Virtu Financial, Inc.
Form 10-Q
November 08, 2018
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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 September 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: 001-37352
Virtu Financial, Inc.
(Exact name of registrant as specified in its charter)

Delaware	32-0420206
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

300 Vesey Street New York, New York 10282	10282
(Address of principal executive offices)	(Zip Code)

(212) 418-0100
(Registrant's telephone number, including area code)
(Former name, former address and former fiscal year, if changed since last report)

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 x No
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes x No
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions 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 (Do not check if a smaller reporting company)	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 Securities Act. Yes No x
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No
Class of Stock

	Shares Outstanding as of November 8, 2018
Class A common stock, par value $0.00001 per share	106,145,686
Class C common stock, par value $0.00001 per share	14,001,131
Class D common stock, par value $0.00001 per share	69,091,740

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FOR THE QUARTER ENDED SEPTEMBER 30, 2018

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Unless the context otherwise requires, the terms “we,” “us,” “our,” “Virtu” and the “Company” refer to Virtu Financial, Inc., a Delaware corporation, and its consolidated subsidiaries and the term “Virtu Financial” refers to Virtu Financial LLC, a Delaware limited liability company and a consolidated subsidiary of ours.

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PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS
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Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Financial Condition (unaudited)

(in thousands, except share and interest data)	September 30, 2018	December 31, 2017
Assets		
Cash and cash equivalents	$ 415,933	$ 532,887
Securities borrowed	1,305,789	1,471,172
Securities purchased under agreements to resell	10,014	—
Receivables from broker dealers and clearing organizations	1,115,764	972,018
Trading assets, at fair value:		
Financial instruments owned	2,374,124	2,117,579
Financial instruments owned and pledged	552,629	595,043
Property, equipment and capitalized software (net of accumulated depreciation of $324,732 and $375,656 as of September 30, 2018 and December 31, 2017, respectively)	117,501	137,018
Goodwill	836,583	844,883
Intangibles (net of accumulated amortization of $142,564 and $123,408 as of September 30, 2018 and December 31, 2017, respectively)	90,069	111,224
Deferred tax assets	178,087	125,760
Assets of business held for sale	—	55,070
Other assets ($42,375 and $98,364, at fair value, as of September 30, 2018 and December 31, 2017, respectively)	242,037	357,352
Total assets	$ 7,238,530	$ 7,320,006
Liabilities and equity		
Liabilities		
Short-term borrowings	$ 14,567	$ 27,883
Securities loaned	800,145	754,687
Securities sold under agreements to repurchase	301,238	390,642
Payables to broker dealers and clearing organizations	952,343	716,205
Trading liabilities, at fair value:		
Financial instruments sold, not yet purchased	2,398,094	2,384,598
Tax receivable agreement obligations	199,264	147,040
Accounts payable and accrued expenses and other liabilities	284,241	358,825
Long-term borrowings	904,027	1,388,548
Total liabilities	$ 5,853,919	$ 6,168,428
Commitments and Contingencies (Note 15)		
Virtu Financial Inc. Stockholders' equity		
Class A common stock (par value $0.00001), Authorized — 1,000,000,000 and 1,000,000,000 shares, Issued — 108,507,227 and 90,415,532 shares, Outstanding — 106,328,456 and 89,798,609 shares at September 30, 2018 and December 31, 2017, respectively	1	1
Class B common stock (par value $0.00001), Authorized — 175,000,000 and 175,000,000 shares, Issued and Outstanding — 0 and 0 shares at September 30, 2018 and December 31, 2017, respectively	—	—
Class C common stock (par value $0.00001), Authorized — 90,000,000 and 90,000,000 shares, Issued and Outstanding — 14,001,131 and 17,880,239 shares at September 30, 2018 and December 31, 2017, respectively	—	—

Class D common stock (par value $0.00001), Authorized — 175,000,000 and 175,000,000 shares, Issued and Outstanding — 69,091,740 and 79,610,490 shares at September 30, 2018 and December 31, 2017, respectively	1	1
Treasury stock, at cost, 2,178,771 and 616,923 shares at September 30, 2018 and December 31, 2017, respectively	(55,005)	(11,041)
Additional paid-in capital	1,002,059	900,746
Retained earnings (accumulated deficit)	49,647	(62,129)
Accumulated other comprehensive income	721	2,991
Total Virtu Financial Inc. stockholders' equity	$ 997,424	$ 830,569
Noncontrolling interest	387,187	321,009
Total equity	$ 1,384,611	$ 1,151,578
Total liabilities and equity	$ 7,238,530	$ 7,320,006

See accompanying notes to the Condensed Consolidated Financial Statements (Unaudited).

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Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Comprehensive Income (Loss) (unaudited)

(in thousands, except share and per share data)	For the Three Months Ended September 30, 2018	For the Three Months Ended September 30, 2017	For the Nine Months Ended September 30, 2018	For the Nine Months Ended September 30, 2017
Revenues:				
Trading income, net	$235,699	$203,907	$900,454	$479,644
Interest and dividends income	21,451	20,430	61,337	30,933
Commissions, net and technology services	40,252	43,351	140,661	49,237
Other, net	(2,279)	3,598	335,851	3,647
Total revenue	295,123	271,286	1,438,303	563,461
Operating Expenses:				
Brokerage, exchange and clearance fees, net	68,638	64,584	229,779	170,253
Communication and data processing	39,516	45,998	137,793	83,190
Employee compensation and payroll taxes	44,827	72,341	150,723	111,053
Payments for order flow	18,283	12,071	50,381	12,071
Interest and dividends expense	32,566	31,242	101,199	58,456
Operations and administrative	17,254	24,183	53,671	35,931
Depreciation and amortization	16,012	15,602	47,558	29,157
Amortization of purchased intangibles and acquired capitalized software	6,367	6,440	20,042	6,546
Termination of office leases	1,440	—	23,300	—
Debt issue cost related to debt refinancing and prepayment	3,347	4,869	11,727	9,351
Transaction advisory fees and expenses	(261)	15,677	8,985	24,188
Charges related to share based compensation at IPO	—	181	24	545
Financing interest expense on long-term borrowings	17,709	24,593	55,536	40,141
Total operating expenses	265,698	317,781	890,718	580,882
Income (loss) before income taxes and noncontrolling interest	29,425	(46,495)	547,585	(17,421)
Provision for (benefit from) income taxes	13,815	(6,505)	75,330	(2,918)
Net income (loss)	15,610	(39,990)	472,255	(14,503)
Noncontrolling interest	(6,998)	26,472	(263,682)	6,466
Net income (loss) available for common stockholders	$8,612	$(13,518)	$208,573	$(8,037)
Earnings per share				
Basic	$0.08	$(0.17)	$2.07	$(0.17)
Diluted	$0.08	$(0.17)	$2.04	$(0.17)
Weighted average common shares outstanding				
Basic	106,692,034	79,199,142	99,038,084	53,520,346
Diluted	107,128,206	79,199,142	100,468,860	53,520,346
Net income (loss)	$15,610	$(39,990)	$472,255	$(14,503)
Other comprehensive income				
Foreign exchange translation adjustment, net of taxes	(666)	2,558	(3,713)	8,300
Comprehensive income (loss)	14,944	(37,432)	468,542	(6,203)
Less: Comprehensive income attributable to noncontrolling interest	(6,708)	25,122	(262,239)	1,014

Comprehensive income (loss) attributable to common stockholders	$8,236	$(12,310)	$206,303	$(5,189)

See accompanying notes to the Condensed Consolidated Financial Statements (unaudited).

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Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Changes in Equity (unaudited)
Nine Months Ended September 30, 2018 and 2017

(in thousands, except share and interest data)	Class A Common Stock		Class C Common Stock		Class D Common Stock		Treasury Stock		Additional Paid-in Capital	Retained Earnings (Accumulat Deficit)	A C C I (
	Shares	Amounts	Shares	Amounts	Shares	Amounts	Shares	Amounts	Amounts		
Balance at December 31, 2017	90,415,532	$1	17,880,239	$—	79,610,490	$1	(616,923)	$(11,041)	$900,746	$(62,129)	$
Share based compensation	670,505	—	—	—	—	—	—	—	28,708	—	-
Repurchase of Class C common stock	—	—	(370,891)	—	—	—	—	—	—	(8,216)	-
Treasury stock purchases	(664,450)	—	—	—	—	—	(1,561,848)	(43,964)	—	(14,254)	-
Stock option exercised	4,058,673	—	—	—	—	—	—	—	76,754	—	-
Net income	—	—	—	—	—	—	—	—	—	208,573	-
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	(
Distribution from Virtu Financial to non-controlling interest	—	—	—	—	—	—	—	—	—	—	-
Dividends	—	—	—	—	—	—	—	—	—	(74,327)	-
Issuance of common stock in connection with employee exchanges	3,508,217	—	—	—	—	—	—	—	—	—	-
Issuance of Common Stock in connection with secondary offering, net of offering costs	10,518,750	—	—	—	(10,518,750)	—	—	—	(710)	—	-
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(3,508,217)	—	—	—	—	—	—	—	-
Issuance of tax receivable agreements in connection with employee exchange	—	—	—	—	—	—	—	—	(3,439)	—	-
Balance at September 30, 2018	108,507,227	$1	14,001,131	$—	69,091,740	$1	(2,178,771)	$(55,005)	$1,002,059	$49,647	$

Balance at December 31, 2016	40,436,580	$—	19,810,707	$—	79,610,490	$1	(453,066)	$(8,358)	$155,536	$(1,254)	$
Share based compensation	58,536	—	(34,019)	—	—	—	—	—	12,314	—	-
Repurchase of Class C common stock	—	—	(286,150)	—	—	—	—	—	(4,592)	—	-
Treasury stock purchases	—	—	—	—	—	—	(8,326)	(147)	—	—	-
Net income	—	—	—	—	—	—	—	—	—	(8,037)	-
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	2
Distribution from Virtu Financial to non-controlling interest	—	—	—	—	—	—	—	—	—	—	-
Dividends	—	—	—	—	—	—	—	—	—	(42,013)	-
Issuance of Class A common stock	48,076,924	1	—	—	—	—	—	—	735,973	—	-
Issuance of common stock in connection with employee exchanges	1,146,315	—	—	—	—	—	—	—	—	—	-
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(1,146,315)	—	—	—	—	—	—	—	-
Issuance of tax receivable agreements in connection with employee exchange	—	—	—	—	—	—	—	—	1,355	—	-
Balance at September 30, 2017	89,718,355	$1	18,344,223	$—	79,610,490	$1	(461,392)	$(8,505)	$900,586	$(51,304)	$

See accompanying notes to the condensed Consolidated Financial Statements (Unaudited).

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Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Cash Flows (unaudited)

(in thousands)	Nine Months Ended September 30, 2018	2017
Cash flows from operating activities		
Net Income (loss)	$472,255	$(14,503)
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	47,558	29,157
Amortization of purchased intangibles and acquired capitalized software	20,042	6,546
Debt issue cost related to debt refinancing and prepayment	10,645	9,351
Amortization of debt issuance costs and deferred financing fees	7,973	3,470
Termination of office leases	23,300	—
Share based compensation	22,537	10,924
Reserve for legal matters	1,620	(2,176)
Write-down of assets	3,221	1,335
Connectivity early termination	7,062	—
Deferred taxes	8,818	1,489
Gain on sale of businesses	(335,211)	—
Other	69	(444)
Changes in operating assets and liabilities:		
Securities borrowed	165,383	101,046
Securities purchased under agreements to resell	(10,014)	8,645
Receivables from broker dealers and clearing organizations	(143,746)	21,241
Trading assets, at fair value	(214,131)	1,020,821
Other assets	112,938	26,248
Securities loaned	45,458	194,523
Securities sold under agreements to repurchase	(89,404)	(220,719)
Payables to broker dealers and clearing organizations	236,138	(393,564)
Trading liabilities, at fair value	13,496	(569,911)
Accounts payable and accrued expenses and other liabilities	(92,496)	(17,708)
Net cash provided by operating activities	313,511	215,771
Cash flows from investing activities		
Development of capitalized software	(18,431)	(7,929)
Acquisition of property and equipment	(18,715)	(13,932)
Proceeds from sale of telecommunication assets	600	—
Proceeds from sale of BondPoint	400,192	—
Acquisition of KCG Holdings, net of cash acquired, described in Note 3	—	(799,303)
Acquisition of Teza Technologies	—	(5,594)
Proceeds from sale of DMM business	—	300
Net cash provided by (used in) investing activities	363,646	(826,458)
Cash flows from financing activities		
Distribution from Virtu Financial to non-controlling interest	(196,061)	(65,573)
Dividends	(74,327)	(42,013)
Repurchase of Class C common stock	(8,216)	—
Purchase of treasury stock	(58,218)	(147)

Stock option exercised	76,754	—
Short-term borrowings, net	(15,000)	(10,000)
Proceeds from long-term borrowings	—	1,115,036
Payments on repurchase of non-voting common interest	—	(6,092)
Repayment of long term borrowings	(500,000)	(206,473)
Repayment of KCG Notes	—	(480,987)
Tax receivable agreement obligations	(12,359)	(7,045)
Debt issuance costs	(2,261)	(52,528)
Issuance of common stock, net of offering costs	—	735,973
Issuance of common stock in connection with secondary offering, net of offering costs	(710)	—
Net cash provided by (used in) financing activities	(790,398)	980,151

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Effect of exchange rate changes on cash and cash equivalents	(3,713)	8,300
Net increase (decrease) in cash and cash equivalents	(116,954)	377,764
Cash and cash equivalents beginning of period	532,887	181,415
Cash and cash equivalents, end of period	$415,933	$559,179
Supplementary disclosure of cash flow information		
Cash paid for interest	$89,102	$59,524
Cash paid for taxes	84,337	5,744
Non-cash investing activities		
Share based compensation to developers relating to capitalized software	2,055	1,448
Non-cash financing activities		
Tax receivable agreement described in Note 6	$—	$—
Secondary offerings described in Note 16	—	—

See accompanying notes to the Condensed Consolidated Financial Statements (Unaudited).

Virtu Financial, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements (Unaudited)
(dollars in thousands, except shares and per share amounts, unless otherwise noted)

1. Organization and Basis of Presentation

Organization

The accompanying condensed consolidated financial statements include the accounts and operations of Virtu Financial, Inc. (“VFI” or, collectively with its wholly owned or controlled subsidiaries, the “Company”) beginning with its initial public offering (“IPO”) in April of 2015, along with the historical accounts and operations of Virtu Financial LLC (“Virtu Financial”) prior to the Company’s IPO. VFI is a Delaware corporation whose primary asset is its ownership interest in Virtu Financial, which it acquired pursuant to and subsequent to certain reorganization transactions (the “Reorganization Transactions”) consummated in connection with its IPO. As of September 30, 2018, VFI owned approximately 56.6% of the membership interests of Virtu Financial. VFI is the sole managing member of Virtu Financial and operates and controls all of the businesses and affairs of Virtu Financial and, through Virtu Financial and its subsidiaries (the “Group”), continues to conduct the business now conducted by such subsidiaries.

The Company is a leading financial firm that leverages cutting edge technology to deliver liquidity to the global markets and innovative, transparent market making trading solutions to its clients. The Company has broad diversification, in combination with its proprietary technology platform and low-cost structure, which enables the Company to facilitate risk transfer between global capital markets participants by supplying competitive liquidity and execution services while at the same time earning attractive margins and returns.

On July 20, 2017 (the “Closing Date”), the Company completed the all-cash acquisition of KCG Holdings, Inc. (“KCG”) (the “Acquisition of KCG”) . Pursuant to the terms of the Agreement and Plan of Merger, dated as of April 20, 2017 (the “Merger Agreement”), by and among the Company, Orchestra Merger Sub, Inc., a Delaware corporation and an indirect wholly-owned subsidiary of the Company (“Merger Sub”), and KCG Merger Sub merged with and into KCG (the “Merger”), with KCG surviving the Merger as a wholly owned subsidiary of the Company. See Note 3 “Acquisition of KCG Holdings, Inc.” for further details.

Virtu Financial’s principal subsidiaries include Virtu Financial BD LLC (“VFBD”), Virtu Americas LLC (“VAL”), and Virtu Financial Capital Markets LLC (“VFCM”, collectively with VFBD and VAL, the "broker-dealers"), which are self-clearing U.S. broker-dealers. Other principal subsidiaries include Virtu Financial Global Markets LLC (“VFGM”), a U.S. trading entity focused on futures and currencies; Virtu Financial Ireland Limited (“VFIL”), formed in Ireland; Virtu Financial Asia Pty Ltd (“VFAP”), formed in Australia; and Virtu Financial Singapore Pte. Ltd. (“VFSing”), formed in Singapore, each of which are trading entities focused on asset classes in their respective geographic regions.

On January 2, 2018, the Company completed the sale of its fixed income trading venue, BondPoint, to Intercontinental Exchange (“ICE”) for total gross proceeds of $400.2 million. See Note 4 "Sale of BondPoint" for further details.

Prior to the Acquisition of KCG, the Company was managed and operated as one business, under one operating segment. As a result of the Acquisition of KCG, beginning in the third quarter of 2017 the Company has three operating segments: (i) Market Making; (ii) Execution Services; and (iii) Corporate. See Note 19 "Geographic Information and Business Segments" for a further discussion of the Company’s segments.

Basis of Consolidation and Form of Presentation

These condensed consolidated financial statements are presented in U.S. dollars, have been prepared pursuant to the rules and regulations of the U.S. Securities and Exchange Commission ("SEC") regarding financial reporting with respect to Form 10-Q and accounting standards generally accepted in the United States of America ("U.S. GAAP") promulgated in the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC" or the "Codification"), 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 periods presented. The condensed 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 for the year ended December 31, 2017 (the "2017 Form 10-K"). The condensed consolidated financial statements of the Company include its equity interests in Virtu Financial and its subsidiaries. The Company operates and controls all business and affairs of Virtu Financial and its operating subsidiaries indirectly through its equity interest in Virtu Financial.

Certain reclassifications have been made to the prior periods' condensed consolidated financial statements in order to conform to the current period presentation. Such reclassifications are immaterial, individually and in the aggregate, to both current and all previously issued financial statements taken as a whole and have no effect on previously reported condensed consolidated net income available to common stockholders.

The condensed consolidated financial statements include the accounts of the Company and its majority and wholly owned subsidiaries. As sole managing member of Virtu Financial, the Company exerts control over the Group's operations. The Company consolidates Virtu Financial and its subsidiaries' financial statements and records the interests in Virtu Financial that the Company does not own as noncontrolling interests. All intercompany accounts and transactions have been eliminated in consolidation.

As discussed in Note 3 "Acquisition of KCG Holdings Inc.", the Company has accounted for the acquisition of KCG under the acquisition method of accounting. Under the acquisition method of accounting, the assets and liabilities of KCG, as of the Closing Date, were recorded at their respective fair values and added to the carrying value of the Company's existing assets and liabilities. The reported financial condition, results of operations and cash flows of the Company for the periods following the Acquisition reflect KCG's and the Company's balances, and reflect the impact of purchase accounting adjustments. The financial results for the three and nine months ended September 30, 2017 comprise the results of the Company for the entire applicable period and results of KCG from Closing Date through September 30, 2017. All periods to the Closing Date comprise solely results of the Company.

2. Summary of Significant Accounting Policies

Use of Estimates

The Company's condensed consolidated financial statements are prepared in conformity with U.S. GAAP, which require management to make estimates and assumptions regarding measurements including the fair value of trading assets and liabilities, goodwill and intangibles, compensation accruals, capitalized software, income tax, and other matters that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Accordingly, actual results could differ materially from those estimates.

Earnings Per Share

Earnings per share ("EPS") is calculated on both a basic and diluted basis. Basic EPS excludes dilution and is calculated by dividing income available to common stockholders by the weighted-average number of common shares outstanding for the period. Diluted EPS is calculated by dividing the net income available for common stockholders by the diluted weighted average shares outstanding for that period. Diluted EPS includes the determinants of the basic EPS and, in addition, reflects the dilutive effect of shares of common stock estimated to be distributed in the future under the Company's share based compensation plans.

The Company grants restricted stock units ("RSUs"), which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. As a result, the unvested RSUs meet the definition of a participating security requiring the application of the two-class method. Under the two-class method, earnings available to common shareholders, including both distributed and undistributed earnings, are allocated to each class of common stock and participating securities according to dividends declared and participating rights in undistributed earnings, which may cause diluted EPS to be more dilutive than the calculation using the treasury stock method.

Cash and Cash Equivalents

Cash and cash equivalents include money market accounts, which are payable on demand, and short-term investments with an original maturity of less than 90 days.

The Company maintains cash in bank deposit accounts that, at times, may exceed federally insured limits. The Company manages this risk by selecting financial institutions deemed highly creditworthy to minimize the risk.

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Securities Borrowed and Securities Loaned

The Company conducts securities borrowing and lending activities with external counterparties. In connection with these transactions, the Company receives or posts collateral, which comprises cash and/or securities. In accordance with substantially all of its stock borrow agreements, the Company is permitted to sell or repledge the securities received. Securities borrowed or loaned are recorded based on the amount of cash collateral advanced or received. The initial cash collateral advanced or received generally approximates or is greater than 102% of the fair value of the underlying securities borrowed or loaned. The Company monitors the fair value of securities borrowed and loaned, and delivers or obtains additional collateral as appropriate. Receivables and payables with the same counterparty are not offset in the condensed consolidated statements of financial condition. Interest received or paid by the Company for these transactions is recorded gross on an accrual basis under interest and dividends income or interest and dividends expense in the condensed consolidated statements of comprehensive income.

Securities Purchased Under Agreements to Resell and Securities Sold Under Agreements to Repurchase

In a repurchase agreement, securities sold under agreements to repurchase are treated as collateralized financing transactions and are recorded at contract value, plus accrued interest, which approximates fair value. It is the Company's policy that its custodian take possession of the underlying collateral securities with a fair value approximately equal to the principal amount of the repurchase transaction, including accrued interest. For reverse repurchase agreements, the Company typically requires delivery of collateral with a fair value approximately equal to the carrying value of the relevant assets in the condensed consolidated statements of financial condition. To ensure that the fair value of the underlying collateral remains sufficient, the collateral is valued daily with additional collateral obtained or excess collateral returned, as permitted under contractual provisions. The Company does not net securities purchased under agreements to resell transactions with securities sold under agreements to repurchase transactions entered into with the same counterparty.

The Company has entered into bilateral and tri-party term and overnight repurchase and other collateralized financing agreements which bear interest at negotiated rates. The Company receives cash and makes delivery of financial instruments to a custodian who monitors the market value of these instruments on a daily basis. The market value of the instruments delivered must be equal to or in excess of the principal amount loaned under the repurchase agreements plus the agreed upon margin requirement. The custodian may request additional collateral, if appropriate. Interest received or paid by the Company for these transactions is recorded gross on an accrual basis under interest and dividends income or interest and dividends expense in the condensed consolidated statements of comprehensive income.

Receivables from/Payables to Broker-dealers and Clearing Organizations

As of September 30, 2018 and December 31, 2017, receivables from and payables to broker-dealers and clearing organizations primarily represented amounts due for unsettled trades, open equity in futures transactions, securities failed to deliver or failed to receive, deposits with clearing organizations or exchanges and balances due from or due to prime brokers in relation to the Company’s trading. Amounts receivable from broker-dealers and clearing organizations may be restricted to the extent that they serve as deposits for securities sold, not yet purchased. The Company presents its balances, including outstanding principal balances on all credit facilities, on a net by counterparty basis within receivables from and payables to broker-dealers and clearing organizations when the criteria for offsetting are met.

In the normal course of business, a significant portion of the Company’s securities transactions, money balances, and security positions are transacted with several third-party brokers. The Company is subject to credit risk to the extent any broker with whom it conducts business is unable to fulfill contractual obligations on its behalf. The Company

monitors the financial condition of such brokers and to minimize the risk of any losses from these counterparties.

Financial Instruments Owned Including Those Pledged as Collateral and Financial Instruments Sold, Not Yet Purchased

Financial instruments owned and Financial instruments sold, not yet purchased relate to market making and trading activities, and include listed and other equity securities, listed equity options and fixed income securities.

The Company records financial instruments owned, including those pledged as collateral, and financial instruments sold, not yet purchased at fair value. Gains and losses arising from financial instrument transactions are recorded net on a trade-date basis in trading income, net, in the condensed consolidated statements of comprehensive income.

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Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or would be paid to transfer a liability (i.e., the exit price) in an orderly transaction between market participants at the measurement date. Fair value measurements are not adjusted for transaction costs. The recognition of "block discounts" for large holdings of unrestricted financial instruments where quoted prices are readily and regularly available in an active market is prohibited. The Company categorizes its financial instruments into a three level hierarchy which prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy level assigned to each financial instrument is based on the assessment of the transparency and reliability of the inputs used in the valuation of such financial instruments at the measurement date based on the lowest level of input that is significant to the fair value measurement. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurement) and the lowest priority to unobservable inputs (level 3 measurements).

Financial instruments measured and reported at fair value are classified and disclosed in one of the following categories based on inputs:

Level 1 — Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2 — Quoted prices in markets that are not active and financial instruments for which all significant inputs are observable, either directly or indirectly; or

Level 3 — Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

Transfers in or out of levels are recognized based on the beginning fair value of the period in which they occurred.

