quote model allows our institutional investor clients to simultaneously request competing, executable bids or offers from our broker-dealer clients and execute trades with the broker-dealer of their choice from among those that choose to respond. Our Open Trading™ protocols complement our request-for-quote model by exponentially increasing the number of potential counterparties and improving liquidity by allowing all participants to interact anonymously in an all-to-all trading environment. Our platform also provides our broker-dealer clients a solution that enables them to efficiently reach our institutional investor clients for the distribution and trading of bonds.

The majority of our revenues are derived from commissions for trades executed on our platform and distribution fees that are billed to our broker-dealer clients on a monthly basis. We also derive revenues from information and post-trade services, technology products and services and other revenues. Our expenses consist of employee compensation and benefits, depreciation and amortization, technology and communication expenses, professional and consulting fees, occupancy, marketing and advertising and other general and administrative expenses.

Our objective is to provide the leading global electronic trading platform for fixed-income securities, connecting broker-dealers and institutional investors more easily and efficiently, while offering a broad array of information, trading and technology services to market participants across the trading cycle. The key elements of our strategy are:

- to innovate and efficiently add new functionality and product offerings to the MarketAxess platform that we believe will help to increase our market share with existing clients, as well as to expand our client base;
- to leverage our existing client network and technology to exponentially increase the number of potential counterparties and improve liquidity by developing and deploying a wide range of all-to-all electronic trading protocols in our Open Trading™ environment to complement our traditional request-for-quote model;
- to leverage our existing technology and client relationships to deploy our electronic trading platform into additional product areas within the fixed-income securities markets and deliver fixed-income securities-related technical services and products;

- to continue building our existing service offerings so that our electronic trading platform is more fully integrated into the workflow of our broker-dealer and institutional investor clients and to continue to add functionality to allow our clients to achieve a fully automated end-to-end straight-through processing solution (automation from trade initiation to settlement);
- to add new content and analytical capabilities to BondTicker® and expand Axess All®, the first intra-day trade tape for the European fixed-income market, and our other data service offerings provided by Trax® to improve the value of the information we provide to our clients; and
- to continue to increase and supplement our internal growth by entering into strategic alliances, or acquiring businesses or technologies that will enable us to enter new markets, provide new products or services, or otherwise enhance the value of our platform to our clients.

Critical Factors Affecting Our Industry and Our Company

Economic, Political and Market Factors

The global fixed-income securities industry is risky and volatile and is directly affected by a number of economic, political and market factors that may result in declining trading volume. These factors could have a material adverse effect on our business, financial condition and results of operations. These factors include, among others, credit market conditions, the current interest rate environment, including the volatility of interest rates and investors' forecasts of future interest rates, economic and political conditions in the United States, Europe and elsewhere, and the consolidation or contraction of our broker-dealer clients.

Competitive Landscape

The global fixed-income securities industry generally, and the electronic financial services markets in which we engage in particular, are highly competitive, and we expect competition to intensify in the future. Sources of competition for us will continue to include, among others, bond trading conducted directly between broker-dealers and their institutional investor clients over the telephone or electronically and other multi-dealer or all-to-all trading platforms. Competitors, including companies in which some of our broker-dealer clients have invested, have developed or acquired electronic trading platforms or have announced their intention to explore the development of electronic platforms or information networks that may compete with us.

In general, we compete on the basis of a number of key factors, including, among others, the liquidity provided on our platform, the magnitude and frequency of price improvement enabled by our platform, total transaction costs and the quality and speed of execution. We believe that our ability to grow volumes and revenues will largely depend on our performance with respect to these factors.

Our competitive position is also enhanced by the familiarity and integration of our broker-dealer and institutional investor clients with our electronic trading platform and other systems. We have focused on the unique aspects of the credit markets we serve in the development of our platform, working closely with our clients to provide a system that is suited to their needs.

Regulatory Environment

Our industry has been and is subject to continuous regulatory changes and may become subject to new regulations or changes in the interpretation or enforcement of existing regulations, which could require us to incur significant costs.

Following the global financial crisis and other recent events in the financial industry, governments and regulators in both the United States and Europe called for increased regulation and transparency in the over-the-counter markets. As a result, the Dodd-Frank Act was enacted in 2010 and, among other things, mandated the clearing of certain derivative instruments (“swaps”) through regulated central clearing organizations and mandatory trading of those instruments through either regulated exchanges or swap execution facilities (“SEFs”), in each case, subject to certain key exceptions.

Various rules promulgated since the financial crisis could also adversely affect our bank-affiliated broker-dealer clients’ ability to make markets in a variety of fixed-income securities, thereby negatively impacting the level of liquidity and pricing available on our trading platform. For example, while the Volcker Rule does not apply directly to us, the Volcker Rule bans proprietary trading by banks and their affiliates. In addition, enhanced leverage ratios applicable to large banking organizations in the U.S. and Europe require such organizations to strengthen their balance sheets and may limit their ability or willingness to make markets on our trading platform.

Following President Trump's election in November 2016, the U.S. has pursued a path of financial deregulation and has rolled back certain provisions of the Dodd-Frank Act. There has also been a growing focus on U.S. capital markets regulations as the U.S. Department of the Treasury issued a report with recommendations to improve corporate bond liquidity and the regulations that implement the Volcker Rule. In 2017, the SEC established a Fixed Income Market Structure Advisory Committee in order to provide the SEC with diverse perspectives on the structure and operations of the U.S. fixed income markets, as well as advice and recommendations on matters related to fixed income market structure.

In Europe, Markets in Financial Instruments Directive ("MiFID II") and Markets in Financial Instruments Regulation ("MiFIR") were implemented in January 2018 and introduced significant changes in market structure designed to: (i) enhance pre- and post-trade transparency for fixed income instruments with the scope of requirements calibrated for liquidity, (ii) increase and enhance post-trade reporting obligations with a requirement to submit post-trade data to an Approved Reporting Mechanism ("ARM"), (iii) ensure trading of certain derivatives occurs on regulated trading venues and (iv) establish a consolidated tape for trade data. MiFID II has caused us to expend significantly more compliance, business and technology resources, incur additional operational costs and create additional regulatory exposure for our trading and post-trade services businesses. While we generally believe the net impact of the rules and regulations may be positive for our businesses, unintended consequences of the rules and regulations may adversely affect us in ways yet to be determined.

In March 2017, the U.K. notified the European Council of its intention to leave the European Union ("E.U.") (commonly referred to as "Brexit"). By invoking Article 50 of the Lisbon Treaty, the U.K. is currently set to leave the E.U. in March 2019. Subject to the terms, if any, agreed between E.U. member states and the U.K. as part of the exit negotiations, our U.K. subsidiaries will not be able to rely on the existence of a "passporting" regime that allows immediate access to the single E.U. market. Accordingly, we have begun the process of establishing one or more new regulated subsidiaries in the E.U. in order to provide our trading platform and certain post-trade services to clients in the E.U. following Brexit.

We cannot predict the extent to which these, or any other future regulatory changes, may adversely affect our business and operations.

Rapid Technological Changes

We must continue to enhance and improve our electronic trading platform. The electronic financial services industry is characterized by increasingly complex systems and infrastructures and new business models. Our future success will depend on our ability to enhance our existing products and services, develop and/or license new products and technologies that address the increasingly sophisticated and varied needs of our existing and prospective broker-dealer and institutional investor clients and respond to technological advances and emerging industry standards and practices on a cost-effective and timely basis. We have been issued 13 patents covering our most significant trading protocols and other aspects of our trading system technology.

Trends in Our Business

The majority of our revenues are derived from commissions for transactions executed on our platform between and among our institutional investor and broker-dealer clients and monthly distribution fees. We believe that there are five key variables that impact the notional value of such transactions on our platform and the amount of commissions and distribution fees earned by us:

- the number of participants on our platform and their willingness to originate transactions through the platform;
-

the number of institutional investor and broker-dealer clients on the platform and the frequency and competitiveness of the price responses they provide on our platform;

- the number of markets for which we make trading available to our clients;
- the overall level of activity in these markets; and
- the level of commissions that we collect for trades executed through the platform.

We believe that overall corporate bond market trading volume is affected by various factors including the absolute levels of interest rates, the direction of interest rate movements, the level of new issues of corporate bonds and the volatility of corporate bond spreads versus U.S. Treasury securities. Because a significant percentage of our revenue is tied directly to the volume of securities traded on our platform, it is likely that a general decline in trading volumes, regardless of the cause of such decline, would reduce our revenues and have a significant negative impact on profitability.

Commission Revenue

Commissions are generally calculated as a percentage of the notional dollar volume of bonds traded on our platform and vary based on the type, size, yield and maturity of the bond traded. Under our disclosed trading transaction fee plans, bonds that are more actively traded or that have shorter maturities are generally charged lower commissions, while bonds that are less actively traded or that have longer maturities generally command higher commissions.

For trades that we execute between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller, we earn our commission through the difference in price between the two trades. Distribution fees include any unused monthly fee commitments under our variable fee plans.

U.S. High-Grade Corporate Bond Commissions. Our U.S. high-grade corporate bond fee plans generally incorporate variable transaction fees and fixed distribution fees billed to our broker-dealer clients on a monthly basis. Certain dealers participate in fee programs that do not contain monthly distribution fees and instead incorporate additional per transaction execution fees and minimum monthly fee commitments. Under these fee plans, we electronically add the transaction fee to the spread quoted by the broker-dealer client. The U.S. high-grade transaction fee is generally designated in basis points in yield and, as a result, is subject to fluctuation depending on the duration of the bond traded. The average U.S. high-grade fees per million may vary in the future due to changes in yield, years-to-maturity and nominal size of bonds traded on our platform.

Other Credit Commissions. Other credit includes Eurobonds, emerging markets bonds, high-yield bonds and municipal bonds. Commissions for other credit products generally vary based on the type of the instrument traded using standard fee schedules. During the third quarter of 2017, we changed our high-yield fee plan structure. Similar to our U.S. high-grade fee plans, certain dealers now participate in a high-yield fee plan that incorporates a variable transaction fee and fixed distribution fee, while other dealers participate in a plan that does not contain monthly distribution fees and instead incorporates additional per transaction execution fees and minimum monthly fee commitments.

Liquid Products Commissions. Liquid products includes U.S. agency, European government bonds and credit derivatives. Commissions for liquid products generally vary based on the type of the instrument traded using standard fee schedules.

We anticipate that average fees per million may change in the future. Consequently, past trends in commissions are not necessarily indicative of future commissions.

Information Services

We generate revenue from data licensed to our broker-dealer clients, institutional investor clients and data-only subscribers; professional consulting services; technology software licenses; and maintenance and support services. Information services are invoiced monthly, quarterly or annually. Revenues from information services are recognized in the period the services are provided. When billed in advance, information service revenues are deferred and recognized monthly on a straight-line basis. Revenue from professional and consulting services are recognized as services are performed and software license subscription revenue and maintenance and support services are recognized ratably over the period.

Post-trade Services

We generate revenue from regulatory transaction reporting, trade publication and trade matching services. Revenues are recognized in the period the services are provided.

Other Revenue

Other revenue includes revenue generated from telecommunications line charges to broker-dealer clients.

Expenses

In the normal course of business, we incur the following expenses:

Employee Compensation and Benefits. Employee compensation and benefits is our most significant expense and includes employee salaries, stock-based compensation costs, other incentive compensation, employee benefits and payroll taxes.

Depreciation and Amortization. We depreciate our computer hardware and related software, office hardware and furniture and fixtures and amortize our capitalized software development costs on a straight-line basis over three to seven years. We amortize leasehold improvements on a straight-line basis over the lesser of the life of the improvement or the remaining term of the lease. Intangible assets with definite lives, including purchased technologies, customer relationships and other intangible assets, are amortized over their estimated useful lives, ranging from three to 15 years. Intangible assets are assessed for impairment when events or circumstances indicate a possible impairment.

Technology and Communications. Technology and communications expense consists primarily of costs relating to maintenance on software and hardware, our internal network connections, data center hosting costs and data feeds provided by outside vendors or service providers. The majority of our broker-dealer clients have dedicated high-speed communication lines to our network in order to provide fast data transfer. We charge our broker-dealer clients a monthly fee for these connections, which is recovered against the relevant expenses we incur.

Professional and Consulting Fees. Professional and consulting fees consist primarily of accounting fees, legal fees and fees paid to information technology and other consultants for services provided for the maintenance of our trading platform, information and post-trade services products and other services.

Occupancy. Occupancy costs consist primarily of office and equipment rent, utilities and commercial rent tax.

Marketing and Advertising. Marketing and advertising expense consists primarily of print and other advertising expenses we incur to promote our products and services. This expense also includes costs associated with attending or exhibiting at industry-sponsored seminars, conferences and conventions, and travel and entertainment expenses incurred by our sales force to promote our trading platform and information and post-trade services.

Clearing Costs. Clearing costs consist of fees that we are charged by third-party clearing brokers for the clearing and settlement of matched principal trades.

General and Administrative. General and administrative expense consists primarily of general travel and entertainment, board of directors’ expenses, charitable contributions, provision for doubtful accounts and various state franchise and U.K. value-added taxes.

Expenses may grow in the future, notably in employee compensation and benefits, primarily due to investment in new products and geographic expansion. Occupancy expense has also increased during the six months ended June 30, 2018 as a result of the new office space for our global headquarters in New York City. See Item 2 of the Annual Report on Form 10-K, as amended, for the year ended December 31, 2017 for a discussion of our properties.

Other Income (Expense)

Investment Income. Investment income consists of income earned on our investments.

Other, Net. Other, net consists of realized and unrealized gains or losses on trading security investments, foreign currency transaction gains (losses), investment advisory fees and other miscellaneous revenues and expenses.

Critical Accounting Policies and Estimates

This Management's Discussion and Analysis of Financial Condition and Results of Operations discusses our Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States, also referred to as U.S. GAAP. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the reported amounts of income and expenses during the reporting periods. We base our estimates and judgments on historical experience and on various other factors that we believe are reasonable under the circumstances. Actual results may differ from these estimates under varying assumptions or conditions. Note 2 of the Notes to our Consolidated Financial Statements includes a summary of the significant accounting policies and methods used in the preparation of our Consolidated Financial Statements. Effective January 1, 2018, we adopted Revenue from Contracts with Customers ASU 2014-09 using the modified retrospective approach, which did not have a material impact on our Consolidated Financial Statements. There were no other significant changes to our critical accounting policies and estimates during the six months ended June 30, 2018, as compared to those we disclosed in Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report on Form 10-K, as amended, for the year ended December 31, 2017.