Fair Value Option

The fair value option election allows entities to make an irrevocable election of fair value as the initial and subsequent measurement attribute for certain eligible financial assets and liabilities. Unrealized gains and losses on items for which the fair value option has been elected are recorded in other, net in the condensed consolidated statements of comprehensive income. The decision to elect the fair value option is determined on an instrument by instrument basis, which must be applied to an entire instrument and is irrevocable once elected.

Derivative Instruments

Derivative instruments are used for trading purposes, including economic hedges of trading instruments, are carried at fair value, and include futures, forward contracts, and options. Gains or losses on these derivative instruments are recognized currently within trading income, net in the condensed consolidated statement of comprehensive income. Fair values for exchange-traded derivatives, principally futures, are based on quoted market prices. Fair values for over-the-counter derivative instruments, principally forward contracts, are based on the values of the underlying financial instruments within the contract. The underlying instruments are currencies, which are actively traded. The Company presents its derivatives balances on a net-by-counterparty basis when the criteria for offsetting are met. Cash flows associated with such derivative activities are included in cash flows from operating activities on the condensed consolidated statements of cash flows.

Property, Equipment and Occupancy

Property and equipment are carried at cost, less accumulated depreciation, except for the assets acquired in connection with acquisitions using the purchase accounting method, which were recorded at fair value on the respective date of acquisitions. Depreciation is provided using the straight-line method over estimated useful lives of the underlying assets. Routine maintenance, repairs and replacement costs are expensed as incurred and improvements that appreciably extend the useful life of the assets are capitalized. When property and equipment are sold or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is recognized in income. Property and equipment are reviewed for impairment whenever events or changes in circumstances indicate that the related carrying amount may not be recoverable. Furniture, fixtures, and equipment are depreciated over three to seven years. Leasehold improvements are amortized over the lesser of the life of the improvement or the term of the lease.

The Company recognizes rent expense under operating leases with fixed rent escalations, lease incentives and free rent periods on a straight-line basis over the lease term beginning on the date the Company takes possession of or controls the use of the space, including during free rent periods.

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Lease Loss Accrual

The Company's policy is to identify excess real estate capacity and where applicable, accrue for related future costs, net of projected sub-lease income upon the date the Company ceases to use the excess real estate, which is recorded under operating and administrative in the condensed consolidated statements of comprehensive income. Such accrual is adjusted to the extent the actual terms of sub-leased property differ from the previous assumptions used in the calculation of the accrual.

Capitalized Software

The Company capitalizes costs of materials, consultants, and payroll and payroll related costs for employees incurred in developing internal-use software. Costs incurred during the preliminary project and post-implementation stages are charged to expense.

Management's judgment is required in determining the point at which various projects enter the stages at which costs may be capitalized, in assessing the ongoing value of the capitalized costs, and in determining the estimated useful lives over which the costs are amortized.

Capitalized software development costs and related accumulated amortization are included in property, equipment and capitalized software in the accompanying condensed consolidated statements of financial condition and are amortized over a period of 1.5 to 2.5 years, which represents the estimated useful lives of the underlying software.

Goodwill

Goodwill represents the excess of the purchase price over the underlying net tangible and intangible assets of the Company's acquisitions. Goodwill is not amortized but is tested for impairment on an annual basis and between annual tests whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Goodwill is tested at the reporting unit level, which is defined as an operating segment or one level below the operating segment.

The Company tests goodwill for impairment on an annual basis on July 1 and on an interim basis when certain events or circumstances exist. In the impairment test as of July 1, 2018, the Company assessed qualitative factors as described in ASC 350-20 for each of its reporting units for any indicators that the fair values of the reporting units were less than their carrying values.

Intangible Assets

The Company amortizes finite-lived intangible assets over their estimated useful lives. Finite-lived intangible assets are tested for impairment when impairment indicators are present, and if impaired, they are written down to fair value.

Exchange Memberships and Stock

Exchange memberships are recorded at cost or, if any other than temporary impairment in value has occurred, at a value that reflects management's estimate of fair value. Exchange memberships acquired in connection with the Acquisition were recorded at their fair value on the date of acquisition. Exchange stock includes shares that entitle the Company to certain trading privileges. The Company's exchange memberships and stock are included in intangibles in the condensed consolidated statements of financial condition.

Trading Income, net

Trading income, net is comprised of changes in the fair value of trading assets and liabilities (i.e., unrealized gains and losses) and realized gains and losses on trading assets and liabilities. Trading gains and losses on financial instruments owned and financial instruments sold, not yet purchased are recorded on the trade date and reported on a net basis in the condensed consolidated statements of comprehensive income.

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Commissions, net and Technology Services

Commissions, net, which primarily comprise commissions and commission equivalents earned on institutional client orders, are recorded on a trade date basis. Under a commission management program, the Company allows institutional clients to allocate a portion of their gross commissions to pay for research and other services provided by third parties. The Company recognizes the related revenue when the third party research services are rendered and payments are made. As the Company acts as an agent in these transactions, it records such expenses on a net basis within commissions and technology services in the condensed consolidated statements of comprehensive income.

Technology services revenues consist of technology licensing fees and agency commission fees. Technology licensing fees are earned from third parties for licensing of the Company's proprietary risk management and trading infrastructure technology and the provision of associated management and hosting services. These fees include both upfront and annual recurring fees, as well as, in certain cases, contingent fees based on client revenues, which represent variable consideration. The services offered under these contracts have the same pattern of transfer; accordingly, they are being measured and recognized as a single performance obligation. The performance obligation is satisfied over time, and accordingly, revenue is recognized as time passes. Variable consideration has not been included in the transaction price as the amount of consideration is contingent on factors outside the Company's control and thus it is not probable that a significant reversal of cumulative revenue recognized will not occur. Recurring fees, which exclude variable consideration, are billed and collected on a quarterly basis.

Interest and Dividends Income/Interest and Dividends Expense

Interest income and interest expense are accrued in accordance with contractual rates. Interest income consists of interest earned on collateralized financing arrangements and on cash held by brokers. Interest expense includes interest expense from collateralized transactions, margin and related lines of credit. Dividends on financial instruments owned including those pledged as collateral and financial instruments sold, not yet purchased are recorded on the ex-dividend date and interest is recognized on an accrual basis.

Brokerage, Exchange and Clearance Fees, Net

Brokerage, exchange and clearance fees, net, comprise the costs of executing and clearing trades and are recorded on a trade date basis. Rebates consist of volume discounts, credits or payments received from exchanges or other market places related to the placement and/or removal of liquidity from the order flow in the marketplace. Rebates are recorded on an accrual basis and included net within brokerage, exchange and clearance fees in the accompanying condensed consolidated statements of comprehensive income.

Payments for Order Flow

Payments for order flow represent payments to broker-dealer clients, in the normal course of business, for directing their order flow in U.S. equities to the Company. Payments for order flow are recorded on a trade-date basis in the condensed consolidated statements of comprehensive income.

Income Taxes

Subsequent to consummation of the Reorganization Transactions and the IPO, the Company is subject to U.S. federal, state and local income taxes on its taxable income. The Company's subsidiaries are subject to income taxes in the respective jurisdictions (including foreign jurisdictions) in which they operate. Prior to the consummation of the Reorganization Transactions and the IPO, no provision for United States federal, state and local income tax was required, as Virtu Financial is a limited liability company and is treated as a pass-through entity for United States

federal, state, and local income tax purposes.

The provision for income tax is comprised of current tax and deferred tax. Current tax represents the tax on current year tax returns, using tax rates enacted at the balance sheet date. The deferred tax assets are recognized in full and then reduced by a valuation allowance if it is more likely than not that some or all of the deferred tax assets will not be recognized.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the applicable taxing authority, including resolution of the appeals or litigation processes, based on the technical merits of the position. The tax benefits recognized in the condensed consolidated financial statements from such a position are measured based on the largest benefit for each such position that has a greater than fifty percent likelihood of being realized upon ultimate resolution. Many factors are considered when evaluating and estimating the tax positions and tax benefits. Such estimates involve interpretations of regulations, rulings, case law, etc. and are inherently

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complex. The Company's estimates may require periodic adjustments and may not accurately anticipate actual outcomes as resolution of income tax treatments in individual jurisdictions typically would not be known for several years after completion of any fiscal year.

Comprehensive Income and Foreign Currency Translation

Comprehensive income consists of two components: net income and other comprehensive income ("OCI"). The Company's OCI is comprised of foreign currency translation adjustments. Assets and liabilities of operations having non-U.S. dollar functional currencies are translated at period-end exchange rates, and revenues and expenses are translated at weighted average exchange rates for the period. Gains and losses resulting from translating foreign currency financial statements, net of related tax effects, are reflected in accumulated other comprehensive income, a separate component of stockholders' equity.

The Company's foreign subsidiaries generally use the U.S. dollar as their functional currency. The Company also has subsidiaries that utilize a functional currency other than the U.S. dollar, primarily comprising its subsidiaries domiciled in Ireland, which utilizes the Euro as the functional currency.

The Company may seek to reduce the impact of fluctuations in foreign exchange rates on its net investment in certain non-U.S. operations through the use of foreign currency forward contracts. For foreign currency forward contracts designated as hedges, the Company assesses its risk management objectives 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. The effectiveness of the hedge is assessed based on the overall changes in the fair value of the forward contracts. For qualifying net investment hedges, any gains or losses, to the extent effective, are included in Accumulated other comprehensive income on the condensed consolidated statements of financial condition and Cumulative translation adjustment, net of tax, on the condensed consolidated statements of comprehensive income. The ineffective portion, if any, is recorded in investment income and other, net on the condensed consolidated statements of operations.

Share-Based Compensation

The fair value of awards issued for compensation prior to the Reorganization Transactions and the IPO was determined by management, with the assistance of an independent third party valuation firm, using a projected annual forfeiture rate, where applicable, on the date of grant.

Share-based awards issued for compensation in connection with or subsequent to the Reorganization Transactions and the IPO pursuant to the VFI 2015 Management Incentive Plan (as amended, the "2015 Amended and Restated Management Incentive Plan") were in the form of stock options, Class A common stock and RSUs. The fair value of the stock option grants is determined through the application of the Black-Scholes-Merton model. The fair value of the Class A common stock and RSUs are determined based on the volume weighted average price for the three days preceding the grant, and with respect to the RSUs, a projected annual forfeiture rate. The fair value of share-based awards granted to employees is expensed based on the vesting conditions and are recognized on a straight line basis over the vesting period. The Company records as treasury stock shares repurchased from its employees for the purpose of settling tax liabilities incurred upon the issuance of Class A common stock, the vesting of RSUs or the exercise of stock options.

Variable Interest Entities

A variable interest entity ("VIE") is an entity that lacks one or more of the following characteristics (i) the total equity investment at risk is sufficient to enable the entity to finance its activities independently and (ii) the equity holders

have the power to direct the activities of the entity that most significantly impact its economic performance, the obligation to absorb the losses of the entity and the right to receive the residual returns of the entity.

The Company will be considered to have a controlling financial interest and will consolidate a VIE if it has both (i) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (ii) the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE.

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In October 2016, the Company invested in a joint venture ("JV") with nine other parties. One of the parties was KCG. Upon the Merger, KCG was required to relinquish their ownership in the JV. As of September 30, 2018, each of the remaining parties owns approximately 11% of the voting shares and 11% of the equity of this JV. In addition, as a result of the Acquisition of KCG, the Company owns 50% of the voting shares and 50% of the equity of another JV. These two JVs build and maintain microwave communication networks in the U.S., Europe, and Asia. The Company and its JV partners each pay monthly fees for the use of the microwave communication networks in connection with their respective trading activities, and the JVs may sell excess bandwidth that is not utilized by the JV members to third parties. The JVs meet the criteria to be considered VIEs.

In each of the JVs, the Company does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; therefore it does not have a controlling financial interest in and does not consolidate the JVs. The Company records its interest in each JV under the equity method of accounting and records its investment in the JVs within Other assets and its amounts payable for communication services provided by the JV within Accrued expenses and other liabilities on the condensed consolidated statements of financial condition. The Company records its pro-rata share of each JV's earnings or losses within Other, net and fees related to the use of communication services provided by the JVs within Communications and data processing on the condensed consolidated statements of comprehensive income.

The Company's exposure to the obligations of these VIEs is generally limited to its interests in each respective JV, which is the carrying value of the equity investment in each JV.

The following table presents the Company's nonconsolidated VIEs at September 30, 2018:

	Carrying Amount		Maximum	VIEs'
(in thousands)	Asset	Liability	Exposure to Loss	assets
Equity investment	$18,669	$ —	$ 18,669	$48,557

The following table presents the Company's nonconsolidated VIEs at December 31, 2017:

	Carrying Amount		Maximum	VIEs'
(in thousands)	Asset	Liability	Exposure to Loss	assets
Equity investment	$18,799	$ —	$ 18,799	$41,936

Accounting Pronouncements, Recently Adopted

Revenue Recognition - In May 2014, the FASB issued Accounting Standard Update ("ASU") 2014-9, Revenue from Contracts with Customers. ASU 2014-9 is a comprehensive new revenue recognition model that requires a company to recognize revenue to depict the transfer of goods or services to a customer at an amount that reflects the consideration it expects to receive in exchange for those goods or services. ASU 2014-9 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract.

The Company adopted the new revenue standard on January 1, 2018 by applying the modified retrospective method, which did not result in a transition adjustment. The new standard does not apply to revenue associated with financial instruments that are accounted for under other U.S. GAAP, and as a result, did not have a material impact on the Company's condensed consolidated financial statements, which are most closely associated with financial instruments,

including trading income, net, and interest and dividends income. The new revenue standard primarily impacts revenues from technology services, commissions and soft-dollar arrangements generated by execution services. The additional disclosures required by the new standard have been included in Note 13 "Revenues from Contracts with Customers".

Financial Assets and Liabilities — In January 2016, the FASB issued ASU 2016-01, Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. The ASU affects the accounting for equity investments, financial liabilities under fair value option and presentation and disclosure requirements of financial instruments. The ASU affects all entities that hold financial assets or owe financial liabilities and is effective for annual reporting periods (including interim periods) beginning after December 15, 2017. The Company does not currently classify any equity securities as available for sale, and it does not apply the fair value option to its own debt issuances. The

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Company has adopted this ASU as of January 1, 2018, and it did not have a material impact on its condensed consolidated financial statements.

Income Taxes – In October 2016, the FASB issued ASU 2016-16, Income Taxes (Topic 749): Intra-Entity Transfers of Assets Other Than Inventory. The ASU requires the reporting entity to recognize the tax expense from the sale of an asset in the seller's tax jurisdiction when the transfer occurs, even though the pre-tax effects of the transactions are eliminated in consolidation. Any deferred tax asset that arises in the buyer's jurisdiction would also be recognized at the time of the transfer. The ASU is effective for reporting periods beginning after December 15, 2017. The Company adopted this ASU on January 1, 2018, and it did not have a material impact on its condensed consolidated financial statements.

Business Combinations - In January 2017, the FASB issued ASU 2017-1, Business Combinations (Topic 805), Clarifying the Definition of a Business, to amend the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The ASU is effective for reporting periods beginning after December 15, 2017. The Company adopted this ASU on January 1, 2018, and it did not have a material impact on its condensed consolidated financial statements.

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

Leases — In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). Under the new ASU, a lessee will be required to recognize assets and liabilities for leases with lease terms of more than 12 months. The liability will be equal to the present value of the future lease payments. The asset, referred to as a "right-of-use asset" will be based on the liability, subject to adjustment, such as for initial direct costs. For income statement purposes, leases will be classified as either operating or finance. Operating leases will result in straight-line expense (similar to current operating leases) while finance leases will result in a front-loaded expense pattern (similar to current capital leases). Classification will be based on criteria that are largely similar to those applied in current lease accounting, but without explicit bright lines. The Company's implementation effort is ongoing, and it will adopt this ASU on January 1, 2019.

In July 2018, the FASB issued ASU 2018-10, Codification Improvements to Topic 842, Leases, which modifies certain aspects of ASC Topic 842, including allowing entities to adopt the new leasing standard as of January 1, 2019, without restating prior periods presented, and providing certain practical expedients including allowing lessors not to separate out lease and non-lease components when certain conditions are met.

The Company is not anticipating recognizing lease assets and lease liabilities for leases with a determined lease term of twelve months or less and which are not expected to be renewed. Upon adoption of this ASU, the Company expects to report grossed up assets and liabilities on its condensed consolidated statement of financial condition as a result of recognizing right-of-use assets and lease liabilities related to its operating leases, which currently are not reflected in its condensed consolidated statement of financial condition.

Goodwill - In January, 2017, the FASB issued ASU 2017-4, Intangibles—Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment. To simplify the subsequent measurement of goodwill, this ASU eliminated Step 2 from the goodwill impairment test. In computing the implied fair value of goodwill under Step 2, an entity had to perform procedures to determine the fair value at the impairment testing date of its assets and liabilities (including unrecognized assets and liabilities) following the procedure that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. Instead, under this ASU, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. This ASU also eliminated the requirements for any reporting unit with a zero or negative carrying

amount to perform a qualitative assessment and, if it fails that qualitative test, to perform Step 2 of the goodwill impairment test. This ASU is effective for public entities in fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company does not expect the adoption of this ASU to have a material impact on its condensed consolidated financial statements.

Stock Compensation - In June 2018, the FASB issued ASU 2018-07, Compensation, Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting, with the objective of conforming the accounting for share-based awards to non-employees to the accounting for awards granted to employees. Previously, non-employee awards were measured at the vesting date, rather than the grant date, which effectively required the awards to be marked to market until the award vested. Under the new ASU, companies will be required to measure non-employee awards at the fair value of the instruments issued at the grant date. Entities will also be able to consider the probability of the recipient satisfying any

performance conditions. The ASU is effective for periods beginning after December 15, 2018, including interim periods within that fiscal year. The Company is currently evaluating the impact of this standard on its condensed consolidated financial statements. The Company does not currently make share-based awards to non-employees, and does not expect the adoption of this ASU to have a material impact on its condensed consolidated financial statements.

Fair Value Measurement - In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement, which modified the disclosure requirements on fair value measurements in ASC Topic 820, Fair Value Measurement. Disclosure requirements were eliminated for the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels, and the valuation processes for Level 3 fair value measurements. Disclosure requirements were modified for liquidation of investments in certain entities that calculate net asset value, and for measurement uncertainty disclosures. Disclosure requirements were added for changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. The ASU is effective for periods beginning after December 15, 2019, including interim periods within that fiscal year. The Company does not expect the adoption of this ASU to have a material impact on its condensed consolidated financial statements.

3. Acquisition of KCG Holdings, Inc.

As of the Closing Date of the Acquisition of KCG, each of KCG's issued and outstanding shares of Class A common stock, par value $0.01 per share was cancelled and extinguished and converted into the right to receive $20.00 in cash, without interest, less any applicable withholding taxes.

On the Closing Date, and in connection with the financing of the Acquisition of KCG, as described in Note 10 "Borrowings", the Company issued to Aranda Investments Pte. Ltd. ("Aranda"), an affiliate of Temasek Holdings (Private) Limited ("Temasek"), 6,346,155 shares of the Company's Class A common stock, pursuant to the investment agreement with Aranda (as amended, the "Aranda Investment Agreement") for an aggregate purchase price of approximately $99.0 million. On August 10, 2017, the Company issued an additional 1,666,666 shares of its Class A common stock for an aggregate purchase price of $26.0 million (collectively, the "Temasek Investment").

On the Closing Date, and in connection with the financing of the Acquisition of KCG, the Company issued to North Island Holdings I, LP ("NIH") 39,725,979 shares of the Company's Class A common stock for an aggregate purchase price of approximately $613.5 million. On August 10, 2017 the Company issued an additional 338,124 shares of its Class A common stock for an aggregate purchase price of $5.2 million (collectively, the "NIH Investment"). In connection with the Temasek Investment and NIH Investment, the Company incurred approximately $7.8 million in fees which were recorded as a reduction to additional paid-in capital.

On July 21, 2017, the outstanding 6.875% Senior Secured Notes due 2020 issued by KCG were redeemed at a redemption price equal to 103.438% of the $465.0 million principal amount, plus accrued and unpaid interest. The redemption was pursuant to the indenture, dated as of March 13, 2015 (as amended, restated, supplemented or otherwise modified), by and among KCG, the subsidiary guarantors party thereto and The Bank of New York Mellon, as trustee and collateral agent. See "Fourth Amended and Restated Credit Agreement" and "Senior Secured Second Lien Notes" in Note 10 "Borrowings".

Accounting treatment of the acquisition

The Acquisition of KCG has been accounted for as a purchase of KCG by the Company, pursuant to provisions of ASC 805, Business Combinations. Under the acquisition method of accounting, the assets and liabilities of KCG, as of

July 20, 2017, were recorded at their respective fair values and added to the carrying value of the Company's existing assets and liabilities. These fair values were determined with the assistance of third party valuation professionals. The reported financial condition, results of operations and cash flows of the Company for the periods following the Acquisition of KCG reflect KCG’s and the Company's balances and reflect the impact of purchase accounting adjustments.

Purchase price and goodwill

The aggregate cash purchase price of $1.4 billion was determined as the sum of the fair value, at $20.00 per share, of KCG shares and warrants outstanding to former KCG stockholders at closing and the fair value of KCG employee stock based awards that were outstanding, and which vested at the Closing Date.

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The purchase price has been allocated to the assets acquired and liabilities assumed using their estimated fair values at the Closing Date of the Acquisition of KCG. Adjustments to the provisional values during the measurement period were recorded in the reporting period in which the adjustment amounts were determined. No further adjustments to the provisional values remain. The Company engaged third party specialists for the purchase price allocation.

Amounts allocated to intangible assets, the amortization period and goodwill were as follows:

(in thousands)	Amount	Amortization Years
Technology	$67,700	1-6 years
Customer relationships	94,000	13 - 17 years
Trade names	1,000	10 years
Favorable leases	5,895	2-15 years
Exchange memberships	6,400	Indefinite
Intangible assets	$174,995	
Goodwill	128,286	
Total	$303,281	

Of the total Goodwill of $128.3 million, $96.2 million has been assigned to the Market Making segment and $32.1 million has been assigned to the Execution Services segment. Such goodwill is attributable to the expansion of products offerings and expected synergies of the combined workforce, products and technologies of the Company and KCG.

Tax treatment of the Acquisition

The Company believes that the Acquisition of KCG will be treated as a tax-free transaction to the Company that does not result in a step up in tax basis in the acquired assets and, therefore, KCG’s tax basis in its assets and liabilities generally carries over to the Company following the Acquisition of KCG. None of the goodwill is expected to be deductible for tax purposes.

The Company recorded net deferred tax assets of $23.9 million with respect to recording KCG’s assets and liabilities under the purchase method of accounting as described above as well as recording the value of other tax attributes acquired as a result of the Acquisition of KCG, as described in Note 14 "Income Taxes".

4. Sale of BondPoint

In October 2017, the Company entered into an Asset Purchase Agreement (the “BondPoint Agreement”) with Intercontinental Exchange ("ICE") pursuant to which the Company has agreed to sell specified assets and to assign specified liabilities constituting its BondPoint division and fixed income venue (“BondPoint”). BondPoint is a provider of electronic fixed income trading solutions for the buy-side and sell-side offering access to centralized liquidity and automated trade execution services.

As of December 31, 2017, the Company transferred the carrying value of BondPoint to assets held for sale; refer to Note 4 “Business held for sale” in the 2017 Form 10-K. On January 2, 2018, the Company completed the sale of BondPoint to ICE for total gross proceeds of $400.2 million in cash. The Company incurred one-time transaction costs of $8.5 million, which include professional fees of $7.1 million related to the sale and $1.4 million of compensation expense, which is recorded in Transaction advisory fees and expenses and Employee compensation and payroll taxes, respectively, on the condensed consolidated statement of comprehensive income. The Company recognized a gain on sale of $337.6 million, which is recorded in Other, net on the condensed consolidated statement of comprehensive

income for the nine months ended September 30, 2018.