Recent Accounting Pronouncements

See Note 2 to the Consolidated Financial Statements for a discussion on recent accounting pronouncements.

Segment Results

We operate an electronic multi-party platform for the trading of fixed-income securities and provide related data, analytics, compliance tools and post-trade services. We consider our operations to constitute a single business segment because of the highly integrated nature of these product and services, of the financial markets in which we compete and of our worldwide business activities. We believe that results by geographic region or client sector are not necessarily meaningful in understanding our business. See Note 13 to the Consolidated Financial Statements for certain geographic information about our business required by U.S. GAAP.

Results of Operations

Three Months Ended June 30, 2018 Compared to Three Months Ended June 30, 2017

Overview

Total revenues increased by $10.7 million or 11.1% to $107.0 million for the three months ended June 30, 2018, from $96.3 million for the three months ended June 30, 2017. This increase in total revenues was primarily due to higher commissions of $9.1 million and post-trade services revenue of $1.1 million. A 4.0% increase in the average foreign currency exchange rate of the British Pound Sterling compared to the U.S. dollar from the three months ended June 30, 2017 to the three months ended June 30, 2018 had the effect of increasing revenues by $0.5 million.

Total expenses increased by $7.6 million or 16.1% to $54.9 million for the three months ended June 30, 2018, from $47.3 million for the three months ended June 30, 2017. This increase was primarily due to higher occupancy costs of $2.0 million, professional and consulting fees of $1.3 million, depreciation and amortization of $1.0 million, technology and communication costs of $1.0 million, employee compensation and benefits of $0.9 million and marketing and advertising of $0.8 million. The change in the average foreign currency exchange rate had the effect of increasing expenses by $0.6 million in the three months ended June 30, 2018.

Total other income increased by $0.6 million to $1.2 million for the three months ended June 30, 2018, from $0.6 million for the three months ended June 30, 2017. This increase was primarily due to an increase in investment income of $0.5 million.

Income before taxes increased by $3.6 million or 7.3% to $53.2 million for the three months ended June 30, 2018, from $49.6 million for the three months ended June 30, 2017. Net income increased by $2.5 million or 6.5% to $40.5 million for the three months ended June 30, 2018, from $38.0 million for the three months ended June 30, 2017.

Revenues

Our revenues for the three months ended June 30, 2018 and 2017, and the resulting dollar and percentage changes, were as follows:

	Three Months Ended June 30,					
	2018		2017			
	($ in thousands)					
	$	% of Revenues	$	% of Revenues	$ Change	% Change
Commissions	$96,113	89.8 %	$87,015	90.3 %	$9,098	10.5 %
Information services	6,930	6.5	6,497	6.7	433	6.7
Post-trade services	3,620	3.4	2,489	2.6	1,131	45.4
Other	301	0.3	313	0.4	(12)	(3.8)
Total revenues	$106,964	100.0 %	$96,314	100.0 %	$10,650	11.1 %

Commissions. Our commission revenues for the three months ended June 30, 2018 and 2017, and the resulting dollar and percentage changes, were as follows:

	Three Months Ended June 30,			
	2018	2017	$ Change	% Change
	($ in thousands)			
Variable transaction fees				
U.S. high-grade	$36,401	$32,868	$3,533	10.7 %
Other credit	34,765	37,145	(2,380)	(6.4)
Liquid products	488	570	(82)	(14.4)
Total variable transaction fees	71,654	70,583	1,071	1.5
Distribution fees				
U.S. high-grade	18,261	15,930	2,331	14.6
Other credit	6,042	384	5,658	1,473.4
Liquid products	156	118	38	32.2
Total distribution fees	24,459	16,432	8,027	48.8
Total commissions	$96,113	$87,015	$9,098	10.5 %

Variable Transaction Fees

The following table shows the extent to which the increase in variable transaction fees for the three months ended June 30, 2018 was attributable to changes in transaction volumes and variable transaction fees per million:

	Change from the Three Months Ended June 30, 2017			
	U.S. High-Grade	Other Credit	Liquid Products	Total
	($ in thousands)			
Volume increase (decrease)	$4,348	$8,506	$ (34)	$12,820
Variable transaction fee per million (decrease)	(815)	(10,886)	(48)	(11,749)
Total increase (decrease) in variable commissions	$3,533	$(2,380)	$ (82)	$1,071

Our trading volumes for the three months ended June 30, 2018 and 2017 were as follows:

	Three Months Ended June 30,			
	2018	2017	$ Change	% Change
	($ in millions)			
Trading Volume Data				
U.S. high-grade - fixed rate	$215,308	$195,717	$19,591	10.0 %
U.S. high-grade - floating rate	15,211	7,870	7,341	93.3
Total U.S. high grade	230,519	203,587	26,932	13.2
Other credit	177,681	144,574	33,107	22.9
Liquid products	12,550	13,345	(795)	(6.0)
Total	$420,750	$361,506	$59,244	16.4 %
Number of U.S. Trading Days	64	63		
Number of U.K. Trading Days	62	61		

For volume reporting purposes, transactions in foreign currencies are converted to U.S. dollars at average monthly rates. The 13.2% increase in our U.S. high-grade volume was principally due to an 11.0% increase in overall U.S. high-grade volume as measured by Financial Industry Regulatory Authority ("FINRA") Trade Reporting and Compliance Engine ("TRACE") and an increase in estimated market share as reported by TRACE for the three months ended June 30, 2018 as compared to the three months ended June 30, 2017. Our estimated market share of total U.S. high-grade corporate bond volume increased to 17.4% for the three months ended June 30, 2018 from 17.0% for the three months ended June 30, 2017.

Other credit volumes increased by 22.9% for the three months ended June 30, 2018 compared to the three months ended June 30, 2017, primarily due to increases of 27.0% in emerging markets bond volume, 32.3% in Eurobond volume and 5.4% in high-yield bond volume. Liquid products volume (excluding credit derivatives) decreased by 6.0% for the three months ended June 30, 2018 compared to the three months ended June 30, 2017, due mainly to a 6.9% decrease in U.S. agency bond market volume as reported by TRACE.

Our average variable transaction fee per million for the three months ended June 30, 2018 and 2017 was as follows:

	Three Months Ended June 30,	
	2018	2017
Average Variable Transaction fee per million		
U.S. high-grade - fixed rate	$162	$165
U.S. high-grade - floating rate	96	63
Total U.S. high-grade	158	162

Other credit	196	257
Liquid products	39	43
Total	170	195

Total U.S. high-grade average variable transaction fee per million decreased to $158 per million for the three months ended June 30, 2018 from $162 per million for the three months ended June 30, 2017, mainly due to a decrease in the duration of bonds traded, and the migration of certain of our broker-dealer clients from an all-variable fee plan to a plan that incorporates a monthly distribution fee. Other credit average variable transaction fee per million decreased to $196 per million for the three months ended June 30, 2018 from $257 million for the three months ended June 30, 2017, mainly due to a decrease in high-yield average variable fee per million as a result of the change in the structure of our high-yield fee plan options implemented in August 2017, Eurobond fee schedule reductions implemented effective January 1, 2018 and a larger percentage of trading volume in emerging market bonds that command lower fees per million.

Distribution Fees

U.S. high-grade distribution fees increased $2.3 million principally due to the migration of certain of our broker-dealer clients from an all-variable fee plan to a plan that incorporates a monthly distribution fee. The $5.7 million increase in Other credit distribution fees principally relates to a $5.0 million increase in distribution fees under the high-yield fee plan structure implemented in August 2017 that allows our broker-dealer clients to elect a plan that incorporates a monthly distribution fee.

Information Services. Information services revenue increased $0.4 million for the three months ended June 30, 2018 principally due to new data contracts.

Post-Trade Services. Post-trade service revenue increased $1.1 million for the three months ended June 30, 2018 principally due to an increase of $0.9 million in trade publication services revenue and $0.1 million in regulatory transaction reporting services revenue. Our transaction reporting business processed 220 million transactions for the three months ended June 30, 2018 compared to 252 million for the three months ended June 30, 2017. Revenue from new customers and services and changes in pricing plans more than offset the decline in revenue related to the decreased number of reported transactions.

Other. Other revenue was $0.3 million for each of the three months ended June 30, 2018 and 2017.

Expenses

Our expenses for the three months ended June 30, 2018 and 2017, and the resulting dollar and percentage changes, were as follows:

	Three Months Ended June 30,					
	2018		2017			
	($ in thousands)					
	$	% of Revenues	$	% of Revenues	$ Change	% Change
Expenses						
Employee compensation and benefits	$26,199	24.5 %	$25,319	26.3 %	$880	3.5 %
Depreciation and amortization	5,790	5.4	4,790	5.0	1,000	20.9
Technology and communications	5,793	5.4	4,822	5.0	971	20.1
Professional and consulting fees	5,426	5.1	4,086	4.2	1,340	32.8
Occupancy	3,467	3.2	1,422	1.5	2,045	143.8
Marketing and advertising	3,535	3.3	2,782	2.9	753	27.1
Clearing costs	2,012	1.9	1,517	1.6	495	32.6
General and administrative	2,708	2.5	2,591	2.7	117	4.5
Total expenses	$54,930	51.4 %	$47,329	49.1 %	$7,601	16.1 %

Employee Compensation and Benefits. Employee compensation and benefits increased by $0.9 million, primarily due to an increase of $0.8 million in salaries, taxes and benefits, principally as a result of higher employee headcount.

Depreciation and Amortization. Depreciation and amortization increased by $1.0 million primarily due to a $0.5 million increase in amortization of software development costs. For the three months ended June 30, 2018 and 2017,

$13.8 million and $1.6 million, respectively, of equipment purchases and leasehold improvements and $2.9 million and $3.5 million, respectively, of software development costs were capitalized. For the three months ended June 30, 2018 we incurred capital expenditures of $9.4 million related to the build-out of our new headquarters in New York City.

Technology and Communications. Technology and communication expenses increased by $1.0 million due to higher software subscription costs of $0.4 million and technology maintenance and support costs of $0.3 million.

Professional and Consulting Fees. Professional and consulting fees increased by $1.3 million primarily due to higher non-IT consulting and legal costs of $0.5 million, recruiting fees of $0.4 million and technology consulting costs of $0.2 million.

Occupancy. Occupancy increased by $2.0 million primarily due to $1.8 million of duplicate rent expense during the build-out phase of our new headquarters in New York City. We expect to relocate to the new premises in late 2018.

Marketing and Advertising. Marketing and advertising expenses increased by $0.8 million for the three months ended June 30, 2018 primarily due to higher advertising costs of $0.7 million.

Clearing Costs. Clearing costs increased by $0.5 million primarily due to higher Open Trading™ volume. Third-party clearing costs as a percentage of matched principal trading revenue decreased from 13.5% for the three months ended June 30, 2017 to 13.2% for the three months ended June 30, 2018.

General and Administrative. General and administrative expenses were $2.7 million and $2.6 million for the three months ended June 30, 2018 and 2017, respectively.

Other Income (Expense)

Our other income for the three months ended June 30, 2018 and 2017, and the resulting dollar and percentage changes, were as follows:

	Three Months Ended June 30,					
	2018		2017			
	($ in thousands)					
	$	% of Revenues	$	% of Revenues	$ Change	% Change
Investment income	$1,383	1.3 %	$840	0.9 %	$ 543	64.6 %
Other, net	(207)	(0.2)	(252)	(0.3)	45	(17.9)
Total other income	$1,176	1.1 %	$588	0.6 %	$ 588	100.0 %

Investment income increased by $0.5 million primarily due to higher investment balances and an increase in interest rates in 2018. Other, net was ($0.2) million and ($0.3) million for the three months ended June 30, 2018 and 2017, respectively.

Provision for Income Tax. On December 22, 2017, the Tax Act was enacted into law. The Tax Act significantly revised the U.S. corporate income tax regime by, among other things, lowering the U.S. federal corporate income tax rate from 35% to 21%, implementing a territorial tax system and imposing a repatriation tax on deemed earnings of foreign subsidiaries. We have made a reasonable estimate of the impact of the Tax Act and recorded a provisional tax charge in 2017 of $11.7 million, composed of $6.7 million to re-measure U.S. deferred tax assets and $5.0 million for the repatriation tax on accumulated undistributed foreign earnings. The final impact of the Tax Act may differ materially from the provisional tax charge recognized in 2017 due to, among other things, changes in interpretations and assumptions we have made, guidance that may be issued by the U.S. Department of the Treasury and actions we may take as a result of the Tax Act.

Our consolidated effective tax rate for the three months ended June 30, 2018 was 23.9%, compared to 23.3% for the three months ended June 30, 2017. The tax provision for the three months ended June 30, 2018 reflected a reduction in the federal corporate income tax rate and other changes associated with the Tax Act and $0.1 million of excess tax benefits related to share-based compensation awards that vested or were exercised during the quarter. The income tax provision for the three months ended June 30, 2017 included $5.3 million of excess tax benefits related to share-based compensation awards. Our consolidated effective tax rate can vary from period to period depending on the geographic mix of our earnings, changes in tax legislation and tax rates and the amount and timing of excess tax benefits related to share-based payments, among other factors.

Six Months Ended June 30, 2018 Compared to Six Months Ended June 30, 2017

Overview

Total revenues increased by $22.4 million or 11.2% to $221.7 million for the six months ended June 30, 2018, from $199.3 million for the six months ended June 30, 2017. This increase in total revenues was primarily due to higher commissions of $17.8 million and $3.3 million of post-trade services revenues. An 8.2% increase in the average foreign currency exchange rate of the British Pound Sterling compared to the U.S. dollar from the six months ended June 30, 2017 to the six months ended June 30, 2018 had the effect of increasing revenues by $2.2 million.