A summary of the carrying value of BondPoint and gain on sale of BondPoint is as follows:

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(in thousands)	
Total sale proceeds received	$400,192
Business assets and liabilities held for sale as of December 31, 2017:	
Receivables from broker dealers and clearing organizations	3,383
Intangibles and other assets	51,687
Liabilities	(728)
Total carrying value of BondPoint as of December 31, 2017:	54,342
Goodwill adjustment allocated to BondPoint	8,300
Gain on sale of BondPoint	337,550
Transaction costs	8,568
Gain on sale of BondPoint, net of transaction costs	$328,982

5. Earnings per Share

The below table contains a reconciliation of net income before noncontrolling interest to net income available for common stockholders:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2018	2017	2018	2017
Income (loss) before income taxes and noncontrolling interest	$29,425	$(46,495)	$547,585	$(17,421)
Provision for (benefit from) income taxes	13,815	(6,505)	75,330	(2,918)
Net income	15,610	(39,990)	472,255	(14,503)
Noncontrolling interest	(6,998)	26,472	(263,682)	6,466
Net income (loss) available for common stockholders	$8,612	$(13,518)	$208,573	$(8,037)

The calculation of basic and diluted earnings per share is presented below:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands, except for share or per share data)	2018	2017	2018	2017
Basic earnings per share:				
Net income (loss) available for common stockholders	$8,612	$(13,518)	$208,573	$ (8,037)
Less: Dividends and undistributed earnings allocated to participating securities	(418)	(314)	(4,029)	(997)
Net income (loss) available for common stockholders, net of dividends and undistributed earnings allocated to participating securities	8,194	(13,832)	204,544	(9,034)
Weighted average shares of common stock outstanding:				
Class A	106,692,034	79,199,142	99,038,084	53,520,346
Basic earnings per share	$0.08	$(0.17)	$2.07	$ (0.17)

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(in thousands, except for share or per share data)	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2017
Diluted earnings per share:				
Net income (loss) available for common stockholders, net of dividends and undistributed earnings allocated to participating securities	$8,194	$(13,832)	$204,544	$(9,034)
Weighted average shares of common stock outstanding:				
Class A				
Issued and outstanding	106,692,934	70,499,142	99,038,084	53,520,346
Issuable pursuant to 2015 Management Incentive Plan (1)	436,172	—	1,430,776	—
	107,129,106	70,499,142	100,468,860	53,520,346
Diluted earnings per share	$0.08	$(0.17)	$2.04	$(0.17)

(1) The dilutive impact of unexercised stock options excludes from the computation of EPS 1,578,617 and 1,704,307 options for the three and nine months ended September 30, 2017, respectively, because inclusion of the options would have been anti-dilutive.

6. Tax Receivable Agreements

In connection with the IPO and the Reorganization Transactions, the Company entered into tax receivable agreements to make payments to certain Virtu pre-IPO equityholders ("Virtu Members") that are generally equal to 85% of the applicable cash tax savings, if any, that the Company actually realizes as a result of favorable tax attributes that were and will continue to be available to the Company as a result of the Reorganization Transactions, exchanges of membership interests for Class A common stock or Class B common stock and payments made under the tax receivable agreements. Payments will occur only after the filing of the U.S. federal and state income tax returns and realization of the cash tax savings from the favorable tax attributes. The Company made its first payment of $7.0 million in February 2017 and its second payment of $12.3 million in September 2018.

As a result of (i) the purchase of equity interests in Virtu Financial from certain Virtu Members in connection with the Reorganization Transactions, (ii) the purchase of non-voting common interest units in Virtu Financial (the “Virtu Financial Units”) (along with the corresponding shares of Class C common stock) from certain of the Virtu Members in connection with the IPO, (iii) the purchase of Virtu Financial Units (along with the corresponding shares of Class C common stock) and the exchange of Virtu Financial Units (along with the corresponding shares of Class C common stock) for shares of Class A common stock in connection with the secondary offerings completed in September 2016, November 2015, and May 2018 (the “Secondary Offerings”), payments to certain Virtu Members in respect of the purchases are expected to range from approximately $3.6 million to $16.0 million per year over the next 15 years. The corresponding deduction to additional paid-in capital was approximately $16.4 million for the difference between the tax receivable agreements liability and the related deferred tax asset.

In connection with the May 2018 secondary offering, as described in Note 16 "Capital Structure", the Company recorded an additional deferred tax asset of $61.1 million and payment liability pursuant to the tax receivable agreements of $64.6 million, with the $3.5 million difference recorded as a decrease to additional paid-in capital.

As a result of the reduction in the U.S. corporate income tax rate as described below, the aforementioned deferred tax asset and related payment liability were subsequently reduced as described below. The amounts recorded as of September 30, 2018 are based on best estimates available at the respective dates and may be subject to change after

the filing of the Company's U.S. federal and state income tax returns for the years in which tax savings were realized.

The 2017 Tax Act includes, among other items, a permanent reduction to the U.S. corporate income tax rate from 35% to 21% effective January 1, 2018 as further described in Note 14 "Income Taxes". As a result, at December 31, 2017, the Company recorded a reduction of its tax receivable agreement obligation of $86.6 million. As further described in Note 14 "Income Taxes", the Company also recorded a reduction of its deferred tax assets, including the deferred tax assets described above. At September 30, 2018 and December 31, 2017, the Company's remaining deferred tax assets described above were approximately $153.9 million and $101.6 million, respectively, and the Company's liabilities over the next 15 years pursuant to the tax receivable agreements are approximately $199.3 million and $147.0 million, respectively.

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For the tax receivable agreements discussed above, the cash savings realized by the Company are computed by comparing the actual income tax liability of the Company to the amount of such taxes the Company would have been required to pay had there been (i) no increase to the tax basis of the assets of Virtu Financial as a result of the purchase or exchange of Virtu Financial Units, (ii) no tax benefit from the tax basis in the intangible assets of Virtu Financial on the date of the IPO and (iii) no tax benefit as a result of the Net Operating Losses ("NOLs") and other tax attributes of Virtu Financial. Subsequent adjustments of the tax receivable agreements obligations due to certain events (e.g., changes to the expected realization of NOLs or changes in tax rates) will be recognized within income before taxes and noncontrolling interests in the condensed consolidated statements of comprehensive income.

7. Goodwill and Intangible Assets

Prior to the Acquisition of KCG, the Company was managed and operated as one business, and accordingly, operated under one operating segment. As a result of the Acquisition of KCG, beginning in the third quarter of 2017 the Company has three operating segments: (i) Market Making; (ii) Execution Services; and (iii) Corporate. The Company allocated goodwill to the new reporting units using a relative fair value approach. In addition, the Company performed an assessment of potential goodwill impairment for all reporting units immediately prior to the reallocation and determined that no impairment was indicated.

The following table presents the details of goodwill by segment:

(in thousands)	Market Making	Execution Services	Corporate	Total
Balance as of December 31, 2017	$755,292	$89,591	$ —	$844,883
Goodwill adjustment allocated to BondPoint	—	(8,300)	—	(8,300)
Balance as of September 30, 2018	$755,292	$81,291	$ —	$836,583

As of September 30, 2018 and December 31, 2017, the Company's total amount of goodwill recorded was $836.6 million and $844.9 million, respectively. As described in Note 4 "Sale of BondPoint", the Company allocated $8.3 million of goodwill to BondPoint as part of the sale. No goodwill impairment was recognized during the nine months ended September 30, 2018 and 2017.

Acquired intangible assets consisted of the following as of September 30, 2018 and December 31, 2017:

	As of September 30, 2018			
(in thousands)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Useful Lives (Years)
Purchased technology	$110,000	$ 110,000	$ —	1.4 to 2.5
ETF issuer relationships	950	638	312	9
ETF buyer relationships	950	639	311	9
Technology	60,000	25,382	34,618	1 to 6
Customer relationships	49,000	4,885	44,115	12
Favorable occupancy leases	5,895	1,020	4,875	3 to 15
Exchange memberships	5,838	—	5,838	Indefinite
	$232,633	$ 142,564	$ 90,069	

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(in thousands)	As of December 31, 2017 Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Useful Lives (Years)
Purchased technology	$110,000	$ 110,000	$—	1.4 to 2.5
ETF issuer relationships	950	559	391	9
ETF buyer relationships	950	559	390	9
Leases	1,800	397	1,403	3
FCC licenses	200	19	181	7
Technology	60,000	9,644	50,356	1 to 6
Customer relationships	49,000	1,822	47,178	12
Favorable occupancy leases	5,895	408	5,487	3 to 15
Exchange memberships	5,838	—	5,838	Indefinite
	$234,633	$ 123,408	$111,224	

Amortization expense relating to finite-lived intangible assets was approximately $6.4 million for each of the three months ended September 30, 2018, and 2017, and approximately $20.0 million and $6.5 million for the nine months ended September 30, 2018 and 2017, respectively. This is included in amortization of purchased intangibles and acquired capitalized software in the accompanying condensed consolidated statements of comprehensive income.

In the third quarter of 2018, the Company sold certain assets to one of its joint ventures, including the intangible assets associated with leases with a net carrying value of $1.1 million at the time of sale.

8. Receivables from/Payables to Broker-Dealers and Clearing Organizations

The following is a summary of receivables from and payables to brokers-dealers and clearing organizations at September 30, 2018 and December 31, 2017:

(in thousands)	September 30, 2018	December 31, 2017
Assets		
Due from prime brokers	$370,599	$219,573
Deposits with clearing organizations	95,817	112,847
Net equity with futures commission merchants	260,705	203,711
Unsettled trades with clearing organization	150,265	173,778
Securities failed to deliver	229,944	248,088
Commissions and fees	8,434	14,021
Total receivables from broker-dealers and clearing organizations	$1,115,764	$972,018
Liabilities		
Due to prime brokers	$398,181	$197,439
Net equity with futures commission merchants	53,986	44,526
Unsettled trades with clearing organization	470,665	420,029
Securities failed to receive	28,077	51,143
Commissions and fees	1,434	3,068
Total payables to broker-dealers and clearing organizations	$952,343	$716,205

Included as a deduction from “Due from prime brokers” and “Net equity with futures commission merchants” is the outstanding principal balance on all of the Company’s short-term credit facilities (described in Note 10 "Borrowings") of approximately $144.7 million and $205.7 million as of September 30, 2018 and December 31, 2017, respectively.

The loan proceeds from the credit facilities are available only to meet the initial margin requirements associated with the Company's ordinary course futures and other trading positions, which are held in the Company's trading accounts with an affiliate of the respective financial institutions. The credit facilities are fully collateralized by the Company's trading accounts and deposit accounts with these financial institutions. "Securities failed to deliver" and "Securities failed to receive" include amounts with a clearing organization and other broker-dealers.

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9. Collateralized Transactions

The Company is permitted to sell or repledge securities received as collateral and use these securities to secure repurchase agreements, enter into securities lending transactions or deliver these securities to counterparties or clearing organizations to cover short positions. At September 30, 2018 and December 31, 2017, substantially all of the securities received as collateral have been repledged. The fair value of the collateralized transactions at September 30, 2018 and December 31, 2017 are summarized as follows:

(in thousands)	September 30, 2018	December 31, 2017
Securities received as collateral:		
Securities borrowed	$1,261,472	$1,415,793
Securities purchased under agreements to resell	10,014	—
	$1,271,486	$1,415,793

In the normal course of business, the Company pledges qualified securities with clearing organizations to satisfy daily margin and clearing fund requirements.

Financial instruments owned and pledged, where the counterparty has the right to repledge, at September 30, 2018 and December 31, 2017 consisted of the following:

(in thousands)	September 30, 2018	December 31, 2017
Equities	$542,088	$586,251
U.S. and Non-U.S. government obligations	—	99
Exchange traded notes	10,541	8,693
	$552,629	$595,043

10. Borrowings

Broker-Dealer Credit Facilities

The Company is a party to two secured credit facilities with a financial institution to finance overnight securities positions purchased as part of its ordinary course broker-dealer market making activities. One of the facilities (the “Uncommitted Facility”), is provided on an uncommitted basis collateralized by one of the Company’s broker-dealer subsidiaries trading and deposit account with the financial institution.

On November 3, 2017, the Company entered the second credit facility (“Revolving Credit Facility”) with the same financial institution for an aggregated borrowing limit of $500.0 million. The Revolving Credit Facility consists two borrowing bases: Borrowing Base A Loan is to be used to finance the purchase and settlement of securities; Borrowing Base B Loan is to be used to fund margin deposit with the NSCC. Each of the three broker-dealers has a sublimit under Borrowing Base A Loan, from $25 million to $500 million, which bears interest at the adjusted LIBOR or base rate plus 1.25% per annum. Two out of the three broker-dealers have a sublimit under Borrowing Base B Loan, from $40 million to $100 million, which bears interest at the adjusted LIBOR or base rate plus 2.50% per annum. A commitment fee of 0.50% per annum on the average daily unused portion of this facility is payable quarterly in arrears.

The following summarizes the Company’s broker-dealer credit facilities' carrying values, net of unamortized debt issuance costs, where applicable:

(in thousands)	At September 30, 2018 Interest Rate

		Financing Available	Borrowing Outstanding	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Broker-dealer credit facilities:					
Uncommitted facility	3.17%	$ 200,000	$ 10,000	$ (1,081)	$ 8,919
Revolving credit facility	3.51%	500,000	7,000	(1,352)	5,648
		$ 700,000	$ 17,000	$ (2,433)	$ 14,567

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	At December 31, 2017				
(in thousands)	Interest Rate	Financing Available	Borrowing Outstanding	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Broker-dealer credit facilities:					
Uncommitted facility	2.42%	$150,000	$ 25,000	$—	$ 25,000
Revolving credit facility	2.81%	500,000	7,000	(4,117)	2,883
		$650,000	$ 32,000	$(4,117)	$ 27,883

The following summarizes interest expense for the broker-dealer facilities. Interest expense is included within interest and dividends expense in the accompanying condensed consolidated statements of comprehensive income.

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2018	2017	2018	2017
Broker-dealer credit facilities:				
Uncommitted facility	$428	$405	$1,458	$1,335
Committed facility (1)	—	2	—	33
Revolving credit facility	60	—	212	—
	$488	$407	$1,670	$1,368

(1) Facility was terminated in July 2017.

Short-Term Credit Facilities

The Company maintains short-term credit facilities with various prime brokers and other financial institutions from which it receives execution or clearing services. The proceeds of these facilities are used to meet margin requirements associated with the products traded by the Company in the ordinary course, and amounts borrowed are collateralized by the Company's trading accounts with the applicable financial institution.

	At September 30, 2018		
	Weighted Average Interest Rate	Financing Available	Borrowing Outstanding
Short-Term Credit Facilities:			
Short-term credit facilities (2)	4.27%	$566,000	$ 144,660
		$566,000	$ 144,660

	At December 31, 2017		
	Weighted Average Interest Rate	Financing Available	Borrowing Outstanding
Short-Term Credit Facilities:			
Short-term credit facilities (2)	3.86%	$543,000	$ 205,677
		$543,000	$ 205,677

(2) Outstanding borrowings were included with receivable from/ payable to broker-dealers and clearing organization within the condensed consolidated statements of financial condition.

Interest expense in relation to the facilities was approximately $1.5 million and $1.4 million for the three months ended September 30, 2018 and 2017, respectively, and $5.0 million and $4.8 million for the nine months ended September 30, 2018, and 2017.

Long-Term Borrowings

The following summarizes the Company's long-term borrowings, net of unamortized discount and debt issuance costs, where applicable:

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(in thousands)	Maturity Date	At September 30, 2018 Interest Rate	Outstanding Principal	Discount	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Long-term borrowings:						
Fourth Amended and Restate Credit Agreement	December 2021	5.09%	$ 400,000	$ (360)	$ (7,267)	$ 392,373
Senior secured Second Lien Notes	June 2022	6.75%	500,000	—	(19,099)	480,901
SBI bonds	January 2020	5.00%	30,783	—	(30)	30,753
			$ 930,783	$ (360)	$ (26,396)	$ 904,027

(in thousands)	Maturity Date	At December 31, 2017 Interest Rate	Outstanding Principal	Discount	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Long-term borrowings:						
Fourth Amended and Restate Credit Agreement	December 2021	5.13%	$ 900,000	$ (999)	$ (18,504)	$ 880,497
Senior secured Second Lien Notes	June 2022	6.75%	500,000	—	(22,961)	477,039
SBI bonds	January 2020	5.00%	31,059	—	(47)	31,012
			$ 1,431,059	$ (999)	$ (41,512)	$ 1,388,548

Fourth Amended and Restated Credit Agreement

To finance the Acquisition, on June 30, 2017, Virtu Financial and VFH Parent LLC (“VFH”) entered into a fourth amended and restated credit agreement (as amended on January 2, 2018 and September 19, 2018, the “Fourth Amended and Restated Credit Agreement”) with the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent, sole lead arranger and bookrunner, which amended and restated in its entirety the existing Credit Agreement, and upon the closing of the Acquisition of KCG, provided for an aggregate $1.15 billion of first lien secured term loans (the “Term Loan Facility”).

For the nine months ended September 30, 2018, $500.0 million of prepayments were made under the Fourth Amended and Restated Credit Agreement, for an aggregate total of $750.0 million of principal prepayments under the Term Loan Facility since its closing. As a result of these prepayments, the total principal outstanding under the senior secured credit facility is $400.0 million. VFH also entered into a repricing transaction during January 2018 to reprice the senior secured term loans under the Fourth Amended and Restated Credit Agreement at LIBOR plus 3.25%, and another repricing transaction during September 2018 to reprice such senior secured term loans at LIBOR plus 2.75%. In connection with the debt refinancing and the debt prepayment, the Company accelerated approximately $11.7 million for unamortized financing costs incurred that were scheduled to be amortized over the term of the loan, including original issue discount and underwriting and legal fees, which is included within debt issue cost related to debt refinancing in the consolidated statements of comprehensive income.

The Fourth Amended and Restated Credit Agreement contains certain customary covenants and certain customary events of default, including relating to a change of control. If an event of default occurs and is continuing, the lenders under the Fourth Amended and Restated Credit Agreement will be entitled to take various actions, including the acceleration of amounts outstanding under the Fourth Amended and Restated Credit Agreement and all actions permitted to be taken by a secured creditor in respect of the collateral securing the obligations under the Fourth

Amended and Restated Credit Agreement.

Senior Secured Second Lien Notes

To finance the Acquisition of KCG, on June 16, 2017, the Escrow Issuer and Orchestra Co-Issuer, Inc. (the "Co-Issuer") completed the offering of $500.0 million aggregate principal amount of 6.750% Senior Secured Second Lien Notes due 2022 (the "Notes"). The Notes were issued under an Indenture, dated June 16, 2017 (the "Indenture"), among the Escrow Issuer, the Co-Issuer and U.S. Bank National Association, as trustee and collateral agent.

On July 20, 2017, VFH assumed all of the obligations of the Escrow Issuer under the Indenture and the Notes. The Notes are guaranteed by Virtu Financial and each of Virtu Financial's wholly-owned domestic restricted subsidiaries that guarantees the Fourth Amended and Restated Credit Agreement.

The Indenture imposes certain limitations on the Company, and contains certain customary events of default, including, among others, payment defaults related to the failure to pay principal or interest on the Notes, covenant defaults, final maturity default or cross-acceleration with respect to material indebtedness and certain bankruptcy events. The gross proceeds from the Notes were deposited into a segregated escrow account with an escrow agent. The proceeds were released from escrow as of

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the Closing Date and were used to finance, in part, the Acquisition of KCG, and to repay certain indebtedness of the Company and KCG. (See Note 3 "Acquisition of KCG Holdings, Inc." for further details).

SBI Bonds

On July 25, 2016, VFH issued Japanese Yen Bonds (collectively the "SBI Bonds") in the aggregate principal amount of ¥3.5 billion ($33.1 million at issuance date) to SBI Life Insurance Co., Ltd. and SBI Insurance Co., Ltd. The proceeds from the SBI Bonds were used to partially fund the investment in SBI (as described in Note 11 "Financial assets and liabilities"). The SBI Bonds are guaranteed by Virtu Financial. The SBI Bonds are subject to fluctuations on the Japanese Yen currency rates relative to the Company's reporting currency (U.S. Dollar) with the changes reflected in other, net in the condensed consolidated statements of comprehensive income. The principal balance was ¥3.5 billion ($30.8 million) as of September 30, 2018 and ¥3.5 billion ($31.1 million) as of December 31, 2017. The Company recorded losses of $0.9 million and $0.3 million due to the change in currency rates during the three and nine months ended September 30, 2018. Losses due to the change in currency rates were immaterial for the three and nine months ended September 30, 2017.

Aggregate future required minimum principal payments based on the terms of the long-term borrowings were as follows:

(in thousands)	September 30, 2018
2018	$ —
2019	—
2020	30,783
2021 and thereafter	900,000
Total principal of long-term borrowings	$ 930,783

11. Financial Assets and Liabilities

Financial Instruments Measured at Fair Value

The fair value of equities, options, on the run U.S. government obligations and exchange traded notes is estimated using recently executed transactions and market price quotations in active markets and are categorized as Level 1 with the exception of inactively traded equities and certain other financial instruments, which are categorized as Level 2. The Company's corporate bonds, derivative contracts and other U.S. and non-U.S. government obligations have been categorized as Level 2. Fair value of the Company's derivative contracts is based on the indicative prices obtained from broadly distributed bank and broker dealers, as well as management's own analyses. The indicative prices have been independently validated through the Company's risk management systems, which are designed to check prices with information independently obtained from exchanges and venues where such financial instruments are listed or to compare prices of similar instruments with similar maturities for listed financial futures in foreign exchange.

As of March 31, 2017, the Company began pricing certain financial instruments held for trading at fair value based on theoretical prices, which can differ from quoted market prices. The theoretical prices reflect price adjustments primarily caused by the fact that the Company continuously prices its financial instruments based on all available information. This information includes prices for identical and near-identical positions, as well as the prices for securities underlying the Company's positions, on other exchanges that are open after the exchange on which the financial instruments is traded closes. The Company validates that all price adjustments can be substantiated with market inputs and checks the theoretical prices independently. Consequently, such financial instruments are classified as Level 2. The Company concluded that this is a change in accounting estimate and no retrospective adjustments were necessary.

There were no transfers of financial instruments between levels during the three and nine months ended September 30, 2018 and 2017.

Fair value measurements for those items measured on a recurring basis are summarized below as of September 30, 2018:

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(in thousands)	September 30, 2018 Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Counterparty and Cash Collateral Netting	Total Fair Value
Assets					
Financial instruments owned, at fair value:					
Equity securities	$814,667	$1,286,236	$ —	$—	$2,100,903
U.S. and Non-U.S. government obligations	92,965	21,375	—	—	114,340
Corporate Bonds	—	68,965	—	—	68,965
Exchange traded notes	13,042	48,369	—	—	61,411
Currency forwards	—	1,929,452	—	(1,901,746)	27,706
Options	799	—	—	—	799
	921,473	3,354,397	—	(1,901,746)	2,374,124
Financial instruments owned, pledged as collateral:					
Equity securities	$386,731	$155,357	$ —	$—	$542,088
U.S. and Non-U.S. government obligations	—	—	—	—	—
Exchange traded notes	2,790	7,751	—	—	10,541
	389,521	163,108	—	—	552,629
Other Assets					
Equity investment	$—	$—	$ 40,243	$—	$40,243
Exchange stock	2,132	—	—	—	2,132
	2,132	—	40,243	—	42,375
Liabilities					
Financial instruments sold, not yet purchased, at fair value:					
Equity securities	$1,092,602	$1,162,905	$ —	$—	$2,255,507
U.S. and Non-U.S. government obligations	82,916	1,227	—	—	84,143
Corporate Bonds	—	37,865	—	—	37,865
Exchange traded notes	874	19,012	—	—	19,886
Currency forwards	—	1,942,686	—	(1,942,686)	—
Options	693	—	—	—	693
	$1,177,085	$3,163,695	$ —	$(1,942,686)	$2,398,094

Fair value measurements for those items measured on a recurring basis are summarized below as of December 31, 2017:

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(in thousands)	December 31, 2017 Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Counterparty and Cash Collateral Netting	Total Fair Value
Assets					
Financial instruments owned, at fair value:					
Equity securities	$758,596	$1,167,995	$ —	$—	$1,926,591
Non-U.S. government obligations	5,968	16,815	—	—	22,783
Corporate Bonds	—	60,975	—	—	60,975
Exchange traded notes	13,576	68,819	—	—	82,395
Currency forwards	—	2,045,487	—	(2,027,697)	17,790
Options	7,045	—	—	—	7,045
	$785,185	$3,360,091	$ —	$(2,027,697)	$2,117,579
Financial instruments owned, pledged as collateral:					
Equity securities	$410,670	$175,581	$ —	$—	$586,251
U.S. and Non-U.S. government obligations	99	—	—	—	99
Exchange traded notes	82	8,611	—	—	8,693
	$410,851	$184,192	$ —	$—	$595,043
Other Assets					
Equity investment	$—	$—	$ 40,588	$—	$40,588
Exchange stock	1,952	—	—	—	1,952
Other(1)	—	55,824	—	—	55,824
	$1,952	$55,824	$ 40,588	$—	$98,364
Liabilities					
Financial instruments sold, not yet purchased, at fair value:					
Equity securities	$847,816	$1,355,616	$ —	$—	$2,203,432
U.S. and Non-U.S. government obligations	18,940	12,481	—	—	31,421
Corporate Bonds	—	81,118	—	—	81,118
Exchange traded notes	1,514	54,248	—	—	55,762
Currency forwards	—	2,032,017	—	(2,024,991)	7,026
Options	5,839	—	—	—	5,839
	$874,109	$3,535,480	$ —	$(2,024,991)	$2,384,598

(1) Other primarily consists of a $55.8 million receivable from Bats related to the sale of KCG Hotspot.

SBI Investment

As of September 30, 2018, the fair value of SBI Investment was determined using the discounted cash flow method, an income approach, with the discount rate of 15.0% applied to the cash flow forecasts. The Company also used a market approach based on 14x average price/earnings multiples of comparable companies to corroborate the income approach. The fair value of the SBI Investment at September 30, 2018 was determined by taking the weighted average of enterprise valuations based on discounted cash flow on projected income from the next five years, the implied enterprise valuations on comparable companies, and the implied enterprise valuations on comparable transactions. The

fair value measurement is highly sensitive to significant changes in the unobservable inputs and significant increases (decreases) in discount rate or decreases (increases) in price/earnings multiples would result in a significantly lower (higher) fair value measurement. Changes in the fair value of the SBI Investment are reflected in other, net in the condensed consolidated statements of comprehensive income.