Total expenses increased by $14.3 million or 15.1% to $109.5 million for the six months ended June 30, 2018, from $95.1 million for the six months ended June 30, 2017. This increase was primarily due to higher occupancy costs of $4.0 million, employee compensation and benefits of $2.4 million, technology and communications expenses of $2.2 million and professional and consulting fees of $2.1 million. The change in the average foreign currency exchange rate had the effect of increasing expenses by $2.2 million in the six months ended June 30, 2018.

Income before taxes increased by $9.0 million or 8.6% to $114.2 million for the six months ended June 30, 2018, from $105.2 million for the six months ended June 30, 2017. Net income increased by $7.9 million or 9.9% to $88.4 million for the six months ended June 30, 2018, from $80.5 million for six months ended June 30, 2017.

Revenues

Our revenues for the six months ended June 30, 2018 and 2017, and the resulting dollar and percentage changes, were as follows:

	Six Months Ended June 30, 2018 ($ in thousands) $	% of Revenues	2017 $	% of Revenues	$ Change	% Change
Commissions	$198,885	89.7 %	$181,037	90.8 %	$17,848	9.9 %
Information services	13,996	6.3	12,682	6.4	1,314	10.4
Post-trade services	8,196	3.7	4,945	2.5	3,251	65.7
Other	601	0.3	614	0.3	(13)	(2.1)
Total revenues	$221,678	100.0 %	$199,278	100.0 %	$22,400	11.2 %

Commissions. Our commission revenues for the six months ended June 30, 2018 and 2017, and the resulting dollar and percentage changes, were as follows:

	Six Months Ended June 30, 2018 ($ in thousands)	2017	$ Change	% Change
Variable transaction fees				
U.S. high-grade	$75,168	$68,391	$6,777	9.9 %
Other credit	75,192	78,840	(3,648)	(4.6)
Liquid products	1,071	1,200	(129)	(10.8)
Total variable transaction fees	151,431	148,431	3,000	2.0
Distribution fees				
U.S. high-grade	35,488	31,680	3,808	12.0
Other credit	11,582	664	10,918	1,644.3
Liquid products	384	262	122	46.6
Total distribution fees	47,454	32,606	14,848	45.5
Total commissions	$198,885	$181,037	$17,848	9.9 %

Variable Transaction Fees

The following table shows the extent to which the increase in variable transaction fees for the six months ended June 30, 2018 was attributable to changes in transaction volumes and variable transaction fees per million:

	Change from the Six Months Ended June 30, 2017			
	U.S. High-Grade	Other Credit	Liquid Products	Total
	($ in thousands)			
Volume increase (decrease)	$9,462	$18,998	$ (85)	$28,375
Variable transaction fee per million (decrease)	(2,685)	(22,646)	(44)	(25,375)
Total increase (decrease) in variable commissions	$6,777	$(3,648)	$ (129)	$3,000

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Our trading volumes for the six months ended June 30, 2018 and 2017 were as follows:

	Six Months Ended June 30,			
	2018	2017	$ Change	% Change
	($ in millions)			
Trading Volume Data				
U.S. high-grade - fixed rate	$451,831	$407,691	$44,140	10.8 %
U.S. high-grade - floating rate	29,673	15,290	14,383	94.1
Total U.S. high grade	481,504	422,981	58,523	13.8
Other credit	377,624	304,298	73,326	24.1
Liquid products	26,629	28,651	(2,022)	(7.1)
Total	$885,757	$755,930	$129,827	17.2 %
Number of U.S. Trading Days	125	125		
Number of U.K. Trading Days	125	125		

For volume reporting purposes, transactions in foreign currencies are converted to U.S. dollars at average monthly rates. The 13.8% increase in our U.S. high-grade volume was principally due to an increase in our estimated market share of total U.S. high-grade corporate bond volume as reported by TRACE to 17.7% for the six months ended June 30, 2018 from 16.4% for the six months ended June 30, 2017, coupled with a 5.7% increase in overall market volume as measured by TRACE.

Other credit volumes increased by 24.1% for the six months ended June 30, 2018 compared to the six months ended June 30, 2017, primarily due to increases of 30.2% in emerging markets bond volume, 24.9% in Eurobond volume and 10.4% in high-yield bond volume. Liquid products volume (excluding credit derivatives) decreased by 7.1% for the six months ended June 30, 2018 compared to the six months ended June 30, 2017, due mainly to a 14.1% decrease in U.S. agency bond market volume as reported by TRACE.

Our average variable transaction fee per million for the six months ended June 30, 2018 and 2017 was as follows:

	Six Months Ended June 30,	
	2018	2017
Average Variable Transaction fee per million		
U.S. high-grade - fixed rate	$160	$166
U.S. high-grade - floating rate	95	59
Total U.S. high-grade	156	162
Other credit	199	259
Liquid products	40	42
Total	171	196

Total U.S. high-grade average variable transaction fee per million decreased to $156 per million for the six months ended June 30, 2018 from $162 per million for the six months ended June 30, 2017, mainly due to an increase in number of larger sized trades. Other credit average variable transaction fee per million decreased to $199 per million for the six months ended June 30, 2018 from $259 million for the six months ended June 30, 2017, mainly due to a decrease in high-yield average variable fee per million as a result of the change in the structure of our high-yield fee plan options implemented in August 2017, Eurobond fee schedule reductions implemented effective January 1, 2018 and a larger percentage of trading volume in emerging market bonds that command lower fees per million.

Distribution Fees

U.S. high-grade distribution fees increased $3.8 million principally due to the migration of certain of our broker-dealer clients from an all-variable fee plan to a plan that incorporates a monthly distribution fee. The $10.9 million increase in Other credit distribution fees principally relates to a $9.8 million increase in distribution fees under the high-yield fee plan structure implemented in August 2017 that allows our broker-dealer clients to elect a plan that incorporates a monthly distribution fee.

Information Services. Information services revenue increased by $1.3 million for the six months ended June 30, 2018 from the six months ended June 30 2017. The increase is attributable to $0.8 million in revenue from new data contracts and the positive impact of foreign exchange of $0.5 million.

Post-Trade Services. Post-trade services revenue increased by $3.3 million for the six months ended June 30, 2018 from the six months ended June 30, 2017 primarily due to an increase of $1.8 million in trade publication services revenue, $0.6 million in regulatory transaction reporting services revenue, $0.2 million in MiFID II implementation services revenue and the positive impact of foreign exchange of $0.7 million. Our transaction reporting business processed 433 million transactions for the six months ended June 30, 2018 compared to 523 million for the six months ended June 30, 2017. Revenue from new customers and services and changes in pricing plans more than offset the decline in revenue related to the decreased number of reported transactions.

Other. Other revenue was $0.6 million for each of the six months ended June 30, 2018 and 2017.

Expenses

Our expenses for the six months ended June 30, 2018 and 2017, and the resulting dollar and percentage changes, were as follows:

	Six Months Ended June 30,					
	2018		2017			
	($ in thousands)					
	$	% of Revenues	$	% of Revenues	$ Change	% Change
Expenses						
Employee compensation and benefits	$55,033	24.8 %	$52,603	26.4 %	$2,430	4.6 %
Depreciation and amortization	11,059	5.0	9,483	4.8	1,576	16.6
Technology and communications	11,572	5.2	9,407	4.7	2,165	23.0
Professional and consulting fees	10,483	4.7	8,365	4.2	2,118	25.3
Occupancy	6,804	3.1	2,826	1.4	3,978	140.8
Marketing and advertising	5,600	2.5	4,668	2.3	932	20.0
Clearing costs	3,737	1.7	2,844	1.4	893	31.4
General and administrative	5,183	2.3	4,939	2.5	244	4.9
Total expenses	$109,471	49.4 %	$95,135	47.7 %	$14,336	15.1 %

Employee Compensation and Benefits. Employee compensation and benefits increased by $2.4 million, primarily due to a $2.2 million increase in salaries, taxes and benefits, principally as a result of higher employee headcount.

Depreciation and Amortization. Depreciation and amortization increased by $1.6 million primarily due to a $1.0 million increase in amortization of software development. For the six months ended June 30, 2018 and 2017, $16.0 million and $5.8 million, respectively, of equipment purchases and leasehold improvements and $6.6 million and $6.7 million, respectively, of software development costs were capitalized. For the six months ended June 30, 2018 we incurred capital expenditures of $9.7 million related to the build-out of our new headquarters in New York City.

Technology and Communications. Technology and communication expenses increased by $2.2 million due to higher software subscription costs of $0.7 million, technology maintenance and support costs of $0.6 million and market data costs of $0.4 million.

Professional and Consulting Fees. Professional and consulting fees increased by $2.1 million primarily due to higher non-IT consulting and legal costs of $0.7 million, recruiting fees of $0.5 million and technology consulting costs of $0.4 million.

Occupancy. Occupancy costs increased by $4.0 million primarily due to $3.4 million of duplicate rent expense during the build-out phase of our new headquarters in New York City and the lease of additional office space to accommodate our increased headcount.

Marketing and Advertising. Marketing and advertising expenses increased by $0.9 million due to higher advertising costs associated with our Open Trading™ protocols.

Clearing Costs. Clearing costs increased by $0.9 million primarily due to higher Open Trading™ volume. Third-party clearing costs as a percentage of matched principal trading revenue increased from 12.3% for the six months ended June 30, 2017 to 13.0% for the six months ended June 30, 2018.

General and Administrative. General and administrative expenses were $5.2 and $4.9 million for the six months ended June 30, 2018 and June 30, 2017 respectively.

Other Income (Expense)

Our other income for the six months ended June 30, 2018 and 2017, and the resulting dollar and percentage changes, were as follows:

	Six Months Ended June 30,					
	2018		2017			
	($ in thousands)					
	$	% of Revenues	$	% of Revenues	$ Change	% Change
Investment income	$2,551	1.2 %	$1,587	0.8 %	$ 964	60.7 %
Other income, net	(535)	(0.2)	(550)	(0.3)	15	(2.7)
Total other income	$2,016	0.9 %	$1,037	0.5 %	$ 979	94.4 %

Investment income increased by $1.0 million primarily due to higher investment balances and an increase in interest rates in 2018. Other, net was ($0.5) million and ($0.6) million for the six months ended June 30, 2018 and 2017, respectively.

Provision for Income Tax. Our consolidated effective tax rate for the six months ended June 30, 2018 was 22.6%, compared to 23.5% for the six months ended June 30, 2017. The tax provision for the six months ended June 30, 2018 reflected a reduction in the federal corporate income tax rate and other changes associated with the Tax Act and $2.0 million of excess tax benefits related to share-based compensation awards that vested or were exercised during the period. The income tax provision for the six months ended June 30, 2017 included $11.0 million of excess tax benefits related to share-based compensation awards. Our consolidated effective tax rate can vary from period to period depending on the geographic mix of our earnings, changes in tax legislation and tax rates and the amount and timing of excess tax benefits related to share-based payments, among other factors.

Liquidity and Capital Resources

During the past three years, we have met our funding requirements through cash on hand and internally generated funds. Cash and cash equivalents and investments totaled $420.3 million at June 30, 2018.

In October 2015, we entered into a two-year amended and restated credit agreement (the “Credit Agreement”) that increased our borrowing capacity to an aggregate of $100.0 million. In October 2017, we amended the Credit Agreement and extended the maturity date to October 2018. The amended Credit Agreement also provides for two additional one-year extension options and modified certain borrowing terms and covenants. Subject to satisfaction of certain specified conditions, we are permitted to upsize the borrowing capacity under the Credit Agreement by an additional $50.0 million. As of June 30, 2018, we had $1.7 million in letters of credit outstanding and $98.3 million in available borrowing capacity under the Credit Agreement.

Our cash flows were as follows:

	Six Months Ended June 30,			
			$	%
	2018	2017	Change	Change
	($ in thousands)			
Net cash provided by operating activities	$85,818	$69,118	$16,700	24.2 %
Net cash (used in) investing activities	(29,412)	(54,337)	24,925	(45.9)
Net cash (used in) financing activities	(51,880)	(55,455)	3,575	(6.4)
Effect of exchange rate changes on cash and cash equivalents	(854)	574	(1,428)	(248.8)
Net increase (decrease) for the period	$3,672	$(40,100)	$43,772	(109.2)%

The $16.7 million increase in net cash provided by operating activities was primarily due to a decrease in working capital of $9.5 million and an increase in net income of $7.9 million, offset by an increase in net purchases of corporate debt trading investments of $3.2 million.

The $24.9 million decrease in net cash used in investing activities was primarily due to a decrease of $35.0 million in net purchases of available-for-sale investments offset by an increase of $10.1 million in capital expenditures, which includes $9.7 million related to the build-out of our new headquarters in New York City.

The $3.6 million decrease in net cash used in financing activities was principally due to a decrease of $11.2 million in repurchases of our common stock, offset by a $6.8 million increase in the cash dividend paid on common stock.

Past trends of cash flows are not necessarily indicative of future cash flow levels. A decrease in cash flows may have a material adverse effect on our liquidity, business and financial condition.

Non-GAAP Financial Measures

In addition to cash flow from operating activities in accordance with GAAP, we use a non-GAAP financial measure called “Free Cash Flow”. Free Cash Flow is defined as cash flow from operating activities excluding net purchases of corporate debt trading investments less expenditures for furniture, equipment and leasehold improvements and capitalized software development costs. We believe this non-GAAP financial measure is important in gaining an understanding of our financial strength and cash flow generation.

The table set forth below presents a reconciliation of our cash flow from operating activities to Free Cash Flow, as defined, for the twelve months ended June 30, 2018 and 2017:

	Twelve months ended June 30, 2018	
	2018	2017
	(In thousands)	
Cash flow from operating activities	$184,735	$178,961
Add: Net purchases of corporate debt trading investments	20,258	1,910
Less: Purchases of furniture, equipment and leasehold improvements	(22,344)	(8,258)
Less: Capitalization of software development costs	(13,340)	(12,643)
Free Cash Flow	$169,309	$159,970

Other Factors Influencing Liquidity and Capital Resources

We believe that our current resources are adequate to meet our liquidity needs and capital expenditure requirements for at least the next 12 months. However, our future liquidity and capital requirements will depend on a number of factors, including expenses associated with product development and expansion and new business opportunities that are intended to further diversify our revenue stream. We may also acquire or invest in technologies, business ventures or products that are complementary to our business. In the event we require any additional financing, it will take the form of equity or debt financing. Any additional equity offerings may result in dilution to our stockholders. Any debt financings, if available at all, may involve restrictive covenants with respect to dividends, issuances of additional capital and other financial and operational matters related to our business.