Receivable from Bats Global Markets, Inc. (“Bats”)

In March 2015, KCG sold KCG Hotspot, an institutional spot foreign exchange electronic communications networks (“ECN”), to Bats, which is now a subsidiary of CBOE Holdings, Inc. KCG and Bats agreed to share certain tax benefits, which comprise a $50.0 million payment and an annual payment of up to $6.6 million, both of which were paid to the Company in April 2018.

Financial Instruments Not Measured at Fair Value

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The table below presents the carrying value, fair value and fair value hierarchy category of certain financial instruments that are not measured at fair value on the condensed consolidated statement of financial condition. The table below excludes non-financial assets and liabilities. The carrying value of financial instruments not measured at fair value categorized in the fair value hierarchy as Level 1 and Level 2 approximates fair value due to the relatively short-term nature of the underlying assets. The fair value of the Company's long-term borrowings is categorized as Level 2 in the fair value hierarchy, which is based on quoted prices from the market.

The table below summarizes financial assets and liabilities not carried at fair value on a recurring basis as of September 30, 2018:

	September 30, 2018				
			Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
	Carrying Value	Fair Value	(Level 1)	(Level 2)	(Level 3)
Assets					
Cash and cash equivalents	$415,933	$415,933	$ 415,933	$—	$ —
Securities borrowed	1,305,789	1,305,789	—	1,305,789	—
Securities purchased under agreements to resell	10,014	10,014	—	10,014	—
Receivables from broker dealers and clearing organizations	1,115,764	1,115,764	225,274	890,490	—
Total Assets	$2,847,500	$2,847,500	$ 641,207	$2,206,293	$ —
Liabilities					
Short-term borrowings	$14,567	$14,567	$ —	$14,567	$ —
Long-term borrowings	904,027	950,685	—	950,685	—
Securities loaned	800,145	800,145	—	800,145	—
Securities sold under agreements to repurchase	301,238	301,238	—	301,238	—
Payables to broker dealer and clearing organizations	952,343	952,343	277,486	674,859	—
Total Liabilities	$2,972,320	$3,018,978	$ 277,486	$2,741,494	$ —

The table below summarizes financial assets and liabilities not carried at fair value on a recurring basis as of December 31, 2017:

	December 31, 2017				
			Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
	Carrying Value	Fair Value	(Level 1)	(Level 2)	(Level 3)
Assets					
Cash and cash equivalents	$532,887	$532,887	$ 532,887	$—	$ —
Securities borrowed	1,471,172	1,471,172	—	1,471,172	—
Receivables from broker dealers and clearing organizations	972,018	972,018	36,513	935,505	—
Total Assets	$2,976,077	$2,976,077	$ 569,400	$2,406,677	$ —

Liabilities					
Short-term borrowings	$27,883	$27,883	$ —	$27,883	$ —
Long-term borrowings	1,388,548	1,465,489	—	1,465,489	—
Securities loaned	754,687	754,687	—	754,687	—
Securities sold under agreements to repurchase	390,642	390,642	—	390,642	—
Payables to broker dealer and clearing organizations	716,205	716,205	2,925	713,280	—
Total Liabilities	$3,277,965	$3,354,906	$ 2,925	$3,351,981	$ —

The following presents the changes in Level 3 financial instruments measured at fair value on a recurring basis:

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Nine Months Ended September 30, 2018

(in thousands)	December 31, 2017	Purchases	Total Realized and Unrealized Gains / (Losses)	Net Transfers into (out of) Level 3	Settlement	September 30, 2018	Change in Net Unrealized Gains / (Losses) on Investments still held at September 30, 2018
Assets							
Other assets:							
Equity investment	$40,588	$ —	$ (345)	$ —	$ —	$ 40,243	$ (345)
Total	$40,588	$ —	$ (345)	$ —	$ —	$ 40,243	$ (345)

Nine Months Ended September 30, 2017

(in thousands)	December 31, 2016	Purchases	Total Realized and Unrealized Gains / (Losses)	Net Transfers into (out of) Level 3	Settlement	September 30, 2017	Change in Net Unrealized Gains / (Losses) on Investments still held at September 30, 2017
Assets							
Other assets:							
Equity investment	$36,031	$ —	$ 1,232	$ —	$ —	$ 37,263	$ 1,232
Other	—	3,000	—	—	—	3,000	—
Total	$36,031	$ 3,000	$ 1,232	$ —	$ —	$ 40,263	$ 1,232

Offsetting of Financial Assets and Liabilities

The Company does not net securities borrowed and securities loaned, or securities purchased under agreements to resell and securities sold under agreements to repurchase. These financial instruments are presented on a gross basis in the condensed consolidated statements of financial condition. In the tables below, the amounts of financial instruments owned that are not offset in the condensed consolidated statements of financial condition, but could be netted against financial liabilities with specific counterparties under legally enforceable master netting agreements in the event of default, are presented to provide financial statement readers with the Company's estimate of its net exposure to counterparties for these financial instruments.

The following tables set forth the gross and net presentation of certain financial assets and financial liabilities as of September 30, 2018 and December 31, 2017:

	September 30, 2018			
	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Condensed	Net Amounts of Assets Presented in the	Gross Amounts Not Offset In the Condensed Consolidated Statement

(in thousands)		Consolidated Statement of Financial Condition	Condensed Consolidated Statement of Financial Condition	of Financial Condition Financial Instruments	Cash Collateral Received	Net Amount
Offsetting of Financial Assets:						
Securities borrowed	$1,305,789	$—	$ 1,305,789	$(1,268,772)	$(6,195)	$ 30,822
Securities purchased under agreements to resell	10,014	—	10,014	(9,993)	(21)	—
Trading assets, at fair value:						
Currency forwards	1,929,452	(1,901,746)	27,706	—	—	27,706
Options	799	—	799	(799)	—	—
Total	$3,246,054	$(1,901,746)	$ 1,344,308	$(1,279,564)	$(6,216)	$ 58,528

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(in thousands)	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Condensed Consolidated Statement of Financial Condition	Net Amounts of Assets Presented in the Condensed Consolidated Statement of Financial Condition	Gross Amounts Not Offset In the Condensed Consolidated Statement of Financial Condition		
				Financial Instruments	Cash Collateral Pledged	Net Amount
Offsetting of Financial Liabilities:						
Securities loaned	$ 800,145	$—	$ 800,145	$(786,922)	$(6,195)	$ 7,028
Securities sold under agreements to repurchase	301,238	—	$ 301,238	(301,220)	(21)	(3)
Trading liabilities, at fair value:						
Currency forwards	1,942,686	(1,942,686)	—	—		—
Options	693	—	693	(693)	—	—
Total	$ 3,044,762	$(1,942,686)	$ 1,102,076	$(1,088,835)	$(6,216)	$ 7,025

	December 31, 2017					
(in thousands)	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Statement of Financial Condition	Net Amounts of Assets Presented in the Consolidated Statement of Financial Condition	Gross Amounts Not Offset In the Statement of Financial Condition		
				Financial Instruments	Cash Collateral Received	Net Amount
Offsetting of Financial Assets:						
Securities borrowed	$1,471,172	$—	$ 1,471,172	$(1,418,672)	$(13,318)	$ 39,182
Trading assets, at fair value:						
Currency forwards	2,045,487	(2,027,697)	17,790	—	—	17,790
Options	7,045	—	7,045	(45)	—	7,000
Total	$3,523,704	$(2,027,697)	$ 1,496,007	$(1,418,717)	$(13,318)	$ 63,972

(in thousands)	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Statement of Financial Condition	Net Amounts of Assets Presented in the Consolidated Statement of Financial Condition	Gross Amounts Not Offset In the Statement of Financial Condition		
				Financial Instruments	Cash Collateral Pledged	Net Amount
Offsetting of Financial Liabilities:						
Securities loaned	$ 754,687	$—	$ 754,687	$(737,731)	$(10,776)	$ 6,180
Securities sold under agreements to repurchase	390,642	—	390,642	(390,642)	—	—
Trading liabilities, at fair value:						
Currency forwards	2,032,017	(2,024,991)	7,026	—		7,026

Options	5,839	—	5,839	(56)	—	5,783
Total	$ 3,183,185	$(2,024,991)	$ 1,158,194	$(1,128,429)	$(10,776)	$ 18,989

The following table presents gross obligations for securities sold under agreements to repurchase and for securities lending transactions by remaining contractual maturity and the class of collateral pledged:

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(in thousands)	September 30, 2018 Remaining Contractual Maturity Overnight and Continuous	Less than 30 days	30 - 60 days	61 - 90 Days	Total
Repurchase agreements:					
Equity securities	$—	$65,000	$40,000	$160,000	$265,000
U.S. and Non-U.S. government obligations	36,238	—	—	—	36,238
Total	$36,238	$65,000	$40,000	$160,000	$301,238
Securities lending transactions:					
Equity securities	$800,145	$—	$—	$—	$800,145
Total	$800,145	$—	$—	$—	$800,145

(in thousands)	December 31, 2017 Remaining Contractual Maturity Overnight and Continuous	Less than 30 days	30 - 60 days	61 - 90 Days	Total
Repurchase agreements:					
Equity securities	$—	$100,000	$90,000	$200,000	$390,000
U.S. and Non-U.S. government obligations	642	—	—	—	642
Total	$642	$100,000	$90,000	$200,000	$390,642
Securities lending transactions:					
Equity securities	$754,687	$—	$—	$—	$754,687
Total	$754,687	$—	$—	$—	$754,687

12. Derivative Instruments

The fair value of the Company’s derivative instruments on a gross basis consisted of the following at September 30, 2018 and December 31, 2017:

(in thousands)		September 30, 2018		December 31, 2017	
Derivatives Assets	Financial Statements Location	Fair Value	Notional	Fair Value	Notional
Derivative instruments not designated as hedging instruments:					
Equities futures	Receivables from broker dealers and clearing organizations	$16,357	$3,398,419	$(505)	$1,985,770
Commodity futures	Receivables from broker dealers and clearing organizations	225,449	12,830,011	971	21,231,001
Currency futures	Receivables from broker dealers and clearing organizations	21,986	2,672,739	26,548	3,994,412
Fixed income futures	Receivables from broker dealers and clearing organizations	—	34,186	73	44,395
Options	Financial instruments owned	799	139,046	7,045	682,369
Currency forwards	Financial instruments owned	1,929,452	138,790,533	2,045,487	124,000,221

Derivatives Liabilities	Financial Statements Location	Fair Value	Notional	Fair Value	Notional

Derivative instruments not designated as hedging instruments:					
Equities futures	Payables to broker dealers and clearing organizations	$(1,687)	$ 127,500	$(575)	$ 142,658
Commodity futures	Payables to broker dealers and clearing organizations	(276,827)	6,058,850	(1,602)	130,042
Currency futures	Payables to broker dealers and clearing organizations	359	2,566,892	(13,947)	7,756,958

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Fixed income futures	Payables to broker dealers and clearing organizations	1,039	54,534	(1)	2,584
Options	Financial instruments sold, not yet purchased	693	140,079	5,839	681,147
Currency forwards	Financial instruments sold, not yet purchased	1,942,683	168,797,150	2,032,017	123,993,234
Derivative instruments designated as hedging instruments:					
Currency forwards	Financial instruments sold, not yet purchased	—	—	(514)	16,115

Amounts included in receivables from and payables to broker-dealers and clearing organizations represent net variation margin on long and short futures contracts.

The following table summarizes the net gain from derivative instruments not designated as hedging instruments under ASC 815, which are recorded in trading income, net, and from those designated as hedging instrument under ASC 815, which are recorded in accumulated other comprehensive income in the accompanying condensed consolidated statements of comprehensive income for the three and nine months ended September 30, 2018 and 2017.

		Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	Financial Statements Location	2018	2017	2018	2017
Derivative instruments not designated as hedging instruments:					
Futures	Trading income, net	$103,950	$35,097	$(325,556)	$249,274
Currency forwards	Trading income, net	(47,882)	8,950	148,706	3,135
Options	Trading income, net	1,161	21,120	(7,575)	21,119
Others	Trading income, net	—	125	—	—
		$57,229	$65,292	$(184,425)	$273,528
Derivative instruments designated as hedging instruments:					
Foreign exchange - forward contract	Accumulated other comprehensive income	$699	$19	$855	$19

13. Revenues from Contracts with Customers

Revenue Recognition

The Company adopted ASC Topic 606, Revenue from Contracts with Customers as of January 1, 2018 in the condensed consolidated financial statements by applying the modified retrospective method. The Company’s revenue recognition methods for its contracts with customers prior to the adoption of Topic 606 are consistent with its methods after the adoption of Topic 606. Accordingly, the adoption of the new standard did not result in a transition adjustment to opening retained earnings, and as a result, revenues for contracts with customers would not have been adjusted in prior periods and are not presented herein on an adjusted basis.

The new revenue guidance does not apply to revenue associated with financial instruments, including loans and securities that are accounted for under other U.S. GAAP, and as a result, did not have an impact on the elements of the Company's condensed consolidated statement of comprehensive income most closely associated with financial instruments, including trading income, net and interest and dividend income. The new standard primarily impacts the presentation of the following revenue streams:

- Commissions, net. The Company earns commission revenue by acting as an agent on behalf of customers. The Company's performance obligations consist of trade execution and clearing services and are satisfied on the trade date; accordingly, commission revenues are recorded on the trade date. Commission revenues are paid on settlement date; therefore, a receivable is recognized as of the trade date. Under a commission management program, the Company allows institutional clients to allocate a portion of their gross commissions to pay for research and other services provided by third parties. As the Company acts as an agent in these transactions, it records such expenses on a net basis within Commissions and technology services in the condensed consolidated statements of comprehensive income.

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- Technology services. The Company's technology services revenues consist of technology licensing fees and agency commission fees. Technology licensing fees are earned from third parties for licensing of the Company's proprietary risk management and trading infrastructure technology and the provision of associated management and hosting services. These fees include both upfront and annual recurring fees as well as, in certain cases, contingent fees based on customer revenues, which represent variable consideration. The services offered under these contracts are delivered as an integrated package and are interdependent and have the same pattern of transfer to the customer; accordingly, the Company measures and recognizes them as a single performance obligation. The performance obligation is satisfied over time, and, therefore, revenue is recognized as time passes. Variable consideration has not been included in the transaction price as the amount of consideration is contingent on factors outside the Company's control and thus it is not probable that a significant reversal of cumulative revenue recognized will not occur. Recurring fees, which exclude variable consideration, are billed and collected on a quarterly basis and are included within Receivables from broker dealers and clearing organizations.

Disaggregation of Revenues

The following tables present the Company's revenue from contracts with customers disaggregated by the services described above, by timing of revenue recognition, reconciled to the Company's reportable segments, as well as disaggregation of the Company's revenues by services and geographic region, for the three and nine months ended September 30, 2018:

	Three Months Ended September 30, 2018			
(in thousands)	Market Making	Execution Services	Corporate	Total
Revenues from contract with Customers:				
Commissions, net	$6,587	$ 33,332	$—	$39,919
Technology services	—	333	—	333
Total revenue from contract with customers	6,587	33,665	—	40,252
Other sources of revenue	257,783	541	(3,453)	254,871
Total Revenues	264,370	34,206	(3,453)	295,123
Timing of revenue recognition:				
Services transferred at a point in time	264,370	33,873	(3,453)	294,790
Services transferred over time	—	333	—	333
Total Revenues	$264,370	$ 34,206	$(3,453)	$295,123

	Nine Months Ended September 30, 2018			
(in thousands)	Market Making	Execution Services	Corporate	Total
Revenues from contract with Customers:				
Commissions, net	$21,886	$113,786	$—	$135,672
Technology services	—	4,989	—	4,989
Total revenue from contract with customers	21,886	118,775	—	140,661
Other sources of revenue	962,715	339,984	(5,057)	1,297,642
Total Revenues	984,601	458,759	(5,057)	1,438,303

Timing of revenue recognition:				
Services transferred at a point in time	984,601	453,770	(5,057)	1,433,314
Services transferred over time	—	4,989	—	4,989
Total Revenues	$984,601	$458,759	$(5,057)	$1,438,303

Information on Remaining Performance Obligations and Revenue Recognized

As of September 30, 2018, the aggregate amount of the transaction price allocated to the performance obligations relating to Technology Services revenues that are unsatisfied (or partially unsatisfied) was not material.

Contract Assets and Contract Liabilities

The timing of the revenue recognition may differ from the timing of payment from customers. The Company records a receivable when revenue is recognized prior to payment, and when the Company has an unconditional right to payment. The Company records a contract liability when payment is received prior to the time at which the satisfaction of the service obligation occurs. We had receivables related to revenues from contracts with customers of $1.7 million and $7.1 million as of September 30, 2018 and December 31, 2017, respectively.

14. Income Taxes

The Company is subject to U.S. federal, state and local income tax at the rate applicable to corporations less the rate attributable to the noncontrolling interest in Virtu Financial. These noncontrolling interests are subject to U.S. taxation as partnerships. Accordingly, for the three and nine months ended September 30, 2018 and 2017, the income attributable to these noncontrolling interests is reported in the condensed consolidated statements of comprehensive income, but the related U.S. income tax expense attributable to these noncontrolling interests is not reported by the Company as it is the obligation of the individual partners. The Company’s provisions for (benefits from) income taxes and effective tax rates were $13.8 million and 46.9%, and $(6.5) million and 14.0% for the three months ended September 30, 2018 and 2017, respectively, and $75.3 million and 13.8%, and $(2.9) million and 16.7% for the nine months ended September 30, 2018 and 2017, respectively. Income tax expense is also affected by the differing effective tax rates in foreign, state and local jurisdictions where certain of the Company’s subsidiaries are subject to corporate taxation.

Included in Other assets on the condensed consolidated statements of financial condition at September 30, 2018 and December 31, 2017 are current income tax receivables of $40.7 million and $115.2 million, respectively. The balance at September 30, 2018 primarily comprises income taxes due to the Company from federal, state and local, and foreign tax jurisdictions based on income before taxes, and the balance at December 31, 2017 primarily comprises the income tax benefit of KCG net operating losses that were generated prior to the Acquisition of KCG and are eligible to be carried back by the Company. Included in Accounts payable and accrued expenses and other liabilities on the condensed consolidated statements of financial condition at September 30, 2018 and December 31, 2017 are current tax liabilities of $16.0 million and $7.6 million, respectively. The balances primarily comprise income taxes owed to federal, state and local, and foreign tax jurisdictions based on income before taxes.

Deferred income taxes arise primarily due to the amortization of the deferred tax assets recognized in connection with the IPO (Note 6 "Tax Receivable Agreements") and the Acquisition of KCG (Note 3 "Acquisition of KCG Holdings, Inc."), differences in the valuation of financial assets and liabilities, and other temporary differences arising from the deductibility of compensation and depreciation expenses in different time periods for book and income tax return purposes.

There are no expiration dates on the deferred tax assets. The Company’s deferred tax asset at September 30, 2018 and December 31, 2017 includes an alternative minimum tax credit carryforward of $0.6 million and $0.6 million, respectively, which can be either refunded over a period of years or applied against future income tax liability pursuant to the 2017 Tax Act. The provisions of ASC 740 require that carrying amounts of deferred tax assets be reduced by a valuation allowance if, based on the available evidence, it is more likely than not that some portion or all

of the deferred tax assets will not be realized. Accordingly, the need to establish valuation allowances for deferred tax assets is assessed periodically with appropriate consideration given to all positive and negative evidence related to the realization of the deferred tax assets. As a result of the Acquisition of KCG, the Company has non-U.S. net operating losses at September 30, 2018 and December 31, 2017 of $231.8 million and $231.8 million, respectively, and has recorded a related deferred tax asset of $43.5 million and $43.5 million, respectively. A full valuation allowance was also recorded against this deferred tax asset at September 30, 2018 and December 31, 2017 as it is more likely than not that this deferred tax asset will not be realized. No valuation allowance against the remaining deferred taxes was recorded as of September 30, 2018 and December 31, 2017 because it is more likely than not that these deferred tax assets will be fully realized.

The Company is subject to taxation in U.S. federal, state, local and foreign jurisdictions. As of September 30, 2018, the Company's tax years for 2013 through 2017 and 2010 through 2017 are subject to examination by U.S. and non-U.S. tax authorities, respectively. As a result of the Acquisition of KCG, the Company has assumed any KCG tax exposures. KCG is

currently subject to U.S. federal income tax examinations for 2013 through 2017, and to non-U.S. income tax examinations for the tax years 2007 through 2017. In addition, the Company is subject to state and local income tax examinations in various jurisdictions for the tax years 2007 through 2017. The final outcome of these examinations is not yet determinable. However, the Company anticipates that adjustments to the unrecognized tax benefits, if any, will not result in a material change to the financial condition, results of operations and cash flows.

The 2017 Tax Act was signed into law on December 22, 2017 and significantly revises the U.S. corporate income tax by, among other things, lowering the statutory corporate tax rate from 35% to 21%, and eliminating certain deductions. As of December 31, 2017, the Company recorded a reduction of its deferred tax assets for the impact of the 2017 Tax Act of approximately $90.6 million, which was primarily composed of the remeasurement of federal net deferred tax assets as a result of the permanent reduction in the U.S. statutory corporate tax rate from 35% to 21%. During the first three quarters of 2018, the Company did not make any further adjustments due to the 2017 Tax Act. The Company has completed its determination of the accounting implications of the 2017 Tax act on its tax balances.

15. Commitments, Contingencies and Guarantees

Legal Proceedings

In the ordinary course of business, the nature of the Company’s business subjects it to claims, lawsuits, regulatory examinations or investigations and other proceedings. The Company and its subsidiaries are subject to several of these matters at the present time. Given the inherent difficulty of predicting the outcome of litigation and regulatory matters, particularly in regulatory examinations or investigations or other proceedings in which substantial or indeterminate damages or fines are sought, or where such matters are in the early stages, the Company cannot estimate losses or ranges of losses for such matters where there is only a reasonable possibility that a loss may be incurred. In addition, there are numerous factors that result in a greater degree of complexity in class-action lawsuits as compared to other types of litigation. There can be no assurance that these legal proceedings will not have a material adverse effect on the Company’s results of operations in any future period, and a material judgment, fine or sanction could have a material adverse impact on the Company’s financial condition, results of operations and cash flows. However, it is the opinion of management, after consultation with legal counsel, that, based on information currently available, the ultimate outcome of these matters will not have a material adverse impact on the business, financial condition or operating results of the Company, although they might be material to the operating results for any particular reporting period. The Company carries directors’ and officers’ liability insurance coverage for potential claims, including securities actions, against the Company and its respective directors and officers.

In connection with the Acquisition of KCG, a previously filed complaint, which was initially captioned Greenway v. KCG Holdings, Inc., et al., Case No. 2017-421-JTL and filed on behalf of a putative class in Delaware Chancery Court, was recaptioned Chester County Employees’ Retirement Fund v. KCG Holdings, Inc., et al., amended and refiled on February 14, 2018 to include claims for the alleged breach of fiduciary duties against former KCG board members, claims against each of Virtu and Jefferies for allegedly aiding and abetting the KCG board members’ alleged breaches of fiduciary duty and a claim against Virtu and Jefferies for alleged civil conspiracy. The amended complaint was again amended on July 16, 2018 with the filing of the Verified Second Amended Class Action Complaint (the “Second Amended Complaint”) to include additional factual allegations. No amount of damages is stated in the Second Amended Complaint, against which Virtu intends to defend vigorously.

Other Legal and Regulatory Matters

The Company owns subsidiaries including regulated entities that are subject to extensive oversight under federal, state and applicable international laws as well as self-regulatory organization ("SRO") rules. Changes in market structure and the need to remain competitive require constant changes to the Company's systems, order routing and order

handling procedures. The Company makes these changes while continuously endeavoring to comply with many complex laws and rules. Compliance, surveillance and trading issues common in the securities industry are monitored by, reported to, and/or reviewed in the ordinary course of business by the Company's regulators in the U.S. and abroad. As a major order flow execution destination, the Company is named from time to time in, or is asked to respond to a number of regulatory matters brought by U.S. regulators, foreign regulators, SROs, as well as actions brought by private plaintiffs, which arise from its business activities. There has recently been an increased focus by regulators on Anti-Money Laundering and sanctions compliance by broker-dealers and similar entities, as well as an enhanced interest on suspicious activity reporting and transactions involving microcap securities. In addition, there has been an increased focus by Congress, federal and state regulators, SROs and the media on market structure issues, and in particular, high frequency trading, best execution, internalization, ATS manner of operations, market fragmentation and complexity, colocation, cybersecurity, access to market data feeds and remuneration arrangements, such as payment for order flow and exchange fee structures. The Company has received information requests from various authorities,

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including the SEC, requesting, among other items, information regarding these market structure matters, to which the Company has responded or is in the process of responding.