Certain of our U.S. subsidiaries are registered as a broker-dealer or a SEF and therefore are subject to the applicable rules and regulations of the SEC and the CFTC. These rules contain minimum net capital requirements, as defined in the applicable regulations, and also may require a significant part of the registrants' assets be kept in relatively liquid form. Certain of our foreign subsidiaries are regulated by the Financial Conduct Authority in the U.K. or other foreign regulators and must maintain financial resources, as defined in the applicable regulations, in excess of the applicable financial resources requirement. As of June 30, 2018, each of our subsidiaries that are subject to these regulations had net capital or financial resources in excess of their minimum requirements. As of June 30, 2018, our subsidiaries maintained aggregate net capital and financial resources that were $140.7 million in excess of the required levels of $14.9 million.

Each of our U.S. and foreign regulated subsidiaries are subject to local regulations which generally prohibit repayment of borrowings from our affiliates, paying cash dividends, making loans to our affiliates or otherwise entering into transactions that result in a significant reduction in regulatory net capital or financial resources without prior notification to or approval from such regulated entity's principal regulator. As of June 30, 2018, the amount of unrestricted cash held by our non-U.S. subsidiaries was $69.3 million.

Pursuant to the Tax Act, all previously undistributed earnings have now been subject to U.S. Tax. Notwithstanding the U.S. taxation of these amounts, we consider our undistributed foreign earnings to be indefinitely reinvested outside of the U.S. and do not expect to incur any significant additional taxes related to such amounts.

We execute certain bond transactions between and among institutional investor and broker-dealer clients on a matched principal basis by serving as counterparty to both the buyer and the seller in trades which settle through third-party clearing brokers. Settlement typically occurs within one to two trading days after the trade date. Cash settlement of the transaction occurs upon receipt or delivery of the underlying instrument that was traded. For the six months ended June 30, 2018 and 2017, revenues from matched principal trading were approximately $28.7 million and $23.2 million, respectively. Under securities clearing agreements with third party clearing brokers, we maintain collateral deposits with each clearing broker in the form of cash. As of June 30, 2018 and 2017, the amount of the collateral deposits included in prepaid expenses and other assets in the Consolidated Statements of Financial Condition was $1.2 million and $1.1 million, respectively. For the six months ended June 30, 2018, and 2017, clearing expenses associated with matched principal transactions were $3.7 million and $2.8 million, respectively, and are classified under clearing costs on our Consolidated Statements of Operations. We are exposed to credit risk in the event a counterparty does not fulfill its obligation to complete a transaction or if there is a miscommunication or other error in executing a matched principal transaction. Pursuant to the terms of the securities clearing agreements, each third-party clearing broker has the right to charge us for any losses they suffer resulting from a counterparty’s failure on any of our trades. We did not record any liabilities or losses with regard to this right for the six months ended June 30, 2018 and 2017.

In the normal course of business, we enter into contracts that contain a variety of representations, warranties and indemnification provisions. Our maximum exposure from any claims under these arrangements is unknown, as this would involve claims that have not yet occurred. However, based on past experience, we expect the risk of loss to be remote.

In September 2017, our Board of Directors authorized a new fifteen-month share repurchase program for up to $100.0 million commencing in October 2017. Shares repurchased under the program will be held in treasury for future use.

In July 2018, our Board of Directors approved a quarterly cash dividend of $0.42 per share payable on August 23, 2018 to stockholders of record as of the close of business on August 9, 2018. Any future declaration and payment of dividends will be at the sole discretion of our Board of Directors. Our Board of Directors may take into account such matters as general business conditions, our financial results, capital requirements, contractual obligations, legal, and regulatory restrictions on the payment of dividends to our stockholders or by our subsidiaries to their respective parent entities, and any such other factors as the Board of Directors may deem relevant.

Effects of Inflation

Because the majority of our assets are short-term in nature, they are not significantly affected by inflation. However, the rate of inflation may affect our expenses, such as employee compensation, office leasing costs and communications expenses, which may not be readily recoverable in the prices of our services. To the extent inflation results in rising interest rates and has other adverse effects on the securities markets, it may adversely affect our financial condition and results of operations.

Contractual Obligations and Commitments

As of June 30, 2018, we had the following contractual obligations and commitments:

	Payments due by period				
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 - years
	(In thousands)				
Operating leases	$141,095	$6,634	$21,230	$18,551	$94,680
Foreign currency forward contract	89,830	89,830	—	—	—
	$230,925	$96,464	$21,230	$18,551	$94,680

During 2016, we entered into a fifteen-year lease agreement for our new global headquarters in New York City. We expect to vacate all of the office space we currently lease in New York City and relocate our headquarters to approximately 83,000 square feet of newly built office space at 55 Hudson Yards upon the building’s completion in late 2018. Rent expense recognition for the office space at 55 Hudson Yards commenced in January 2018 upon us accepting possession of the premises.

We enter into foreign currency forward contracts to hedge our exposure to variability in certain foreign currency cash flows resulting from the net investment in our U.K. subsidiaries. As of June 30, 2018, the notional value of the foreign currency forward contract outstanding was $89.8 million and the fair value of the liability was $0.3 million.

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Item 3. Quantitative and Qualitative Disclosures about Market Risk

Market risk is the risk of the loss resulting from adverse changes in market rates and prices, such as interest rates and foreign currency exchange rates.

Market Risk

The global financial services business is, by its nature, risky and volatile and is directly affected by many national and international factors that are beyond our control. Any one of these factors may cause a substantial decline in the U.S. and global financial services markets, resulting in reduced trading volume and revenues. These events could have a material adverse effect on our business, financial condition and results of operations.

As of June 30, 2018, we had $245.2 million of investments, which were invested in corporate bonds and classified as securities available-for-sale or trading securities. Adverse movements, such as a 10% decrease in the value of these securities or a downturn or disruption in the markets for these securities, could result in a substantial loss. In addition, principal gains and losses resulting from these securities could on occasion have a disproportionate effect, positive or negative, on our financial condition and results of operations for any particular reporting period.

Interest Rate Risk

Interest rate risk represents our exposure to interest rate changes with respect to our cash, cash equivalents and investments. As of June 30, 2018, our cash and cash equivalents and investments amounted to $415.9 million. A hypothetical five basis point decrease in short-term interest rates would decrease our annual pre-tax earnings by approximately $0.2 million, assuming no change in the amount or composition of our cash and cash equivalents.

As of June 30, 2018, a hypothetical 100 basis point increase or decrease in interest rates would decrease or increase the fair value of the available-for-sale investment portfolio by approximately $1.2 million, assuming no change in the amount or composition of the investments. The hypothetical unrealized gain (loss) of $1.2 million would be recognized in accumulated other comprehensive loss on the Consolidated Statements of Financial Condition.

A similar hypothetical 100 basis point increase or decrease in interest rates would decrease or increase the fair value of the trading securities portfolio by approximately $0.8 million. The hypothetical unrealized gain (loss) of $0.8 million would be recognized in other, net in the Consolidated Statements of Operations.

We do not maintain an inventory of bonds that are traded on our platform.

Foreign Currency Exchange Rate Risk

We conduct operations in several different countries outside of the U.S., most notably the U.K., and substantial portions of our revenues, expenses, assets and liabilities are generated and denominated in non U.S. dollar currencies. Since our consolidated financial statements are presented in U.S. dollars, we must translate revenues, income and expenses, as well as assets and liabilities, into U.S. dollars at exchange rates in effect during or at the end of each reporting period. Accordingly, increases or decreases in the value of the U.S. dollar against the other currencies will affect our net operating revenues, operating income and the value of balance sheet items denominated in foreign currencies.

During the twelve months ended June 30, 2018, approximately 13.7% of our revenue and 28.9% of our expenses were denominated in currencies other than the U.S. dollar, most notably the British Pound Sterling. Based on actual results over the past year, a hypothetical 10% increase or decrease in the U.S. dollar against all other currencies would have increased or decreased revenue by approximately $5.7 million and operating expenses by approximately $6.1 million.

Derivative Risk

Our limited derivative risk stems from our activities in the foreign currency forward contract market. We use this market to mitigate our U.S. dollar versus British Pound Sterling exposure that arises from the activities of our U.K. subsidiaries. As of June 30, 2018, the fair value of the notional amount of our foreign currency forward contract was $89.8 million. We do not speculate in any derivative instruments.

Credit Risk

Two of our subsidiaries, MarketAxess Corporation and MarketAxess Capital Limited, act as a matched principal counterparty in connection with the Open Trading™ transactions that we execute between clients. We act as an intermediary in these transactions by serving as counterparty to both the buyer and the seller in trades which then settle through a third-party clearing broker. Settlement typically occurs within one to two trading days after the trade date. Cash settlement of the transaction occurs upon receipt or delivery of the underlying instrument that was traded.

We are exposed to credit and performance risks in our role as matched principal trading counterparty to our Open Trading™ clients executing bond trades on our platform, including the risk that counterparties that owe us money or securities will not perform their obligations. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons. Adverse movements in the prices of securities that are the subject of these transactions can increase our risk. In connection with Open Trading™ or other anonymous protocols, we expect that the number of transactions in which we act as a matched principal will increase.

We have policies and procedures in place to identify and manage our credit risk. In connection with the growth of our Open Trading™ protocols, we have implemented additional automated controls to help us manage our credit risk exposure. There can be no assurance that the policies, procedures and automated controls we use to manage this credit risk will effectively mitigate our credit risk exposure. Some of our risk management procedures are reliant upon the evaluation of information regarding the fixed- income markets, our clients or other relevant matters that are publicly available or otherwise acquired from third party sources. Such information may not be accurate, complete, up-to-date or properly assessed and interpreted by us. If our risk management procedures fail, our business, financial condition and results of operations may be adversely affected. Furthermore, our insurance policies are unlikely to provide coverage for such risks.

Cash and cash equivalents includes cash and money market instruments that are primarily maintained at one major global bank. Given this concentration, we are exposed to certain credit risk in relation to our deposits at this bank.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures. Our management, including the Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our “disclosure controls and procedures,” as that term is defined in Rule 13a-15(e) and Rule 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as of June 30, 2018. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures are effective to ensure that information required to be disclosed by MarketAxess in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and to ensure that information is accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Changes in Internal Control over Financial Reporting. There were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) and Rule 15d-15(f) under the Exchange Act) during the quarter ended June 30, 2018 identified in connection with the evaluation thereof by our management, including the Chief Executive Officer and Chief Financial Officer, that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II — Other Information

Item 1. Legal Proceedings

In the normal course of business, we and our subsidiaries included in the consolidated financial statements may be involved in various lawsuits, proceedings and regulatory examinations. We assess liabilities and contingencies in connection with outstanding legal proceedings, if any, utilizing the latest information available. For matters where it is probable that we will incur a material loss and the amount can be reasonably estimated, we will establish an accrual for the loss. Once established, the accrual will be adjusted to reflect any relevant developments. When a loss contingency is not both probable and estimable, we would not establish an accrual.

Based on currently available information, the outcome of our outstanding matters is not expected to have a material adverse impact on our financial position. It is not presently possible to determine our ultimate exposure to these matters and there is no assurance that the resolution of the outstanding matters will not significantly exceed any reserves accrued by us.

Item 1A. Risk Factors

There have been no material changes in our risk factors from those disclosed in our most recent Form 10-K, as amended, for the year ended December 31, 2017. For a discussion of the risk factors affecting the Company, see "Risk Factors" in Part I, Item 1A of our 2017 Form 10-K, as amended, for the year ended December 31, 2017.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

During the quarter ended June 30, 2018, we repurchased the following shares of common stock:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans and Programs	Dollar Value of Shares That May Yet Be Purchased Under the Plans and Programs

				(In thousands)
April 1, 2018 - April 30, 2018	10,456	$206.97	10,400	$ 85,471
May 1, 2018 - May 31, 2018	11,265	204.39	11,000	83,222
June 1, 2018 - June 30, 2018	11,849	213.34	10,500	80,987
	33,570	$208.35	31,900	

During the three months ended June 30, 2018, we repurchased 33,570 shares of common stock. The repurchases included 1,670 shares surrendered by employees to us to satisfy the withholding tax obligations upon the vesting of restricted shares and 31,900 shares repurchased in connection with our share repurchase program.

In September 2017, our Board of Directors authorized a new fifteen-month share repurchase program for up to $100.0 million commencing in October 2017. Shares repurchased under the program will be held in treasury for future use.

Item 3. Defaults upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit Listing:

Number	Description
10.1	Amendment to the MarketAxess Holdings Inc. 2012 Incentive Plan (Amended and Restated Effective June 7, 2016), as amended (incorporated by reference to Appendix A to the registrant's Proxy Statement for its Annual Meeting of Stockholders held on June 7, 2018, filed on April 25, 2018)
31.1*	Certification by Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification by Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification by Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2*	Certification by Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document**
101.SCH	XBRL Taxonomy Extension Schema Document**
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document**
101.LAB	XBRL Taxonomy Extension Label Linkbase Document**
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document**

101.DEF XBRL Taxonomy Extension Definition Linkbase Document**

* Filed herewith.

** Attached as Exhibit 101 to this Quarterly Report on Form 10-Q are the following materials, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Statements of Financial Condition as of June 30, 2018 and December 31, 2017; (ii) Consolidated Statements of Operations for the Three and Six Months Ended June 30, 2018 and 2017; (iii) Consolidated Statements of Comprehensive Income for the Three and Six Months Ended June 30, 2018 and 2017; (iv) Consolidated Statement of Stockholders' Equity for the Six Months Ended June 30, 2018; (v) Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2018 and 2017; and (vi) Notes to the Consolidated Financial Statements.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

		MARKETAXESS HOLDINGS INC.
Date: July 26, 2018	By:	/s/ RICHARD M. MCVEY Richard M. McVey Chief Executive Officer (principal executive officer)
Date: July 26, 2018	By:	/s/ ANTONIO L. DELISE Antonio L. DeLise Chief Financial Officer (principal financial and accounting officer)