The Company is currently the subject of various regulatory reviews and investigations by federal, state and foreign regulators and SROs, including the SEC and the Financial Industry Regulatory Authority. In some instances, these matters may rise to a disciplinary action and/or a civil or administrative action. For example, the Autorité des Marchés Financiers ("AMF") fined the Company’s European subsidiary in the amount of €5.0 million (approximately $5.4 million) based on its allegations that the subsidiary of a predecessor entity engaged in price manipulation and violations of the AMF General Regulation and Euronext Market Rules. The fine was subsequently reduced in 2017 to €3.3 million (approximately $3.9 million). The Company has fully reserved for the monetary penalty as of September 30, 2018 and anticipates paying the fine during the year ended December 31, 2018.

Representations and Warranties; Indemnification Arrangements

In the normal course of its operations, the Company enters into contracts that contain a variety of representations and warranties in addition to indemnification obligations. The Company's maximum exposure under these arrangements is currently unknown, as any such exposure could relate to claims not yet brought or events which have not yet occurred. For example, in November 2013, KCG sold Urban Financial of America, LLC ("Urban"), the reverse mortgage origination and securitization business previously owned by Knight Capital Group, Inc., to an investor group now known as Finance of America Reverse , LLC ("FAR"). Pursuant to the terms of the Stock Purchase Agreement between KCG and FAR, Virtu has certain continuing obligations related to KCG's prior ownership of Urban and has been and, in the future may be, advised by FAR of potential claims thereunder.

Consistent with standard business practices in the normal course of business, the Company has provided general indemnifications to its managers, officers, directors, employees, and agents against expenses, legal fees, judgments, fines, settlements, and other amounts actually and reasonably incurred by such persons under certain circumstances as more fully disclosed in its operating agreement. The overall maximum amount of the obligations (if any) cannot reasonably be estimated as it will depend on the facts and circumstances that give rise to any future claims.

16. Capital Structure

The Company has four classes of authorized common stock. The Class A common stock and the Class C common stock have one vote per share. The Class B common stock and the Class D common stock have 10 votes per share. Shares of the Company’s common stock generally vote together as a single class on all matters submitted to a vote of the Company’s stockholders. For details related to the Company's IPO and Reorganization Transactions and other public offerings, refer to Note 15 "Capital Structure" in the Company's 2017 Form 10-K.

During the period prior to the Reorganization Transactions and IPO, Class A-2 profits interests and Class B interests were issued to Employee Holdco (as defined below) on behalf of certain key employees and stakeholders. In connection with the Reorganization Transactions, all Class A-2 profits interests and Class B interests were reclassified into non-voting common interest units. As of September 30, 2018 and December 31, 2017, respectively, there were 9,012,000 and 12,301,067 non-voting common interest units outstanding, respectively, and 3,289,067 and 1,466,484 non-voting common interest units and corresponding Class C common stock were exchanged into Class A common stock, forfeited or repurchased during the nine months ended September 30, 2018 and 2017, respectively.

Amended and Restated 2015 Management Incentive Plan

The Company’s board of directors and stockholders adopted the 2015 Management Incentive Plan, which became effective upon consummation of the IPO, and was subsequently amended and restated following receipt of approval

from the Company's stockholders on June 30, 2017. The Amended and Restated 2015 Management Incentive Plan provides for the grant of stock options, restricted stock units, and other awards based on an aggregate of 16,000,000 shares of Class A common stock, subject to additional sublimits, including limits on the total option grant to any one participant in a single year and the total performance award to any one participant in a single year.

Acquisition of KCG

On the Closing Date and in connection with the financing of the Acquisition of KCG, the Company issued 6,346,155 shares of the Company's Class A common stock to Aranda for an aggregate purchase price of approximately $99.0 million and 39,725,979 shares of the Company Class A Common Stock to NIH for an aggregate purchase price of approximately $613.5

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million. On August 10, 2017, the Company issued an additional 1,666,666 shares of its Class A Common Stock for an aggregate purchase price of $26.0 million and an additional 338,124 shares of its Class A Common Stock for an aggregate purchase price of $5.2 million. See Note 3 "Acquisition of KCG Holdings, Inc." for further details.

Share Repurchase Program

In February 2018, the Company's board of directors authorized a new share repurchase program of up to $50.0 million in Class A common stock and common units by March 31, 2019. The Company may repurchase shares from time to time in open market transactions, privately negotiated transactions or by other means. Repurchases may also be made under Rule 10b5-1 plans. The timing and amount of repurchase transactions will be determined by the Company's management based on its evaluation of market conditions, share price, legal requirements and other factors. The program may be suspended, modified or discontinued at any time without prior notice.

On July 27, 2018, the Company's board of directors authorized the expansion of the Company's share repurchase program, increasing the total authorized amount by $50.0 million to $100.0 million and extending the duration of the program through September 30, 2019. Since the inception of the program in February 2018, the Company has repurchased approximately 2.4 million shares of Class A common stock and common units for approximately $61.9 million. The Company now has approximately $38.1 million remaining capacity for future purchases of shares of Class A common stock and common units under the program.

Secondary Offerings

In May 2018, the Company and certain selling stockholders completed a public offering (the “May 2018 Secondary Offering”) of 17,250,000 shares of its Class A common stock by the Company and certain selling stockholders at a purchase price per share of $27.16 (the offering price to the public of $28.00 per share minus the underwriters’ discount), which included the exercise in full by the underwriters of their option to purchase additional shares in the May 2018 Secondary Offering. The Company sold 10,518,750 shares of its Class A common stock in the offering, the net proceeds of which were used to purchase an equivalent number of common interest units in Virtu Financial LLC and corresponding shares of Class D common stock from TJMT Holdings LLC pursuant to that certain Member Purchase Agreement, entered into on May 15, 2018 by and between the Company and TJMT Holdings LLC. The selling stockholders sold 6,731,250 shares of Class A common stock in the May 2018 Secondary Offering, including 2,081,250 shares of Class A common stock issued by the Company upon the exercise of vested stock options.

Employee Exchanges

During the nine months ended September 30, 2018 and 2017, respectively, pursuant to the exchange agreement by and among the Company, Virtu Financial and holders of Virtu Financial common units, certain current and former employees elected to exchange 3,508,217 and 1,146,315 units, in Virtu Financial held directly or on their behalf by Virtu Employee Holdco LLC (“Employee Holdco”) on a one-for-one basis for shares of Class A common stock.

As a result of the completion of the IPO, the Reorganization Transactions, the Secondary Offerings, employee exchanges, and the share issuance in connection with the Acquisition, the Company holds approximately 56.6% interest in Virtu Financial at September 30, 2018.

17. Share-based Compensation

Pursuant to 2015 Management Incentive Plan as described in Note 16 "Capital Structure", and in connection with the IPO, non-qualified stock options to purchase shares of Class A common stock were granted, each of which vests in equal annual installments over a period of the four years from grant date and expires not later than 10 years from the

date of grant.

The following table summarizes activity related to stock options for the nine months ended September 30, 2018 and 2017:

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	Options Outstanding			Options Exercisable	
	Number of Options	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Life	Number of Options	Weighted Average Exercise Price Per Share
At December 31, 2016	8,234,000	$ 19.00	8.29	2,058,500	$ 19.00
Granted	—	—	—	—	—
Exercised	—	—	—	—	—
Forfeited or expired	(401,000)	—	—	—	—
At September 30, 2017	7,833,000	$ 19.00	7.55	3,916,500	$ 19.00
At December 31, 2017	7,783,000	$ 19.00	7.29	3,891,500	$ 19.00
Granted	—	—	—	—	—
Exercised	(4,086,558)	19.00	—	(4,086,558)	19.00
Forfeited or expired	(83,750)	—	—	—	—
At September 30, 2018	3,612,692	$ 19.00	6.55	1,741,942	$ 19.00

The expected life has been determined based on an average of vesting and contractual period. The risk-free interest rate was determined based on the yields available on U.S. Treasury zero-coupon issues. The expected stock price volatility was determined based on historical volatilities of comparable companies. The expected dividend yield was determined based on estimated future dividend payments divided by the IPO stock price.

The Company recognized $1.4 million and $1.4 million for the three months ended September 30, 2018, and 2017, respectively, and $4.2 million and $4.2 million for the nine months ended September 30, 2018, and 2017, respectively, of compensation expense in relation to the stock options issued and outstanding. As of September 30, 2018 and December 31, 2017, total unrecognized share-based compensation expense related to unvested stock options was $3.1 million and $7.5 million, respectively, and these amounts are to be recognized over a weighted average period of 0.6 and 1.3 years, respectively.

Class A common stock and Restricted Stock Units

Pursuant to the 2015 Management Incentive Plan as described in Note 16 "Capital Structure", subsequent to the IPO, shares of immediately vested Class A common stock and restricted stock units were granted, the latter which vest over a period of up to 4 years. The fair value of the Class A common stock and RSUs was determined based on a volume weighted average price and is being recognized on a straight line basis over the vesting period. For the nine months ended September 30, 2018, there were 594,536 shares of immediately vested Class A common stock granted as part of 2017 year-end compensation, with a fair value of $11.3 million which was recorded as an increase to the condensed consolidated statements of changes in equity. In addition, the Company accrued compensation expense of $2.5 million and $0.0 million for the three months ended September 30, 2018 and 2017, respectively, and $7.1 million and $9.4 million for the nine months ended September 30, 2018 and 2017, respectively, related to immediately vested Class A common stock expected to be awarded as part of year-end incentive compensation, which was included in employee compensation and payroll taxes on the condensed consolidated statements of comprehensive income and accounts payable and accrued expenses and other liabilities on the condensed consolidated statements of financial condition.

The following table summarizes activity related to the RSUs:

	Number of Shares	Weighted Average Fair

		Value
At December 31, 2016	1,573,441	$ 18.28
Granted	34,825	17.95
Forfeited	(212,729)	18.46
Vested	(58,536)	19.22
At September 30, 2017	1,337,001	18.21
At December 31, 2017	853,047	17.94
Granted	1,265,899	20.89
Forfeited	(127,493)	18.30
Vested	(83,942)	18.25
At September 30, 2018	1,907,511	$ 19.86

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The Company recognized $4.6 million and $2.2 million for the three months ended September 30, 2018 and 2017, respectively, and $13.1 million and $7.1 million for the nine months ended September 30, 2018 and 2017, respectively, of compensation expense in relation to the restricted stock units. As of September 30, 2018 and December 31, 2017, total unrecognized share-based compensation expense related to unvested RSUs was $25.0 million and $14.3 million, respectively, and this amount is to be recognized over a weighted average period of 1.1 and 1.5 years, respectively.

18. Regulatory Requirement

As of September 30, 2018 and December 31, 2017, broker-dealer subsidiaries of the Company are subject to the SEC Uniform Net Capital Rule 15c3-1, which requires the maintenance of minimum net capital of $1.0 million for each of the three broker-dealers. Pursuant to NYSE and NYSE MKT (formerly NYSE Amex) rules, VAL was also required to maintain $3.1 million and $4.1 million of capital in connection with the operation of its designated market maker (“DMM”) business as of September 30, 2018 and December 31, 2017, respectively. The required amount is determined under the exchange rules as the greater of $1 million or 15% of the market value of 60 trading units for each symbol in which the broker-dealer subsidiary is registered as the DMM. This DMM business was transferred from VFCM to VAL during the second quarter of 2018.

The regulatory capital and regulatory capital requirements of these subsidiaries as of September 30, 2018 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Virtu Americas LLC	$ 337,534	$ 4,086	$ 333,448
Virtu Financial BD LLC	82,546	1,000	81,546
Virtu Financial Capital Markets LLC	9,020	1,000	8,020

The regulatory capital and regulatory capital requirements of these subsidiaries as of December 31, 2017 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Virtu Americas LLC	$ 379,875	$ 1,000	$ 378,875
Virtu Financial BD LLC	40,683	1,000	39,683
Virtu Financial Capital Markets LLC	8,308	5,114	3,194

19. Geographic Information and Business Segments

The Company operates its business in the U.S. and internationally, primarily in Europe and Asia. Significant transactions and balances between geographic regions occur primarily as a result of certain Company’s subsidiaries incurring operating expenses such as employee compensation, communications and data processing and other overhead costs, for the purpose of providing execution, clearing and other support services to affiliates. Charges for transactions between regions are designed to approximate full costs. Intra-region income and expenses and related balances have been eliminated in the geographic information presented below to accurately reflect the external business conducted in each geographical region. The revenues are attributed to countries based on the locations of the subsidiaries. The following table presents total revenues by geographic area for the three and nine months ended September 30, 2018 and 2017:

	Three Months Ended September	Nine Months Ended September 30,

	30,			
(in thousands)	2018	2017	2018	2017
Revenues:				
United States	$245,631	$218,042	$1,266,047	$399,361
Ireland	21,938	17,874	60,563	79,129
United Kingdom	479	10,485	15,324	10,485
Singapore	26,921	22,601	95,757	72,210
Others	154	2,284	612	2,276
Total revenues	$295,123	$271,286	$1,438,303	$563,461

Prior to the Acquisition of KCG, the Company was managed and operated as one business, and, accordingly, operated under one reportable segment. As a result of the acquisition of KCG, beginning in the third quarter of 2017 the Company has three operating segments: (i) Market Making; (ii) Execution Services; and (iii) Corporate.

The Market Making segment principally consists of market making in the cash, futures and options markets across global equities, options, fixed income, currencies and commodities. As a market maker, the Company commits capital on a principal

basis by offering to buy securities from, or sell securities to, broker dealers, banks and institutions. The Company engages in principal trading in the Market Making segment direct to clients as well as in a supplemental capacity on exchanges, ECNs and alternative trading systems ATSs. The Company is an active participant on all major global equity and futures exchanges and also trades on substantially all domestic electronic options exchanges. As a complement to electronic market making, the cash trading business handles specialized orders and also transacts on the OTC Bulletin Board marketplaces operated by the OTC Markets Group Inc. and the AIM.

The Execution Services segment comprises agency-based trading and trading venues, offering execution services in global equities, options, futures and fixed income on behalf of institutions, banks and broker dealers as well as technology services revenues. The Company earns commissions and commission equivalents as an agent on behalf of clients as well as between principals to transactions; in addition, the Company will commit capital on behalf of clients as needed. Agency-based, execution-only trading in the segment is done primarily through a variety of access points including: (i) algorithmic trading and order routing in global equities and options; (ii) institutional sales traders executing program, block and riskless principal trades in global equities and ETFs; (iii) a fixed income ECN that also offers trading applications; and (iv) an ATS for U.S. equities. Technology licensing fees are earned from third parties for licensing of the Company’s proprietary risk management and trading infrastructure technology and the provision of associated management and hosting services.

The Corporate segment contains the Company's investments, principally in strategic trading-related opportunities and maintains corporate overhead expenses and all other income and expenses that are not attributable to the Company's other segments.

Management evaluates the performance of its segments on a pre-tax basis. Segment assets and liabilities are not used for evaluating segment performance or in deciding how to allocate resources to segments. The Company’s total revenues and income before income taxes and noncontrolling interest (“Pre-tax earnings”) by segment for the three months ended September 30, 2018 and 2017 are summarized in the following table:

(in thousands)	Market Making	Execution Services	Corporate (1)	Consolidated Total
2018:				
Total revenue	$264,370	$34,206	$(3,453)	$295,123
Income before income taxes and noncontrolling interest	39,744	129	(10,448)	29,425
2017:				
Total revenue	228,582	39,077	3,627	271,286
Income (loss) before income taxes and noncontrolling interest	(19,322)	(6,017)	(21,156)	(46,495)

(1) Amounts shown in the Corporate segment include eliminations of income statement and balance sheet items included in the Company's other segments.

The Company's Pre-tax earnings by segment for the nine months ended September 30, 2018 and 2017 are summarized in the following table:

(in thousands)	Market Making	Execution Services	Corporate (1)	Consolidated Total
2018				
Total revenue	$984,601	$458,759	$(5,057)	$1,438,303
Income before income taxes and noncontrolling interest	262,910	331,703	(47,028)	547,585
2017				
Total revenue	514,823	44,964	3,674	563,461

Income (loss) before income taxes and noncontrolling interest	17,241	(4,913)	(29,749)	(17,421)

(1) Amounts shown in the Corporate segment include eliminations of income statement and balance sheet items included in the Company's other segments.

20. Related Party Transactions

The Company incurs expenses and maintains balances with its affiliates in the ordinary course of business. As of September 30, 2018, and December 31, 2017 the Company had a payable of $3.7 million and a receivable of $0.1 million to its affiliates, respectively.

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The Company conducts securities lending transactions with Industrial and Commercial Bank of China ("ICBC"), which is partially owned by Temasek and its affiliates. As of September 30, 2018, the Company had a securities loaned contract of $0.4 million with ICBC. The Company had a securities borrowed contract of $23.1 million and a securities loaned contract of $1.1 million outstanding with ICBC as of December 31, 2017.

The Company purchases network connections services from affiliates of Level 3 Communications ("Level 3"). Temasek and its affiliates have a significant ownership interest in Level 3. The Company paid $0.4 million and $0.5 million for the three months ended September 30, 2018 and 2017, respectively, and $1.9 million and $1.6 million for the nine months ended September 30, 2018 and 2017, respectively, to Level 3 for these services.
The Company purchases and leases computer equipment and maintenance and support from affiliates of Dell Inc. ("Dell"). Temasek and its affiliates have a significant ownership interest in Dell. The Company paid $0.5 million for the three months ended September 30, 2017, and $0.8 million and $1.9 million for the nine months ended September 30, 2018 and 2017, respectively, to Dell for these purchases and leases.

The Company purchases market data and software licenses from affiliates of Markit Group Holdings Limited ("MarkIt"). Temasek and its affiliates have a significant ownership interest in MarkIt. For the three and nine months ended September 30, 2018, the amounts paid to MarkIt for these services were immaterial and $0.4 million, respectively. The amount paid to MarkIt was immaterial for the three and nine months ended September 30, 2017.

The Company has held a minority interest in SBI since 2016 (See Note 11 "Financial Assets and Liabilities"). The Company pays exchange fees to SBI for the trading activities conducted on its proprietary trading system. The Company paid $1.5 million and $1.4 million for the three months ended September 30, 2018 and 2017, respectively, and $6.2 million and $4.1 million for the nine months ended September 30, 2018 and 2017, respectively, to SBI for these trading activities.

The Company makes payments to two JVs (See Note 2, "Summary of Significant Accounting Policies") to fund the construction of the microwave communication networks, and to purchase microwave communication networks, which are recorded within communications and data processing on the condensed consolidated statements of comprehensive income. The Company made payments of $3.0 million and $0.2 million to the JVs for the three months ended September 30, 2018 and 2017, respectively, and $13.1 million and $0.4 million for the nine months ended September 30, 2018 and 2017, respectively.

21. Subsequent Events

The Company has evaluated subsequent events for adjustment to or disclosure in its condensed consolidated financial statements through the date of this report, and has not identified any recordable or disclosable events, not otherwise reported in these condensed consolidated financial statements or the notes thereto, except for the following:

On November 6, 2018, the Company's board of directors declared a dividend of $0.24 per share of Class A common stock and Class B common stock and per Restricted Stock Unit that will be paid on December 14, 2018 to holders of record as of November 30, 2018.

On November 6, 2018, the Company and Investment Technology Group, Inc. ("ITG") entered into a definitive agreement (the "ITG Merger Agreement") whereby the Company will acquire ITG in a cash transaction valued at $30.30 per ITG share, or a total of approximately $1.0 billion (the "ITG Acquisition"). The ITG Acquisition is expected to close during the first half of 2019 after receipt of all required regulatory approvals and ITG shareholder approval. The Company intends to finance the ITG Acquisition solely with debt financing (collectively with the ITG Acquisition and related transactions, the "ITG Transactions") and has entered into a debt commitment letter with Jefferies Finance LLC and Royal Bank of Canada for gross new borrowings of $1.5 billion, the proceeds of which will

be used to pay the merger consideration and related fees and to refinance the Company’s existing first lien term loan.

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ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following management's discussion and analysis covers the three and nine months ended September 30, 2018 and 2017 and should be read in conjunction with the condensed consolidated financial statements of Virtu Financial, Inc. (the "Company") for the three and nine months ended September 30, 2018 and 2017. This management's discussion and analysis contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Unless otherwise stated, all amounts are presented in thousands of dollars.

Forward-Looking Statements

This quarterly report on Form 10-Q contains forward-looking statements. You should not place undue reliance on forward-looking statements because they are subject to numerous uncertainties and factors relating to our operations and business environment, all of which are difficult to predict and many of which are beyond our control. Forward-looking statements include information concerning our possible or assumed future results of operations, including descriptions of our business strategy. These forward-looking statements can be identified by the use of forward-looking terminology, including the terms "may," "will," "should," "believe," "expect," "anticipate," "intend," "plan," "project" or, in each case, their negative, or other variations or comparable terminology and expressions. These statements are based on assumptions that we have made in light of our experience in the industry as well as our perceptions of historical trends, current conditions, expected future developments and other factors we believe are appropriate under the circumstances. As you read and consider this quarterly report on Form 10-Q, you should understand that forward-looking statements are not guarantees of performance or results and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate, may differ materially from those made in or suggested by the forward-looking statements contained in this quarterly report on Form 10-Q. By their nature, forward-looking statements involve known and unknown risks and uncertainties, including those described under the heading "Risk Factors" in this quarterly report on Form 10-Q, because they relate to events and depend on circumstances that may or may not occur in the future. Although we believe that the forward-looking statements contained in this quarterly report on Form 10-Q are based on reasonable assumptions, you should be aware that many factors, including those described under the heading "Risk Factors" in this quarterly report on Form 10-Q or in Part I "Item 1A. Risk factors" in our 2017 Form 10-K as filed with the Securities and Exchange Commission ("SEC") on March 13, 2018, could affect our actual financial results or results of operations and cash flows, and could cause actual results to differ materially from those in such forward-looking statements, including but not limited to:

- reduced levels of overall trading activity;
- dependence upon trading counterparties and clearing houses performing their obligations to us;
- failures of our customized trading platform;
- risks inherent to the electronic market making business and trading generally;
- increased competition in market making activities and execution services;
- dependence on continued access to sources of liquidity;
- risks associated with self clearing and other operational elements of our business;
- compliance with laws and regulations, including those specific to our industry;
- obligations to comply with applicable regulatory capital requirements;
- litigation or other legal and regulatory based liabilities;
- proposed legislation that would impose taxes on certain financial transactions in the European Union, the U.S. and other jurisdictions;
- obligations to comply with laws and regulations applicable to our international operations;
- enhanced media and regulatory scrutiny and its impact upon public perception of us or of companies in our industry;
- need to maintain and continue developing proprietary technologies;
- failure to maintain system security or otherwise maintain confidential and proprietary information;

- the effect of the Acquisition of KCG on existing business relationships, operating results, and ongoing business operations generally;

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- the significant costs and significant indebtedness that we incurred in connection with the Acquisition of KCG, and the integration of KCG into our business;
- the risk that we may encounter significant difficulties or delays in integrating the KCG business with ours and that the anticipated benefits, cost savings and synergies or capital release may not be achieved;
- the assumption of potential liabilities relating to KCG’s business;
- the timely completion, or completion at all, of the ITG Transactions;
- the effect of the Acquisition of ITG on existing business relationships, operating results, and ongoing business operations generally,
- the significant costs and significant indebtedness that we intend to incur in connection with the Acquisition of ITG, and the integration of ITG into our business;
- the risk that we may encounter significant difficulties or delays in integrating the ITG business with ours and that the anticipated benefits, cost savings and synergies or capital release may not be achieved;
- the assumption of potential liabilities and risks relating to ITG's business;
- capacity constraints, system failures, and delays;
- dependence on third party infrastructure or systems;
- use of open source software;
- failure to protect or enforce our intellectual property rights in our proprietary technology;
- risks associated with international operations and expansion, including failed acquisitions or dispositions;
- the effects of and changes in economic conditions (such as volatility in the financial markets, inflation, monetary conditions and foreign currency and exchange rate fluctuations, foreign currency controls and/or government mandated pricing controls, as well as in trade, monetary, fiscal and tax policies in international markets) and political conditions (such as military actions and terrorist activities);
- risks associated with potential growth and associated corporate actions;
- inability to access, or delay in accessing the capital markets to sell shares or raise additional capital;
- loss of key executives and failure to recruit and retain qualified personnel; and
- risks associated with losing access to a significant exchange or other trading venue.

Our forward-looking statements made herein are made only as of the date of this quarterly report on Form 10-Q. We expressly disclaim any intent, obligation or undertaking to update or revise any forward-looking statements made herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements contained in this quarterly report on Form 10-Q.

Basis of Preparation

Our condensed consolidated financial statements for the three and nine months ended September 30, 2018 reflect our operations and those of our consolidated subsidiaries. As discussed in Note 1 "Organization and Basis of Presentation" and in Note 3 “Acquisition of KCG Holdings Inc.” of Part I Item 1 “Condensed Consolidated Financial Statements (Unaudited)” of this quarterly report on Form 10-Q, we have accounted for the acquisition of KCG Holdings, Inc. ("Acquisition of KCG") under the acquisition method of accounting. Under the acquisition method of accounting, the assets and liabilities of KCG, as of July 20, 2017 (the "Closing Date"), were recorded at their respective fair values and added to the carrying values of our existing assets and liabilities. Our reported financial condition, results of operations and cash flows for the periods following the Acquisition of KCG reflect KCG's and our balances and reflect the impact of purchase accounting adjustments, including revised amortization and depreciation expense for acquired assets. As we are the accounting acquirer, the financial results for the three and nine months ended September 30, 2018 comprise our results and the results of KCG for the three and nine months ended September 30, 2018. All periods prior to the Closing Date comprise solely our results.

Overview

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We are a leading financial services firm that leverages cutting edge technology to deliver liquidity to the global markets and innovative, transparent trading solutions to our clients. We believe that our broad diversification, in combination with our proprietary technology platform and low-cost structure, enables us to facilitate risk transfer between global capital markets participants by supplying competitive liquidity and execution services while at the same time earning attractive margins and returns.

Technology and operational efficiency are at the core of our business, and our focus on market making technology is a key element of our success. We have developed a proprietary, multi-asset, multi-currency technology platform that is highly reliable, scalable and modular, and we integrate directly with exchanges and other liquidity centers. Our market data, order routing, transaction processing, risk management and market surveillance technology modules manage our market making activities in an efficient manner and enable us to scale our market making activities globally and across additional securities and other financial instruments and asset classes without significant incremental costs or third party licensing or processing fees.

We believe that technology-enabled market makers like Virtu serve an important role in maintaining and improving the overall health and efficiency of the global capital markets by continuously posting bids and offers for financial instruments and thereby providing market participants a transparent and efficient means to transfer risk. All market participants benefit from the increased liquidity, lower overall trading costs and execution certainty that Virtu provides.

As described in “Acquisition of KCG” below, on the Closing Date, we completed the Acquisition of KCG. KCG was a leading independent securities firm offering clients a range of services designed to address trading needs across asset classes, product types and geographies. KCG combined advanced technology with specialized client service across market making, agency execution and trading venues and also engaged in principal trading via exchange-based electronic market making. KCG offered multiple access points to trade global equities, options, futures, fixed income, currencies and commodities available via voice or electronically.

Prior to the Acquisition of KCG, Virtu operated as a single operating business segment. As a result of the Acquisition of KCG, beginning in the third quarter of 2017, Virtu has three operating segments: Market Making, Execution Services, and Corporate. Our management allocates resources, assesses performance and manages our business according to these segments.

Market Making

We provide competitive and deep liquidity that helps to create more efficient markets around the world. We stand ready, at any time, to buy or sell a broad range of securities, and we generate revenue by buying and selling large volumes of securities and other financial instruments and earning small bid/ask spreads. Our market structure expertise, broad diversification, and execution technology enables us to provide competitive bids and offers in over 25,000 securities, at over 235 venues, in 36 countries worldwide.

We believe the overall level of volumes and realized volatility in the various markets we serve have the greatest impact on our businesses. Increases in market volatility can cause bid/ask spreads to widen as market participants are more willing to pay market makers like us to transact immediately and as a result market makers' capture rate per notional amount transacted will increase.

Execution Services

We offer agency execution services and trading venues that provide transparent trading in global equities, ETFs, futures and fixed income to institutions, banks and broker dealers. We generally earn commissions as an agent

between principals for transactions. Agency based, execution-only trading in the segment is done primarily through a variety of access points including: (a) algorithmic trading and order routing; (b) institutional sales traders who offer portfolio trading and single stock sales trading which provides execution expertise for program, block and riskless principal trades in global equities and ETFs; and (c) matching of client orders in Virtu MatchIt (our ATS for U.S. equities). We also earn technology services revenues by providing our proprietary technology and infrastructure to select third parties for a service fee.

Corporate

Our Corporate segment contains investments principally in strategic financial services-oriented opportunities and maintains corporate overhead expenses and all other income and expenses that are not attributable to our other segments.

Acquisition of KCG

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On the Closing Date, pursuant to the terms of the Agreement and Plan of Merger, dated as of April 20, 2017 (the “Merger Agreement”), by and among the Company, Orchestra Merger Sub, Inc., a Delaware corporation and an indirect wholly-owned subsidiary of the Company (“Merger Sub”), and KCG, Merger Sub merged with and into KCG (the “Merger”), with KCG surviving the Merger as a wholly owned subsidiary of the Company.

In connection with the financing of the Acquisition of KCG, on the Closing Date, the Company issued to (i) Aranda Investments Pte. Ltd. (“Aranda”), an affiliate of Temasek Holding (Private) Limited ("Temasek"), 6,346,155 shares of the Company’s Class A common stock, par value $0.00001 per share (the "Class A Common Stock") for an aggregate purchase price of approximately $99.0 million and (ii) North Island Holdings I, LP (“NIH”) 39,725,979 shares of Class A Common Stock for an aggregate purchase price of approximately $613.5 million. On August 10, 2017, the Company issued additional 1,666,666 shares and 338,124 shares of Class A Common Stock to Aranda and NIH respectively, for an aggregate additional purchase price of approximately $26.0 million and $5.2 million, respectively.

Also in connection with the financing of the Acquisition of KCG, on June 16, 2017, Orchestra Borrower LLC (the "Escrow Issuer") a wholly owned subsidiary of Virtu Financial LLC (“Virtu Financial”) and Orchestra Co-Issuer, Inc. (the “Co-Issuer”) completed the offering of $500 million aggregate principal amount of 6.750% Senior Secured Second Lien Notes due 2022 (the “Notes”) as more fully described under - Senior Secured Second Lien Notes. On July 20, 2017, VFH Parent LLC ("VFH") assumed all of the obligations of the Escrow Issuer under the Notes and the indenture governing the Notes.

On June 30, 2017, Virtu Financial and VFH entered into a fourth amended and restated credit agreement (the “Fourth Amended and Restated Credit Agreement”) for $1.15 billion first lien secured term loans with the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent, sole lead arranger and bookrunner, which amended and restated in its entirety VFH’s existing credit agreement.

On July 21, 2017, the outstanding 6.875% Senior Secured Notes due 2020 issued by KCG were redeemed at a redemption price equal to 103.438% of the principal amount, plus accrued and unpaid interest, pursuant to the indenture, dated as of March 13, 2015 (as amended, restated, supplemented or otherwise modified), by and among KCG, the subsidiary guarantors party thereto and The Bank of New York Mellon, as trustee and collateral agent.

Amended and Restated 2015 Management Incentive Plan

The Company’s board of directors and stockholders adopted the 2015 Management Incentive Plan, which became effective upon consummation of the Company's initial public offering in April 2015 (the "IPO") (the "2015 Management Incentive Plan"). The 2015 Management Incentive Plan, which was amended and restated in 2017 (the “Amended and Restated 2015 Management Incentive Plan”), provides for the grant of stock options, restricted stock units, and other awards based on an aggregate of 16,000,000 shares of Class A Common Stock, subject to additional sublimits, including limits on the total option grant to any one participant in a single year and the total performance award to any one participant in a single year.

In connection with the IPO, non-qualified stock options to purchase 9,228,000 shares were granted at the IPO per share price, each of which vests in equal annual installments over a period of four years from the grant date and expires not later than 10 years from the grant date. Subsequent to the IPO and through September 30, 2018, options to purchase 1,528,750 shares in the aggregate were forfeited and 4,049,058 options were exercised. The fair value of the stock option grants was determined through the application of the Black-Scholes-Merton model and will be recognized on a straight line basis over the vesting period. In connection with and subsequent to the IPO, 1,677,318 shares of immediately vested Class A Common Stock and 2,620,051 restricted stock units were granted, which vest over a period of up to 4 years and are settled in shares of Class A Common Stock. The fair value of the Class A

Common Stock and restricted stock units was determined based on the volume weighted average price for the three days preceding the grant, and with respect to the restricted stock units will be recognized on a straight line basis over the vesting period.

Parent Company Financial Information

There are no material differences between our condensed consolidated financial statements and the financial statements of Virtu Financial LLC (“Virtu Financial”) except as follows: (i) cash and cash equivalents reflected on our Condensed Consolidated Statement of Financial Condition in the amount of $24.6 million; (ii) deferred tax assets reflected on our Condensed Consolidated Statement of Financial Condition in the amount of $177.0 million and tax receivable agreement obligation in the amount of $199.3 million, in each case as described in greater detail in Note 6 "Tax Receivable Agreements" of Part I "Financial Information" of this quarterly report on Form 10-Q; (iii) a portion of the member's equity of Virtu Financial is represented as non-controlling interest on our Condensed Consolidated Statement of Financial Condition; and (iv) provision

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for corporate income tax in the amount of $0.5 million and $56.5 million reflected on our Condensed Consolidated Statements of Comprehensive Income for the three and nine months ended September 30, 2018, respectively.

Components of Our Results of Operations

The following table shows the i) Total revenue, ii) Total operating expenses, and iii) Income before income taxes and noncontrolling interest by operating segment for the three and nine months ended September 30, 2018 and 2017:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
Market Making	2018	2017	2018	2017
Total revenue	$264,370	$228,582	$984,601	$514,823
Total operating expenses	224,626	247,904	721,691	497,582
Income before income taxes and noncontrolling interest	39,744	(19,322)	262,910	17,241
Execution Services				
Total revenue	34,206	39,077	458,759	44,964
Total operating expenses	34,077	45,094	127,056	49,877
Income before income taxes and noncontrolling interest	129	(6,017)	331,703	(4,913)
Corporate				
Total revenue	(3,453)	3,627	(5,057)	3,674
Total operating expenses	6,995	24,783	41,971	33,423
Income before income taxes and noncontrolling interest	(10,448)	(21,156)	(47,028)	(29,749)
Consolidated				
Total revenue	295,123	271,286	1,438,303	563,461
Total operating expenses	265,698	317,781	890,718	580,882
Income before income taxes and noncontrolling interest	$29,425	$(46,495)	$547,585	$(17,421)

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(in thousands)	Three Months Ended September 30, 2018	2017	Nine Months Ended September 30, 2018	2017
Revenues:				
Trading income, net	$235,699	$203,907	$900,454	$479,644
Interest and dividends income	21,451	20,430	61,337	30,933
Commissions, net and technology services	40,252	43,351	140,661	49,237
Other, net	(2,279)	3,598	335,851	3,647
Total revenue	295,123	271,286	1,438,303	563,461
Operating Expenses:				
Brokerage, exchange and clearance fees, net	68,638	64,584	229,779	170,253
Communication and data processing	39,516	45,998	137,793	83,190
Employee compensation and payroll taxes	44,827	72,341	150,723	111,053
Payments for order flow	18,283	12,071	50,381	12,071
Interest and dividends expense	32,566	31,242	101,199	58,456
Operations and administrative	17,254	24,183	53,671	35,931
Depreciation and amortization	16,012	15,602	47,558	29,157
Amortization of purchased intangibles and acquired capitalized software	6,367	6,440	20,042	6,546
Termination of office leases	1,440	—	23,300	—
Debt issue cost related to debt refinancing and prepayment	3,347	4,869	11,727	9,351
Transaction advisory fees and expenses	(261)	15,677	8,985	24,188
Charges related to share based compensation at IPO	—	181	24	545
Financing interest expense on long-term borrowings	17,709	24,593	55,536	40,141
Total operating expenses	265,698	317,781	890,718	580,882
Income before income taxes and noncontrolling interest	29,425	(46,495)	547,585	(17,421)
Provision for income taxes	13,815	(6,505)	75,330	(2,918)
Net income	$15,610	$(39,990)	472,255	(14,503)

Total Revenues

The majority of our revenue is generated through market making activities and is recorded as trading income, net. In addition, we generate revenues from interest and dividends income, agency execution services to select third parties, and technology services to third parties using our proprietary technology to provide technology infrastructure. Following the Acquisition of KCG, we also earn commissions and commission equivalents terms, as well as, in certain cases, contingent fees based on client revenues, which represents variable consideration. The services offered under these contracts have the same pattern of transfer; accordingly, they are being measured and recognized as a single performance obligation. The performance obligation is satisfied over time, and accordingly, revenue is recognized as time passes. Variable consideration has not been included in the transaction price as the amount of consideration is contingent on factors outside the Company's control and thus it is not probable that a significant reversal of cumulative revenue recognized will not occur. Recurring fees, which exclude variable consideration, are billed and collected on a monthly basis.

Trading income, net. Trading income, net, represents revenue earned from bid/ask spreads. Trading income is generated in the normal course of our market making activities and is typically proportional to the level of trading activity, or volumes, in the asset classes we serve. Our trading income is highly diversified by asset class and geography and is comprised of small amounts earned on millions of trades on various exchanges, primarily in the

following three categories: Americas Equities, Rest of World Equities, and Global FICC, options and other. Our trading income, net, results from gains and losses associated with economically neutral trading strategies, which are designed to capture small bid ask spreads and often involve making markets in a derivative versus a correlated instrument that is not a derivative. These transactions often result in a gain or loss on the derivative and a corresponding loss or gain on the non-derivative. Trading income, net, accounted for 79.9% and 75.2% of our total revenues for the three months ended September 30, 2018, and 2017, respectively, and 62.6% and 85% for the nine months ended September 30, 2018 and 2017, respectively.

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Interest and dividends income. Our market making activities require us to hold securities on a regular basis, and we generate revenues in the form of interest and dividends income from these securities. Interest is earned on securities borrowed from other market participants pursuant to collateralized financing arrangements and on cash held by brokers. Dividends income arises from holding market making positions over dates on which dividends are paid to shareholders of record.

Commissions, net and technology services. Agency commission fees are charged for agency trades executed by us on behalf of third party broker-dealers, institutions and other financial institutions. We began providing agency execution services in April 2016, and revenue is recognized on a trade date basis, which is the point at which the performance obligation to the customer is satisfied, based on the trade volume executed. Revenues on transactions for which we charge explicit commissions or commission equivalents, which include the majority of our institutional client orders, are included within commissions, net and technology services. Commissions and fees are primarily affected by changes in our equity, fixed income and futures transaction volumes with institutional clients; client relationships; changes in commission rates; client experience on the various platforms; level of volume based fees from providing liquidity to other trading venues; and the level of our soft dollar and commission recapture activity.

Technology services revenues include technology licensing fees and agency commission fees. Technology licensing fees are charged for the licensing of our proprietary technology and the provision of related services, including hosting, management and support. These fees include an up-front component and a recurring fee for the relevant terms, which may include both fixed and variable components. Revenue is recognized ratably for these services over the contractual term of the agreement.

Other, net. In July 2016, we made a minority investment in SBI Japannext Co., Ltd. (“SBI”), a proprietary trading system based in Tokyo. In connection with the investment, we issued bonds to certain affiliates of SBI and used the proceeds to partially finance the transaction. Revenues or losses are recognized due to the changes in fair value of the investment or fluctuations in Japanese Yen conversion rates within other, net.

We have interests in two telecommunications joint ventures (“JV”). We record our pro-rata share of each JV’s earnings or losses within other, net, while fees related to the use of communication services provided by the JVs are recorded within communications and data processing. In addition, we also recorded gains or losses on certain one-time transactions, including the sale of BondPoint, within other, net.

Operating Expenses

Brokerage, exchange and clearance fees, net. Brokerage, exchange and clearance fees are our most significant expenses, which include the direct expenses of executing and clearing transactions that we consummate in the course of our market making activities. Brokerage, exchange and clearance fees primarily consist of fees charged by third parties for executing, processing and settling trades. These fees generally increase and decrease in direct correlation with the level of trading activity, or volumes, in the markets we serve. Execution fees are paid primarily to exchanges and venues where we trade. Clearance fees are paid to clearing houses and clearing agents. Rebates based on volume discounts, credits or payments received from exchanges or other marketplaces are netted against brokerage, exchange and clearance fees.

Payments for order flow. Payments for order flow are a result of the Acquisition of KCG, and they primarily represent payments to broker dealer clients, in the normal course of business, for directing their order flow to us primarily in U.S. equities. Payments for order flow will fluctuate as we modify our rates and as the percentage of our clients with policies not to accept payments for order flow varies. Payments for order flow also fluctuate based on U.S. equity share and option volumes, our profitability and the mix of market orders, limit orders, and customers.

Communication and data processing. Communication and data processing represent primarily fixed expenses for leased equipment, equipment co-location, network lines and connectivity for our trading centers and co-location facilities. More specifically, communications expense consists primarily of the cost of voice and data telecommunication lines supporting our business, including connectivity to data centers and exchanges, markets and liquidity pools around the world, and data processing expense consists primarily of market data fees that we pay to third parties to receive price quotes and related information.

Employee compensation and payroll taxes. Employee compensation and payroll taxes include employee salaries, cash and non-cash incentive compensation, employee benefits, payroll taxes, severance and other employee related costs. Subsequent to the completion of a series of reorganization transactions prior to the IPO pursuant to which the Company became the sole managing member of Virtu Financial (the "Reorganization Transactions"). Employee compensation and payroll taxes includes non-cash compensation expenses with respect to the stock options and restricted stock units granted in connection with and subsequent to the IPO pursuant to the 2015 Management Incentive Plan.

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Interest and dividends expense. We incur interest expense from loaning certain equity securities in the general course of our market making activities pursuant to collateralized lending transactions. Typically, dividend expense is incurred when a dividend is paid on securities sold short.

Operations and administrative. Operations and administrative expense represents occupancy, recruiting, travel and related expense, professional fees and other expenses.

Depreciation and amortization. Depreciation and amortization expense results from the depreciation of fixed assets, such as computing and communications hardware, as well as amortization of leasehold improvements and capitalized in-house software development. We depreciate our computer hardware and related software, office hardware and furniture and fixtures on a straight line basis over a period of 3 to 7 years based on the estimated useful life of the underlying asset, and we amortize our capitalized software development costs on a straight line basis over a period of 1.5 to 2.5 years, which represents the estimated useful lives of the underlying software. We amortize leasehold improvements on a straight line basis over the lesser of the life of the improvement or the term of the lease.

Amortization of purchased intangibles and acquired capitalized software. Amortization of purchased intangibles and acquired capitalized software represents the amortization of finite lived intangible assets acquired in connection with the acquisitions of certain assets from Nyenburgh Holding B.V., Teza Technologies (the "Teza Acquisition") and KCG, respectively. These assets are amortized over their useful lives, ranging from 1 to 15 years, except for certain assets which were categorized as having indefinite useful lives.

Termination of office leases. Termination of office leases represents the one-time expense write-off on the present value of the future lease obligations on the office leases we abandoned in connection with the Acquisition of KCG. The aggregated write-off amount includes legal fees, broker fees and other miscellaneous expense associated with the abandonment.

Debt issue costs related to debt refinancing. As a result of the refinancing or early termination of our debt, we accelerate the capitalized debt issue costs and the discount on debt that would otherwise to be amortized or accreted over the life of the loan.

Transaction advisory fees and expenses. Transaction advisory fees and expenses primarily reflect professional fees incurred by us in connection with the Company's October 2017 sale of specified assets and assignment of specified liabilities constituting the Company's BondPoint division and fixed income venue ("BondPoint").

Charges related to share based compensation at IPO. At the consummation of the IPO and through the three and nine months ended September 30, 2018, we recognized non-cash compensation expenses in respect of the outstanding time-vested Class B interests of the Company and Class B interests of Virtu East MIP LLC, net of capitalization and amortization of costs attributable to employees incurred in development of software for internal use, as defined and discussed in Note 16, “Share-based compensation” of Part II, Item 8, “Financial Statements and Supplementary Data” of Form 10-K.

Financing interest expense on long-term borrowings. Financing interest expense reflects interest accrued on outstanding indebtedness, under our long-term borrowing arrangements.

Provision for Income Taxes

Prior to the consummation of the Reorganization Transactions and the IPO, our business was historically operated through a limited liability company that is treated as a partnership for U.S. federal income tax purposes, and as such,

most of our income was not subject to U.S. federal and certain state income taxes. Our income tax expense for historical periods reflects taxes payable by certain of our non-U.S. subsidiaries. Subsequent to the consummation of the Reorganization Transactions and the IPO, we are subject to U.S. federal, state and local income tax at the rate applicable to corporations less the rate attributable to the noncontrolling interest in Virtu Financial.

Our effective tax rate is subject to significant variation due to several factors, including variability in our pre-tax and taxable income and loss and the mix of jurisdictions to which they relate, changes in how we do business, acquisitions (including the Acquisition of KCG) and investments, audit-related developments, tax law developments (including changes in statutes, regulations, case law, and administrative practices), and relative changes of expenses or losses for which tax benefits are not recognized. Additionally, our effective tax rate can be more or less volatile based on the amount of pre-tax income or loss. For example, the impact of discrete items and non-deductible expenses on our effective tax rate is greater when our pre-tax income is lower.

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Public Law No. 115-97, commonly referred to as the Tax Cuts and Jobs Act (the “2017 Tax Act”) was signed into law on December 22, 2017 and significantly revises the U.S. corporate income tax by, among other things, lowering the statutory corporate tax rate from 35% to 21%, and eliminating certain deductions. The Company has completed its determination of the accounting implications of the 2017 Tax Act on its tax accruals and recorded these amounts in our financial statements as of December 31, 2017. The Company recorded a deferred tax expense for the impact of the 2017 Tax Act of approximately $90.6 million, which is primarily composed of the remeasurement of federal net deferred tax assets as a result of the permanent reduction in the U.S. statutory corporate tax rate from 35% to 21%. During 2018, the Company did not make any adjustments due to the 2017 Tax Act. The Company has completed its determination of the accounting implications of the 2017 Tax act on its tax balances.

We regularly assess whether it is more likely than not that we will realize our deferred tax assets in each taxing jurisdiction in which we operate. In performing this assessment with respect to each jurisdiction, we review all available evidence, including actual and expected future earnings, capital gains, and investment in such jurisdiction, the carry-forward periods available to us for tax reporting purposes, and other relevant factors.

See Note 14 "Income Taxes" of Part I “Financial Information” of this quarterly report on Form 10-Q for additional information.

Non-GAAP Financial Measures and Other Items

To supplement our condensed consolidated financial statements presented in accordance with generally accepted accounting principles in the United States (“GAAP”), we use the following non-GAAP financial measures of financial performance:

- “Adjusted Net Trading Income”, which is the amount of revenue we generate from our market making activities, or trading income, net, plus commissions, net and technology services, plus interest and dividends income and expense, net, less direct costs associated with those revenues, including brokerage, exchange and clearance fees, net, and payments for order flow. Management believes that this measurement is useful for comparing general operating performance from period to period. Although we use Adjusted Net Trading Income as a financial measure to assess the performance of our business, the use of Adjusted Net Trading Income is limited because it does not include certain material costs that are necessary to operate our business. Our presentation of Adjusted Net Trading Income should not be construed as an indication that our future results will be unaffected by revenues or expenses that are not directly associated with our market making activities.
- “EBITDA”, which measures our operating performance by adjusting net income to exclude financing interest expense on long-term borrowings, debt issue cost related to debt refinancing, depreciation and amortization, amortization of purchased intangibles and acquired capitalized software, and income tax expense, and “Adjusted EBITDA”, which measures our operating performance by further adjusting EBITDA to exclude severance, reserve for legal matters, transaction advisory fees and expenses, termination of office leases, acquisition related retention bonus, trading related settlement income, other, net, share based compensation, charges related to share based compensation at IPO, 2015 Management Incentive Plan, and charges related to share based compensation at IPO.
- “Normalized Adjusted Net Income”, “Normalized Adjusted Net Income before income taxes”, “Normalized provision for income taxes”, and “Normalized Adjusted EPS”, which we calculate by adjusting Net Income to exclude certain items including IPO-related adjustments and other non-cash items, assuming that all vested and unvested Virtu Financial Units have been exchanged for Class A Common Stock, and applying a corporate tax rate of 23% for 2018 and 35.5% for 2017.

Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS are

non-GAAP financial measures used by management in evaluating operating performance and in making strategic decisions. Additional information provided regarding the breakdown of total Adjusted Net Trading Income by category is also a non-GAAP financial measure but is not used by the Company in evaluating operating performance and in making strategic decisions. In addition, these non-GAAP financial measures or similar non-GAAP financial measures are used by research analysts, investment bankers and lenders to assess our operating performance. Management believes that the presentation of Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS provide useful information to investors regarding our results of operations and cash flows because they assist both investors and management in analyzing and benchmarking the

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performance and value of our business. Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS provide indicators of general economic performance that are not affected by fluctuations in certain costs or other items. Accordingly, management believes that these measurements are useful for comparing general operating performance from period to period. Furthermore, our Fourth Amended and Restated Credit Agreement contains covenants and other tests based on metrics similar to Adjusted EBITDA. Other companies may define Adjusted Net Trading Income, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS differently, and as a result our measures of Adjusted Net Trading Income, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS may not be directly comparable to those of other companies. Although we use these non-GAAP measures as financial measures to assess the performance of our business, such use is limited because they do not include certain material costs necessary to operate our business.

Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS should be considered in addition to, and not as a substitute for, Net Income in accordance with U.S. GAAP as a measure of performance. Our presentation of Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS should not be construed as an indication that our future results will be unaffected by unusual or nonrecurring items. Adjusted Net Trading Income, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS and our EBITDA-based measures have limitations as analytical tools, and you should not consider them in isolation or as substitutes for analysis of our results as reported under U.S. GAAP. Some of these limitations are:

- they do not reflect every cash expenditure, future requirements for capital expenditures or contractual commitments;
- our EBITDA-based measures do not reflect the significant interest expense or the cash requirements necessary to service interest or principal payment on our debt;
- although depreciation and amortization are non-cash charges, the assets being depreciated and amortized will often have to be replaced or require improvements in the future, and our EBITDA-based measures do not reflect any cash requirement for such replacements or improvements;
- they are not adjusted for all non-cash income or expense items that are reflected in our statements of cash flows;
- they do not reflect the impact of earnings or charges resulting from matters we consider not to be indicative of our ongoing operations; and
- they do not reflect limitations on our costs related to transferring earnings from our subsidiaries to us.

Because of these limitations, Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS are not intended as alternatives to Net Income as indicators of our operating performance and should not be considered as measures of discretionary cash available to us to invest in the growth of our business or as measures of cash that will be available to us to meet our obligations. We compensate for these limitations by using Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes and Normalized Adjusted EPS along with other comparative tools, together with U.S. GAAP measurements, to assist in the evaluation of operating performance. These U.S. GAAP measurements include operating Net Income, cash flows from operations and cash flow data. See below a reconciliation of each non-GAAP financial measure to the most directly comparable GAAP measure.

The following tables reconcile condensed consolidated statements of comprehensive income to arrive at EBITDA, Adjusted EBITDA, Adjusted Net Trading Income, and selected Operating Margins for the three and nine months ended September 30, 2018, and 2017.

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	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
Reconciliation of Trading income, net to Adjusted Net Trading Income	2018	2017	2018	2017
Trading income, net	$235,699	$203,907	$900,454	$479,644
Interest and dividends income	21,451	20,430	61,337	30,933
Commissions, net and technology services	40,252	43,351	140,661	49,237
Brokerage, exchange and clearance fees, net	(68,638)	(64,584)	(229,779)	(170,253)
Payments for order flow	(18,283)	(12,071)	(50,381)	(12,071)
Interest and dividends expense	(32,566)	(31,242)	(101,199)	(58,456)
Adjusted Net Trading Income	$177,915	$159,791	$721,093	$319,034
Reconciliation of Net Income to EBITDA and Adjusted EBITDA				
Net Income	$15,610	$(39,990)	$472,255	$(14,503)
Financing interest expense on long-term borrowings	17,709	24,593	55,536	40,141
Debt issue cost related to debt refinancing	3,347	4,869	11,727	9,351
Depreciation and amortization	16,012	15,602	47,558	29,157
Amortization of purchased intangibles and acquired capitalized software	6,367	6,440	20,042	6,546
Provision for Income Taxes	13,815	(6,505)	75,330	(2,918)
EBITDA	$72,860	$5,009	$682,448	$67,774
Severance	1,291	9,295	7,625	10,172
Reserve for legal matters	1,620	—	2,020	(2,176)
Transaction advisory fees and expenses	(261)	15,677	8,985	24,188
Termination of office leases	1,440	1,811	23,300	1,811
Connectivity early termination	—	—	7,062	—
Gain on sale of business	2,339	—	(335,210)	—
Other, net	(60)	(300)	(641)	(289)
Write-down of assets	542	544	3,239	544
Acquisition related retention bonus	—	23,050	—	23,050
Share based compensation	7,091	2,270	20,213	17,102
Charges related to share based compensation at IPO, 2015 Management Incentive Plan	1,425	1,336	4,356	4,134
Charges related to share based compensation awards at IPO	—	181	24	545
Adjusted EBITDA	$88,287	$58,873	$423,421	$146,855
Selected Operating Margins				
Net Income Margin (1)	8.8 %	(25.0)%	65.5 %	(4.5)%
EBITDA Margin (2)	41.0 %	3.1 %	94.6 %	21.2 %
Adjusted EBITDA Margin (3)	49.6 %	36.8 %	58.7 %	46.0 %

(1) Calculated by dividing net income by Adjusted Net Trading Income.
(2) Calculated by dividing EBITDA by Adjusted Net Trading Income.
(3) Calculated by dividing Adjusted EBITDA by Adjusted Net Trading Income.

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The following tables reconcile Net Income to arrive at Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes, Normalized Adjusted Net Income and Normalized Adjusted EPS.

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands, except share and per share data)	2018	2017	2018	2017
Reconciliation of Net Income to Normalized Adjusted Net Income				
Net income	$15,610	$ (39,990)	$472,255	$ (14,503)
Provision for income taxes	13,815	(6,505)	75,330	(2,918)
Income before income taxes	29,425	(46,495)	547,585	(17,421)
Amortization of purchased intangibles and acquired capitalized software	6,367	6,440	20,042	6,546
Financing interest expense related to KCG transaction	—	3,010	—	4,626
Debt issue cost related to debt refinancing	3,347	4,869	11,727	9,351
Severance	1,291	9,295	7,625	10,172
Reserve for legal matters	1,620	—	2,020	(2,176)
Transaction advisory fees and expenses	(261)	15,677	8,985	24,188
Termination of office leases	1,440	1,811	23,300	1,811
Connectivity early termination	—	—	7,062	—
Gain on sale of business	2,339	—	(335,210)	—
Write-down of assets	542	1,075	3,239	2,177
Acquisition related retention bonus	—	23,050	—	23,050
Other, net	(60)	(300)	(641)	(289)
Share based compensation	7,091	2,270	20,213	17,102
Charges related to share based compensation at IPO, 2015 Management Incentive Plan	1,425	1,336	4,356	4,134
Charges related to share based compensation awards at IPO	—	181	24	545
Normalized Adjusted Net Income before income taxes	54,566	22,219	320,327	83,816
Normalized provision for income taxes (1)	12,550	8,221	73,671	31,012
Normalized Adjusted Net Income	$42,016	$ 13,998	$246,656	$ 52,804
Weighted Average Adjusted shares outstanding (2)	191,989,323	178,490,856	190,886,342	152,812,060
Normalized Adjusted EPS	$0.22	$ 0.08	$1.29	$ 0.35

(1) Reflects U.S. federal, state, and local income tax rate applicable to corporations of approximately 23% for 2018 and 35.5% for 2017.

(2) Assumes that (1) holders of all vested and unvested non-vesting common interest units in Virtu Financial ("Virtu Financial Units") (together with corresponding shares of the Company's Class C common stock, par value $0.00001 per share (the "Class C Common Stock"), have exercised their right to exchange such Virtu Financial Units for shares of Class A Common Stock on a one-for-one basis, (2) holders of all Virtu Financial Units (together with corresponding shares of the Company's Class D common stock, par value $0.00001 per share (the "Class D Common Stock")), have exercised their right to exchange such Virtu Financial Units for shares of the Company's Class B common stock, par value $0.00001 per share (the "Class B Common Stock") on a one-for-one basis, and subsequently exercised their right to convert the shares of Class B Common Stock into shares of Class A Common Stock, par value $0.00001 per share (the "Class A Common Stock") on a one-for-one basis. Includes additional shares from dilutive impact of options and restricted stock units outstanding under the 2015 Management Incentive Plan during the three and nine months ended September 30, 2018 and 2017.

The following tables reconcile trading income, net to Adjusted Net Trading Income by operating segment (in thousands) for the three and nine months ended September 30, 2018 and 2017:

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	Three Months Ended September 30, 2018			
	Market Making	Execution Services	Corporate	Total
Trading income, net	$235,564	$135	$ —	$235,699
Commissions, net and technology services	6,587	33,665	—	40,252
Interest and dividends income	21,320	110	21	21,451
Brokerage, exchange and clearance fees, net	(54,305)	(14,333)	—	(68,638)
Payments for order flow	(18,261)	(22)	—	(18,283)
Interest and dividends expense	(32,048)	(518)	—	(32,566)
Adjusted Net Trading Income	$158,857	$19,037	$ 21	$177,915

	Three Months Ended September 30, 2017			
	Market Making	Execution Services	Corporate	Total
Trading income, net	$206,543	$(3,341)	$ 705	$203,907
Commissions, net and technology services	1,563	41,788	—	43,351
Interest and dividends income	20,056	103	271	20,430
Brokerage, exchange and clearance fees, net	(52,321)	(12,263)	—	(64,584)
Payments for order flow	(12,452)	381	—	(12,071)
Interest and dividends expense	(31,360)	1,561	(1,443)	(31,242)
Adjusted Net Trading Income	$132,029	$28,229	$ (467)	$159,791

	Nine Months Ended September 30, 2018			
	Market Making	Execution Services	Corporate	Total
Trading income, net	$899,902	$552	$ —	$900,454
Commissions, net and technology services	21,886	118,775	—	140,661
Interest and dividends income	60,681	600	56	61,337
Brokerage, exchange and clearance fees, net	(183,171)	(46,608)	—	(229,779)
Payments for order flow	(50,284)	(97)	—	(50,381)
Interest and dividends expense	(100,002)	(1,197)	—	(101,199)
Adjusted Net Trading Income	$649,012	$72,025	$ 56	$721,093

	Nine Months Ended September 30, 2017			
	Market Making	Execution Services	Corporate	Total
Trading income, net	$482,281	$(3,342)	$ 705	$479,644
Commissions, net and technology services	1,563	47,674	—	49,237
Interest and dividends income	30,558	104	271	30,933
Brokerage, exchange and clearance fees, net	(157,991)	(12,262)	—	(170,253)
Payments for order flow	(12,452)	381	—	(12,071)
Interest and dividends expense	(58,575)	1,562	(1,443)	(58,456)
Adjusted Net Trading Income	$285,384	$34,117	$ (467)	$319,034

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The following tables reconcile our Market Making segment trading income, net to Adjusted Net Trading Income by category for the three and nine months ended September 30, 2018 and 2017 (in thousands):

	Three Months Ended September 30, 2018				
	Americas Equities	ROW Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$146,428	$34,372	$58,134	$ (3,370)	$235,564
Commissions, net and technology services	6,469	—	118	—	6,587
Brokerage, exchange and clearance fees, net	(23,227)	(15,916)	(14,905)	(257)	(54,305)
Payments for order flow	(18,261)	—	—	—	(18,261)
Interest and dividends, net	(5,932)	(1,898)	(2,517)	(381)	(10,728)
Adjusted Net Trading Income	$105,477	$16,558	$40,830	$ (4,008)	$158,857

	Three Months Ended September 30, 2017				
	Americas Equities	ROW Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$122,161	$35,271	$48,055	$ 1,056	$206,543
Commissions, net and technology services	63	342	(84)	1,242	1,563
Brokerage, exchange and clearance fees, net	(22,528)	(15,487)	(13,552)	(754)	(52,321)
Payments for order flow	(12,014)	—	—	(438)	(12,452)
Interest and dividends, net	(5,095)	(3,131)	(2,213)	(865)	(11,304)
Adjusted Net Trading Income	$82,587	$16,995	$32,206	$ 241	$132,029

	Nine Months Ended September 30, 2018				
	Americas Equities	ROW Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$586,224	$117,862	$195,959	$ (143)	$899,902
Commissions, net and technology services	21,700	—	186	—	21,886
Brokerage, exchange and clearance fees, net	(92,986)	(43,878)	(43,755)	(2,552)	(183,171)
Payments for order flow	(50,284)	—	—	—	(50,284)
Interest and dividends, net	(21,117)	(7,030)	(9,014)	(2,160)	(39,321)
Adjusted Net Trading Income	$443,537	$66,954	$143,376	$ (4,855)	$649,012

	Nine Months Ended September 30, 2017				
	Americas Equities	ROW Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$217,403	$118,251	$147,541	$ (914)	$482,281
Commissions, net and technology services	63	342	(84)	1,242	1,563

Brokerage, exchange and clearance fees, net	(61,569)	(50,882)	(43,934)	(1,606)	(157,991)
Payments for order flow	(12,014)	—	—	(438)	(12,452)
Interest and dividends, net	(9,295)	(10,268)	(6,376)	(2,078)	(28,017)
Adjusted Net Trading Income	$134,588	$57,443	$97,147	$ (3,794)	$285,384

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The following tables show our Adjusted Net Trading Income and average daily Adjusted Net Trading Income by category for the three and nine months ended September 30, 2018 and 2017 (in thousands, except percentages):

	Three Months Ended September 30,		
Adjusted Net Trading Income by Category:	2018	2017	% Change
Market Making:			
Americas Equities	$105,477	$82,587	27.7%
ROW Equities	16,558	16,995	(2.6)%
Global FICC, Options and Other	40,830	32,206	26.8%
Unallocated(1)	(4,008)	241	NM
Total Market Making	158,857	132,029	20.3%
Execution Services	19,037	28,229	(32.6)%
Corporate	21	(467)	NM
Adjusted Net Trading Income	$177,915	$159,791	11.3%

Average Daily	Three Months Ended September 30,		
Adjusted Net Trading Income by Category:	2018	2017	% Change
Market Making:			
Americas Equities	$1,674	$1,311	27.7%
ROW Equities	263	270	(2.6)%
Global FICC, Options and Other	648	511	26.8%
Unallocated(1)	(64)	4	NM
Total Market Making	2,521	2,096	20.3%
Execution Services	303	448	(32.5)%
Corporate	—	(8)	NM
Adjusted Net Trading Income	$2,824	$2,536	11.3%

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	Nine Months Ended September 30,		
Adjusted Net Trading Income by Category:	2018	2017	% Change
Market Making:			
Americas Equities	$443,537	$134,588	229.6%
ROW Equities	66,954	57,443	16.6%
Global FICC, Options and Other	143,376	97,147	47.6%
Unallocated(1)	(4,855)	(3,794)	NM
Total Market Making	649,012	285,384	127.4%
Execution Services	72,025	34,117	111.1%
Corporate	56	(467)	NM
Adjusted Net Trading Income	$721,093	$319,034	126.0%

Average Daily	Nine Months Ended September 30,		
Adjusted Net Trading Income by Category:	2018	2017	% Change
Market Making:			
Americas Equities	$2,359	$716	229.6%
ROW Equities	356	306	16.6%
Global FICC, Options and Other	763	517	47.6%
Unallocated(1)	(26)	(21)	NM
Total Market Making	3,452	1,518	127.5%
Execution Services	383	181	111.1%
Corporate	—	(2)	NM
Adjusted Net Trading Income	$3,835	$1,697	126.0%

(1)Under our methodology for recording “trading income, net” in our condensed consolidated statements of comprehensive income from Part I “Financial Information” of this quarterly report on Form 10-Q, we recognize revenues based on the exit price of assets and liabilities in accordance with applicable U.S. GAAP rules, and when we calculate Adjusted Net Trading Income for corresponding reporting periods, we start with trading income, net, so calculated. By contrast, when we calculate Adjusted Net Trading Income by category, we do so on a daily basis, and as a result prices used in recognizing revenues may differ. Because we provide liquidity on a global basis, across asset classes and time zones, the timing of any particular Adjusted Net Trading Income calculation may defer or accelerate the amount in a particular category from one day to another, and, at the end of a reporting period, from one reporting period to another. The purpose of the Unallocated category is to ensure that Adjusted Net Trading Income by category sums to total Adjusted Net Trading Income, which can be reconciled to Trading Income, Net, calculated in accordance with GAAP. We do not allocate any resulting differences based on the timing of revenue recognition.

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

Total Revenues

Our total revenues increased $23.8 million, or 8.8%, to $295.1 million for the three months ended September 30, 2018, compared to $271.3 million for the three months ended September 30, 2017. This increase was primarily attributable to the Acquisition of KCG, which resulted in increases in trading income, net, of $31.8 million and interest and dividends income of $1.0 million. These increases were partially offset by decreases in commissions, net and technology services of $3.1 million and other, net, of $5.9 million.

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The following table shows the total revenues by operating segment for the three months ended September 30, 2018 and 2017.

	Three Months Ended September 30,		
(in thousands, except for percentage)	2018	2017	% Change
Market Making			
Trading income, net	$235,564	$206,542	14.1%
Interest and dividends income	21,320	20,056	6.3%
Commissions, net and technology services	6,587	1,563	321.4%
Other, net	899	421	113.5%
Total revenues from Market Making	$264,370	$228,582	15.7%
Execution Services			
Trading income, net	$135	$(3,342)	NM
Interest and dividends income	110	104	5.8%
Commissions, net and technology services	33,665	41,788	(19.4)%
Other, net	296	527	(43.8)%
Total revenues from Execution Services	$34,206	$39,077	(12.5)%
Corporate			
Trading income, net	$—	$707	(100.0)%
Interest and dividends income	21	270	(92.2)%
Commissions, net and technology services	—	—	NM
Other, net	(3,474)	2,650	NM
Total revenues from Corporate	$(3,453)	$3,627	NM
Consolidated			
Trading income, net	$235,699	$203,907	15.6%
Interest and dividends income	21,451	20,430	5.0%
Commissions, net and technology services	40,252	43,351	(7.1)%
Other, net	(2,279)	3,598	NM
Total revenues	$295,123	$271,286	8.8%

Trading income, net. Trading income, net was primarily earned by our Market Making segment. Trading income, net increased $31.8 million, or 15.6%, to $235.7 million for the three months ended September 30, 2018, compared to $203.9 million for the three months ended September 30, 2017. The increase was primarily attributable to the Acquisition of KCG. Rather than analyzing trading income, net, in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income, together with interest and dividends income, interest and dividends expense and brokerage, exchange and clearance fees, net, each of which are described below.

Interest and dividends income. Interest and dividends income was primarily earned by our Market Making segment. Interest and dividends income increased $1.0 million, or 5.0%, to $21.5 million for the three months ended September 30, 2018, compared to $20.4 million for the three months ended September 30, 2017. This increase was primarily attributable to the Acquisition of KCG. As indicated above, rather than analyzing interest and dividends income in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Commissions, net and technology services. Commissions, net and technology services revenues were primarily earned by our Execution Services segment. Commissions, net and technology services revenues decreased $3.1 million, or 7.1%, to $40.3 million for the three months ended September 30, 2018, compared to $43.4 million for the three months ended September 30, 2017. The decrease was primarily due non-renewal of certain technology services contracts.

Other, net. Other, net revenues were primarily earned by our Corporate segment. Other, net was $(2.3) million for the three months ended September 30, 2018, compared to $3.6 million for the three months ended September 30, 2017. The decrease was primarily due to loss on sale of certain telecommunication assets to one of our joint ventures.

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Adjusted Net Trading Income

Adjusted Net Trading Income increased $18.1 million, or 11.3%, to $177.9 million for the three months ended September 30, 2018, compared to $159.8 million for the three months ended September 30, 2017. This increase was primarily attributable to the Acquisition of KCG, which resulted in a significant increase in Americas Equities of $22.9 million, or 27.7%, from the Market Making segment for the three months ended September 30, 2018. The increase was partially offset by the decrease of $9.2 million, or 32.6%, from the Execution Services, primarily reflecting the sale of BondPoint and absence of its related revenues in the three months ended September 30, 2018 compared to the three months ended September 30, 2017. Adjusted Net Trading Income per day increased $0.3 million, or 11.3%, to $2.8 million for the three months ended September 30, 2018, compared to $2.5 million for the three months ended September 30, 2017. The number of trading days was 63 days for both the three months ended September 30, 2018 and 2017.

Operating Expenses

Our operating expenses decreased $52.1 million, or 16.4%, to $265.7 million for the three months ended September 30, 2018, compared to $317.8 million for the three months ended September 30, 2017. The decrease in operating expenses is primarily due to the Company's expense reduction initiatives.

Brokerage, exchange and clearance fees, net. Brokerage exchange and clearance fees, net, increased $4.1 million, or 6.3%, to $68.6 million for the three months ended September 30, 2018, compared to $64.6 million for the three months ended September 30, 2017. This increase was primarily attributable to the larger volume we traded in Americas Equities instruments as a result of the Acquisition of KCG. As indicated above, rather than analyzing brokerage, exchange and clearance fees, net, in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Communication and data processing. Communication and data processing expense decreased $6.5 million, or 14.1%, to $39.5 million for the three months ended September 30, 2018, compared to $46.0 million for the three months ended September 30, 2017. This decrease was primarily due to the reductions in connectivity connections as a result of an on-going effort to consolidate various communication and data processing subscriptions.

Employee compensation and payroll taxes. Employee compensation and payroll taxes decreased $27.5 million, or 38.0%, to $44.8 million for the three months ended September 30, 2018, compared to $72.3 million for the three months ended September 30, 2017. The decrease in compensation levels was primarily attributable to the decreases in headcount subsequent to the Acquisition of KCG. Incentive compensation is recorded at management’s discretion and is generally accrued in connection with the overall level of profitability. We have capitalized and therefore excluded employee compensation and benefits related to software development of $6.2 million, and $1.6 million for the three months ended September 30, 2018, and 2017, respectively.

Payments for order flow. Payments for order flow increased $6.2 million, or 51.5%, to $18.3 million for the three months ended September 30, 2018, compared to $12.1 million for the three months ended September 30, 2017. This increase was attributable to the Acquisition of KCG. Payments for order flow primarily represent payments to broker-dealer clients, in the normal course of business, for directing to us their order flow primarily in U.S. equities. Payments for order flow also fluctuate based on U.S. equity share and option volumes, our profitability and the mix of market orders, limit orders, and customer mix.

Interest and dividends expense. Interest and dividends expense increased $1.3 million, or 4.2%, to $32.6 million for the three months ended September 30, 2018, compared to $31.2 million for the three months ended September 30, 2017. This increase was primarily attributable to higher interest expense incurred on cash collateral received as part of

securities lending transactions resulting from the Acquisition of KCG. As indicated above, rather than analyzing interest and dividends expense in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Operations and administrative. Operations and administrative expense decreased $6.9 million, or 28.7%, to $17.3 million for the three months ended September 30, 2018, compared to $24.2 million for the three months ended September 30, 2017. This decrease was primarily attributable to the cancellation of various legal and professional expenses as a result of an on-going effort to consolidate professional services.

Depreciation and amortization. Depreciation and amortization increased $0.4 million, or 2.6%, to $16.0 million for the three months ended September 30, 2018, compared to $15.6 million for the three months ended September 30, 2017. This increase was primarily attributable to depreciation and amortization of additional assets resulting from the Acquisition of KCG and an increase in capital expenditures on telecommunication, networking and other assets.

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Amortization of purchased intangibles and acquired capitalized software. Amortization of purchased intangibles and acquired capitalized software was $6.4 million for the three months ended September 30, 2018, consistent with the three months ended September 30, 2017.

Termination of office leases. Termination of office leases expense was $1.4 million for the three months ended September 30, 2018. These charges reflect updated assumptions related to certain offices abandoned in prior periods as part of the effort of integration and consolidating office space in connection with the Acquisition of KCG. We did not incur such expenses during the three months ended September 30, 2017.

Debt issue cost related to debt refinancing. Debt issue costs related to debt refinancing decreased $1.5 million, or 31.3%, to $3.3 million for the three months ended September 30, 2018, compared to $4.9 million for the three months ended September 30, 2017. The decrease was primarily attributable to less acceleration of amortization of related debt issuance costs in the three months ended September 30, 2018 compared to the three months ended September 30, 2017.

Transaction advisory fees and expenses. Transaction advisory fees and expenses decreased $15.9 million, or 101.7%, to $(0.3) million for the three months ended September 30, 2018, compared to $15.7 million for the three months ended September 30, 2017. The expense primarily represents lower non-recurring professional fees which had been incurred in the third quarter of 2017 related to the Acquisition of KCG.

Charges related to share based compensation at IPO. Charges related to share based compensation at IPO decreased $0.2 million from the three months ended September 30, 2017. There were no charges related to share-based compensation at IPO for the three months ended September 30, 2018, due to the fact that certain Class B and East MIP Class B interests became fully vested.

Financing interest expense on long-term borrowings. Financing interest expense on long-term borrowings decreased $6.9 million, or 28.0%, to $17.7 million, compared to $24.6 million for the three months ended September 30, 2018. This decrease was primarily attributable to the decrease in outstanding principal as a result from the refinancing of the senior secured first lien term loan and the offering of the Notes, as discussed in Note 10 "Borrowings" of Part I “Financial Information” of this quarterly report on Form 10-Q.

Provision for Income Taxes

Following the consummation of the Reorganization Transactions, we incur corporate tax at the U.S. federal income tax rate on our taxable income, as adjusted for noncontrolling interest in Virtu Financial. Our income tax expense reflects such U.S. federal income tax as well as taxes payable by certain of our non-U.S. subsidiaries. Our provision for (benefit from) income taxes increased $20.3 million, to $13.8 million for the three months ended September 30, 2018, compared to $(6.5) million for the three months ended September 30, 2017. The increase was primarily due to an increase in income before income taxes and noncontrolling interest.

Nine Months Ended September 30, 2018 Compared to Nine Months Ended September 30, 2017
Total Revenues

Our total revenues increased $874.8 million, or 155.3%, to $1.4 billion for the nine months ended September 30, 2018, compared to $563.5 million for the nine months ended September 30, 2017. This increase was primarily attributable to an increase in trading income, net, of $420.8 million and an increase in other, net, of $332.2 million due to the sale of BondPoint.

The following table shows the total revenues by operating segment for the nine months ended September 30, 2018 and 2017.

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	Nine Months Ended September 30,		
(in thousands, except for percentage)	2018	2017	% Change
Market Making			
Trading income, net	$899,902	$482,281	86.6%
Interest and dividends income	60,681	30,558	98.6%
Commissions, net and technology services	21,886	1,563	NM
Other, net	2,132	421	406.4%
Total revenues from Market Making	$984,601	$514,823	91.3%
Execution Services			
Trading income, net	$552	$(3,341)	NM
Interest and dividends income	600	104	476.9%
Commissions, net and technology services	118,775	47,674	149.1%
Other, net	338,832	527	NM
Total revenues from Execution Services	$458,759	$44,964	920.3%
Corporate			
Trading income, net	$—	$704	(100.0)%
Interest and dividends income	56	271	(79.3)%
Commissions, net and technology services	—	—	NM
Other, net	(5,113)	2,699	NM
Total revenues from Corporate	$(5,057)	$3,674	NM
Consolidated			
Trading income, net	$900,454	$479,644	87.7%
Interest and dividends income	61,337	30,933	98.3%
Commissions, net and technology services	140,661	49,237	185.7%
Other, net	335,851	3,647	NM
Total revenues	$1,438,303	$563,461	155.3%

Trading income, net. Trading income, net was primarily earned by our Market Making segment. Trading income, net, increased $420.8 million, or 87.7%, to $900.5 million for the nine months ended September 30, 2018, compared to $479.6 million for the nine months ended September 30, 2017. The increase was primarily attributable to the Acquisition of KCG. Rather than analyzing trading income, net, in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income, together with interest and dividends income, interest and dividends expense and brokerage, exchange and clearance fees, net, each of which are described below.

Interest and dividends income. Interest and dividends income was primarily earned by our Market Making segment. Interest and dividends income increased $30.4 million, or 98.3%, to $61.3 million for the nine months ended September 30, 2018, compared to $30.9 million for the nine months ended September 30, 2017. This increase was primarily attributable to the Acquisition of KCG. As indicated above, rather than analyzing interest and dividends income in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Commissions, net and technology services. Commissions, net and technology services revenues were primarily earned by our Execution Services segment. Commissions, net and technology services revenues increased $91.4 million, or 185.7%, to $140.7 million for the nine months ended September 30, 2018, compared to $49.2 million for the nine months ended September 30, 2017. The increase was primarily due to the Acquisition of KCG, as well as agency fee revenues arising from new customers we on-boarded.

Other, net. Other, net revenues was primarily earned by our Execution Services segment. Other, net increased $332.2 million, or 9,109.0%, to $335.9 million for the nine months ended September 30, 2018, compared to $3.6 million for the nine months ended September 30, 2017. The increase was primarily due to the gain the sale of BondPoint of $337.6 million, as discussed in Note 4 “Sale of BondPoint” of Part I “Financial Information” of this quarterly report on Form 10-Q.

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Adjusted Net Trading Income

Adjusted Net Trading Income increased $402.1 million, or 126.0%, to $721.1 million for the nine months ended September 30, 2018, compared to $319.0 million for the nine months ended September 30, 2017. This increase was primarily attributable to the Acquisition of KCG, which resulted in a significant increase in Americas Equities of $308.9 million, or 229.6%, from the Market Making segment, and an increase of $37.9 million, or 111.1%, from Execution Services. Adjusted Net Trading Income per day increased $2.1 million, or 126.0%, to $3.8 million for the nine months ended September 30, 2018, compared to $1.7 million for the nine months ended September 30, 2017. The number of trading days was 188 for both the nine months ended September 30, 2018, and 2017.

Operating Expenses

Our operating expenses increased $309.8 million, or 53.3%, to $890.7 million for the nine months ended September 30, 2018, compared to $580.9 million for the nine months ended September 30, 2017. This increase was primarily due to increases in brokerage, exchange, and clearance fees of $59.5 million, communications and data processing of $54.6 million, employee compensation and payroll taxes of $39.7 million, payments for order flow of $38.3 million, interest and dividends expense of $42.7 million, operating and administrative expenses of $17.7 million, depreciation and amortization expense of $18.4 million, amortization of purchased intangible and acquired capitalized software of $13.5 million, termination of office leases of $23.3 million, financing interest expense on long term borrowings of $15.4 million, and debt issue cost related to debt refinancing of $2.4 million. These increases in operating expenses were partially offset by a decrease in transaction advisory fees and expenses of $15.2 million.

Brokerage, exchange and clearance fees, net. Brokerage exchange and clearance fees, net, increased $59.5 million, or 35.0%, to $229.8 million for the nine months ended September 30, 2018, compared to $170.3 million for the nine months ended September 30, 2017. This increase was primarily attributable to the increases in market volume and volatility traded in Americas Equities instruments in which we make markets as a result of the Acquisition of KCG. As indicated above, rather than analyzing brokerage, exchange and clearance fees, net, in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Communication and data processing. Communication and data processing expense increased $54.6 million, or 65.6%, to $137.8 million for the nine months ended September 30, 2018, compared to $83.2 million for the nine months ended September 30, 2017. This increase was primarily due to the Acquisition of KCG, which brought on additional connections, co-location connectivity, market data and other subscriptions. The increase was partially offset by the reductions in connectivity connections as a result of an on-going effort to consolidate various communication and data processing subscriptions.

Employee compensation and payroll taxes. Employee compensation and payroll taxes increased $39.7 million, or 35.7%, to $150.7 million for the nine months ended September 30, 2018, compared to $111.1 million for the nine months ended September 30, 2017. The increase in compensation levels was primarily attributable to the increase in headcount as a result of the Acquisition of KCG. Employee compensation expense for the interim period is accrued in connection with the Adjusted Net Trading Income for the period with certain adjustments made at management's discretion. We have capitalized and therefore excluded employee compensation and benefits related to software development of $20.3 million, and $6.1 million for the nine months ended September 30, 2018 and 2017, respectively.

Payments for order flow. Payments for order flow, which we did not incur prior to the Acquisition of KCG, increased $38.3 million, or 317.4%, to $50.4 million for the nine months ended September 30, 2018, compared to $12.1 million for the nine months ended September 30, 2017, and were attributable to the Acquisition of KCG. Payments for order flow primarily represent payments to broker-dealer clients, in the normal course of business, for directing to us their

order flow primarily in U.S. equities. Payments for order flow also fluctuate based on U.S. equity share and option volumes, our profitability and the mix of market orders, limit orders, and customer mix.

Interest and dividends expense. Interest and dividends expense increased $42.7 million, or 73.1%, to $101.2 million for the nine months ended September 30, 2018, compared to $58.5 million for the nine months ended September 30, 2017. This increase was primarily attributable to higher interest expense incurred on cash collateral received as part of securities lending transactions resulting from the Acquisition of KCG. As indicated above, rather than analyzing interest and dividends expense in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

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Operations and administrative. Operations and administrative expense increased $17.7 million, or 49.4%, to $53.7 million for the nine months ended September 30, 2018, compared to $35.9 million for the nine months ended September 30, 2017. The increase was attributable to the Acquisition of KCG.

Depreciation and amortization. Depreciation and amortization increased $18.4 million, or 63.1%, to $47.6 million for the nine months ended September 30, 2018, compared to $29.2 million for the nine months ended September 30, 2017. This increase was primarily attributable to depreciation and amortization of additional assets resulting from the Acquisition of KCG and an increase in capital expenditures on telecommunication, networking and other assets.

Amortization of purchased intangibles and acquired capitalized software. Amortization of purchased intangibles and acquired capitalized software increased $13.5 million, or 206.2%, to $20.0 million for the nine months ended September 30, 2018, compared to $6.5 million for the nine months ended September 30, 2017. This increase was primarily due to additional intangible assets recognized as part of purchase price accounting for the acquisition of certain technology assets from Teza Technologies and the Acquisition of KCG in the amount of $2.0 million and $175.0 million, respectively.

Debt issue costs related to debt refinancing. Expense from debt issue costs related to debt refinancing increased $2.4 million, or 25.4%, to $11.7 million for the nine months ended September 30, 2018, compared to $9.4 million for the nine months ended September 30, 2017. The increase reflects higher prepayments made on long-term debt during the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017, primarily $276 million in the first quarter of 2018, leading to higher accelerated amortization of the related debt issuance costs.

Transaction advisory fees and expenses. Transaction advisory fees and expenses decreased $15.2 million, or 62.9%, to $9.0 million for the nine months ended September 30, 2018, compared to $24.2 million for the nine months ended September 30, 2017. The decrease primarily represents lower non-recurring professional fees compared to those which had been incurred in the third quarter of 2017 related to the Acquisition of KCG.

Charges related to share based compensation at IPO. Charges related to share based compensation at IPO decreased $0.5 million, or 95.6%, to $0.0 million for the nine months ended September 30, 2018, compared to $0.5 million for the nine months ended September 30, 2017. The decrease was primarily attributable to the completed time vesting of the Class B and East MIP Class B interests in 2018.

Financing interest expense on long term borrowings. Financing interest expense on long-term borrowings increased $15.4 million, or 38.4%, to $55.5 million for the nine months ended September 30, 2018, compared to $40.1 million for the nine months ended September 30, 2017. This increase was due to the refinancing of the senior secured first lien term loan and the offering of the senior secured second lien notes, as discussed in Note 10 “Borrowings” of Part I “Financial Information” of this quarterly report on Form 10-Q. The increase in financing interest expense was primarily attributable to higher outstanding borrowings during the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017.

Provision for Income Taxes

Following the consummation of the Reorganization Transactions, we incur corporate tax at the U.S. federal income tax rate on our taxable income, as adjusted for noncontrolling interest in Virtu Financial. Our income tax expense reflects such U.S. federal income tax as well as taxes payable by certain of our non-U.S. subsidiaries. As such, provision for (benefit from) income taxes increased $78.2 million, or 2,681.6%, to $75.3 million for the nine months ended September 30, 2018, compared to $(2.9) million for the nine months ended September 30, 2017. The increase in provision for income taxes was primarily attributable to the increase in income before income taxes and noncontrolling interest.

Liquidity and Capital Resources

General

As of September 30, 2018, we had $415.9 million in cash and cash equivalents. These balances are maintained primarily to support operating activities for capital expenditures and for short-term access to liquidity, and for other general corporate purposes. As of September 30, 2018, we had borrowings under our short-term credit facilities of approximately $144.7 million, borrowing under broker dealer facilities of $17.0 million, and long-term debt outstanding in an aggregate principal amount of approximately $930.8 million. As of September 30, 2018, our regulatory capital requirements for domestic U.S. subsidiaries were $6.1 million, in aggregate.

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The majority of our trading assets consists of exchange-listed marketable securities, which are marked-to-market daily, and collateralized receivables from broker-dealers and clearing organizations arising from proprietary securities transactions. Collateralized receivables consist primarily of securities borrowed, receivables from clearing houses for settlement of securities transactions and, to a lesser extent, securities purchased under agreements to resell. We actively manage our liquidity, and we maintain significant borrowing facilities through the securities lending markets and with banks and prime brokers. We have continually received the benefit of uncommitted margin financing from our prime brokers globally. These margin facilities are secured by securities in accounts held at the prime broker. For purposes of providing additional liquidity, we maintain an uncommitted credit facility with two of our wholly owned broker-dealer subsidiaries. Additionally, we also maintain a revolving credit facility with three of our wholly owned broker-dealer subsidiaries, as discussed in Note 10 "Borrowings" of Part I "Financial Information" of this quarterly report on Form 10-Q.

Based on our current level of operations, we believe our cash flows from operations, available cash and cash equivalents, and available borrowings under our broker-dealer credit facilities will be adequate to meet our future liquidity needs for more than the next twelve months. We anticipate that our primary upcoming cash and liquidity needs will be increased margin requirements from increased trading activities in markets where we currently provide liquidity and in new markets into which we expand. We manage and monitor our margin and liquidity needs on a real-time basis and can adjust our requirements both intra-day and inter-day, as required.

We expect our principal sources of future liquidity to come from cash flows provided by operating activities and financing activities. Certain of our cash balances are insured by the Federal Deposit Insurance Corporation, generally up to $250,000 per account but without a cap under certain conditions. From time to time these cash balances may exceed insured limits, but we select financial institutions deemed highly credit worthy to minimize risk. We consider highly liquid investments with original maturities of less than three months when acquired to be cash equivalents.

Tax Receivable Agreements

Generally, we are required under the tax receivable agreements entered into in connection with our IPO to make payments to certain direct or indirect equityholders of Virtu Financial that are generally equal to 85% of the applicable cash tax savings, if any, that we actually realize as a result of favorable tax attributes that will be available to us as a result of the Reorganization Transactions, for exchanges of membership interests for Class A common stock or Class B common stock and payments made under the tax receivable agreements. We will retain the remaining 15% of any such cash tax savings. We expect that future payments to certain direct or indirect equityholders of Virtu Financial described in Note 6 "Tax Receivable Agreements" to the condensed consolidated financial statements included in Part I "Financial Information" of this quarterly report on Form 10-Q are expected to range from approximately $3.6 million to $16.0 million per year over the next 15 years. Such payments will occur only after we have filed our U.S. federal and state income tax returns and realized the cash tax savings from the favorable tax attributes. We made our first payment of $7.0 million in February 2017 and our second payment of $12.3 million in September 2018. Future payments under the tax receivable agreements in respect of subsequent exchanges would be in addition to these amounts. We currently expect to fund these payments from the cash flow from operations generated by our subsidiaries as well as from excess tax distributions that we receive from our subsidiaries.

Under the tax receivable agreements, as a result of certain types of transactions and other factors, including a transaction resulting in a change of control, we may also be required to make payments to certain direct or indirect equityholders of Virtu Financial in amounts equal to the present value of future payments we are obligated to make under the tax receivable agreements. If the payments under the tax receivable agreements are accelerated, we may be required to raise additional debt or equity to fund such payments. To the extent that we are unable to make payments under the tax receivable agreements for any reason (including because our Fourth Amended and Restated Credit Agreement or the indenture governing our Notes restricts the ability of our subsidiaries to make distributions to us)

such payments will be deferred and will accrue interest until paid.

Regulatory Capital Requirements

Certain of our principal operating subsidiaries are subject to separate regulation and capital requirements in the United States and other jurisdictions. Virtu Financial BD LLC, Virtu Financial Capital Markets LLC and Virtu Americas LLC, which became our subsidiary following the Acquisition of KCG, are registered U.S. broker-dealers, and their primary regulators include the SEC, the Chicago Stock Exchange and FINRA. Virtu Financial Ireland Limited is a registered investment firm under the Market in Financial Instruments Directive, and its primary regulator is the Central Bank of Ireland.

The SEC and FINRA impose rules that require notification when regulatory capital falls below certain pre-defined criteria. These rules also dictate the ratio of debt-to-equity in the regulatory capital composition of a broker-dealer and constrain the ability of a broker-dealer to expand its business under certain circumstances. If a firm fails to maintain the required regulatory

capital, it may be subject to suspension or revocation of registration by the applicable regulatory agency, and suspension or expulsion by these regulators could ultimately lead to the firm's liquidation. Additionally, certain applicable rules impose requirements that may have the effect of prohibiting a broker-dealer from distributing or withdrawing capital and requiring prior notice to and/or approval from the SEC, the Chicago Stock Exchange and FINRA for certain capital withdrawals. Virtu Financial Capital Markets LLC is also subject to rules set forth by NYSE MKT (formerly NYSE Amex) and is required to maintain a certain level of capital in connection with the operation of its designated market maker business. Virtu Financial Ireland Limited is regulated by the Central Bank of Ireland as an Investment Firm and in accordance with European Union law is required to maintain a minimum amount of regulatory capital based upon its positions, financial conditions, and other factors. In addition to periodic requirements to report its regulatory capital and submit other regulatory reports, Virtu Financial Ireland Limited is required to obtain consent prior to receiving capital contributions or making capital distributions from its regulatory capital. Failure to comply with its regulatory capital requirements could result in regulatory sanction or revocation of its regulatory license. KCG Europe Limited, as an FCA-regulated investment firm is also subject to similar prudential capital requirements.

See Note 18 "Regulatory Requirement" of Part I "Financial Information" of this quarterly report on Form 10-Q for a discussion of regulatory capital requirements of our regulated subsidiaries.

Borrowings

We maintain various broker-dealer facilities and short-term credit facilities as part of our daily trading operations. See Note 10 "Borrowings" of Part I "Financial Information" of this quarterly report on Form 10-Q for details on the Company's various credit facilities. As of September 30, 2018, the outstanding principal balance on our broker-dealer facilities was $17.0 million, and the outstanding aggregate short-term credit facilities with various prime brokers and other financial institutions from which the Company receives execution or clearing services was approximately $144.7 million, which was netted within receivables from broker dealers and clearing organizations on the condensed consolidated statement of financial condition of Part I "Financial Information" of this quarterly report on Form 10-Q.

Fourth Amended and Restated Credit Agreement

In connection with the Acquisition of KCG, we entered into the Fourth Amended and Restated Credit Agreement, which amended and restated in its entirety the existing credit agreement. The Fourth Amended and Restated Credit Agreement, provided for a $540.0 million first lien secured term loan, drawn in its entirety on June 30, 2017, and continued VFH's existing $100.0 million first lien senior secured revolving credit facility. Also on June 30, 2017, the Escrow Issuer entered into that certain Escrow Credit Agreement with the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent (the "Escrow Credit Agreement"), which provided for a $610.0 million term loan (the "Escrow Term Loan"), the proceeds of which were deposited into escrow pending the closing of the Acquisition of KCG.

Upon the closing of the Acquisition of KCG, the proceeds of the Escrow Term Loan were released to fund in part the consideration for the Acquisition of KCG, the obligations of the Escrow Issuer in respect of the Escrow Term Loan were automatically assumed by VFH, the Escrow Term Loan was deemed to be outstanding under the Fourth Amended and Restated Credit Agreement and the Escrow Credit Agreement and related credit documents automatically terminated and were superseded by the provisions of the Fourth Amended and Restated Credit Agreement. In addition, the first lien senior secured revolving credit facility under the Fourth Amended and Restated Credit Agreement was terminated.

Under the Fourth Amended and Restated Credit Agreement, the $1.15 billion aggregate principal amount of first lien senior secured term loans, including the Escrow Term Loan ("the Term Loan Facility"), will mature on December 30,

2021 and will require scheduled annual amortization payments on each of the first four anniversaries of the closing of the Acquisition of KCG in an amount equal to the sum of 7.5% of the original aggregate principal amount of the term loan issued under the Fourth Amended and Restated Credit Agreement and 7.5% of the aggregate principal amount of the Escrow Term Loan outstanding on the closing date of the Acquisition of KCG.

All obligations under the Term Loan Facility are unconditionally guaranteed by Virtu Financial and the Company's existing direct and indirect wholly-owned domestic restricted subsidiaries (including, KCG and its wholly-owned domestic restricted subsidiaries), subject to certain exceptions, including exceptions for our broker dealer subsidiaries and certain immaterial subsidiaries. The Term Loan Facility and related guarantees are secured by first-priority perfected liens, subject to certain exceptions, on substantially all of VFH's and the guarantors' existing and future assets, including substantially all material personal property and a pledge of the capital stock of VFH, the guarantors (other than Virtu Financial) and the direct domestic subsidiaries of VFH and the guarantors and 100% of the non-voting capital stock and up to 65.0% of the voting capital stock of foreign subsidiaries that are directly owned by VFH or any of the guarantors.

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The term loans outstanding under the Fourth Amended and Restated Credit Agreement bear interest:

- at VFH's option, at either (a) the greatest of (i) the prime rate in effect, (ii) the NYFRB rate plus 0.50%, (iii) an adjusted LIBOR rate for a Eurodollar borrowing with an interest period of one month plus 1.00%, and (iv) 2.00% plus, in each case, 2.75% per annum (reduced to 2.25% per annum after the repricing transaction in January 2018 and reduced to 1.75% after the repricing transaction in September 2018); or (b) the greater of (i) an adjusted LIBOR rate for the interest period in effect and (ii) 1.00% plus, in each case, 3.75% per annum (reduced to 3.25% per annum after the repricing transaction in January 2018 and reduced to 2.75% after the repricing transaction in September 2018).

Under the Fourth Amended and Restated Credit Agreement, we must comply on a quarterly basis with:

- a maximum total net leverage ratio of 5.00 to 1.0 with a step-down to (i) 4.25 to 1.0 from and after the fiscal quarter ending March 31, 2019, (ii) 3.50 to 1.0 from and after the fiscal quarter ending March 31, 2020 and (iii) 3.25 to 1.0 from the fiscal quarter ending March 31, 2021 and thereafter; and
- a minimum interest coverage ratio of 2.75 to 1.0, stepping up to 3.00 to 1.0 from and after the fiscal quarter ending March 31, 2019.

The Fourth Amended and Restated Credit Agreement contains certain customary affirmative covenants. The negative covenants in the Fourth Amended and Restated Credit Agreement include, among other things, limitations on our ability to do the following, subject to certain exceptions: (i) incur additional debt; (ii) create liens on certain assets; (iii) make certain loans or investments (including acquisitions); (iv) pay dividends on or make distributions in respect of our capital stock or make other restricted junior payments; (v) consolidate, merge, sell or otherwise dispose of all or substantially all of our assets; (vi) sell or otherwise dispose of assets, including equity interests in our subsidiaries; (vii) enter into certain transactions with our affiliates; (viii) enter into swaps, forwards and similar agreements; (ix) enter into sale-leaseback transactions; (x) restrict liens and subsidiary dividends; (xi) change our fiscal year; and (xii) modify the terms of certain debt agreements.

The Fourth Amended and Restated Credit Agreement contains certain customary events of default, including relating to a change of control. If an event of default occurs and is continuing, the lenders under the Fourth Amended and Restated Credit Agreement will be entitled to take various actions, including the acceleration of amounts outstanding under the Fourth Amended and Restated Credit Agreement and all actions permitted to be taken by a secured creditor in respect of the collateral securing the obligations under the Fourth Amended and Restated Credit Agreement.

A portion of certain financing costs incurred in connection with the original credit facility that were scheduled to be amortized over the term of the loan, including original issue discount and underwriting and legal fees, were accelerated at the closing of the refinancing.

We were in compliance with all applicable covenants under the Fourth Amended and Restated Credit Agreement as of September 30, 2018.

As of November 8, 2018, we have made total prepayments in the amount of $750.0 million under the Fourth Amended and Restated Credit Agreement.

Senior Secured Second Lien Notes

On June 16, 2017, the Escrow Issuer and the Co-Issuer completed the offering of $500 million aggregate principal amount of Notes. The Notes were issued under an Indenture, dated as of June 16, 2017 (the "Indenture"), among the Escrow Issuer, the Co-Issuer and U.S. Bank National Association, as the trustee and collateral agent. The Notes mature on June 15, 2022. Interest on the Notes accrues at 6.750% per annum, payable every six months through maturity on each June 15th and December 15th, beginning on December 15, 2017.

On July 20, 2017, VFH assumed all of the obligations of the Escrow Issuer under the Indenture and the Notes. The Notes are guaranteed by Virtu Financial and each of Virtu Financial's wholly-owned domestic restricted subsidiaries that guarantee the Fourth Amended and Restated Credit Agreement, including KCG and certain of its subsidiaries and the Escrow Issuer. We refer to VFH and the Co-Issuer together as, the "Issuers."

The Notes and the related guarantees are secured by second-priority perfected liens on substantially all of the Issuers' and guarantors' existing and future assets, subject to certain exceptions, including all material personal property, a pledge of the

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capital stock of the Issuers, the guarantors (other than Virtu Financial) and the direct subsidiaries of the Issuers and the guarantors and 100% of the non-voting capital stock and up to 65.0% of the voting capital stock of any now-owned or later-acquired foreign subsidiaries that are directly owned by the Issuers or any of the guarantors, which assets will also secure obligations under the Fourth Amended and Restated Credit Agreement on a first-priority basis.

The Indenture imposes certain limitations on our ability to (i) incur or guarantee additional indebtedness or issue preferred stock; (ii) pay dividends, make certain investments and make repayments on indebtedness that is subordinated in right of payment to the Notes and make other “restricted payments” (as such term is defined in the Indenture); (iii) create liens on their assets to secure debt; (iv) enter into transactions with affiliates; (v) merge, consolidate or amalgamate with another company; (vi) transfer and sell assets; and (vii) permit restrictions on the payment of dividends by Virtu Financial’s subsidiaries. The Indenture also contains customary events of default, including, among others, payment defaults related to the failure to pay principal or interest on Notes, covenant defaults, final maturity default or cross-acceleration with respect to material indebtedness and certain bankruptcy events.

Prior to June 15, 2019, we may redeem some or all of the Notes at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest, if any, to (but not including) the date of redemption, plus an applicable “make whole” premium (calculated based upon the yield of certain U.S. treasury securities plus 0.50%).

Prior to June 15, 2019, we may redeem up to 35% of the aggregate principal amount of the Notes at a redemption price equal to 106.750% of the principal amount thereof, plus accrued and unpaid interest, if any, to (but not including) the date of redemption with the net cash proceeds from certain equity offerings.

On or after June 15, 2019, we may redeem some or all of the Notes, at the following redemption prices (expressed as percentages of principal amount), plus accrued and unpaid interest to (but not including) the date of redemption, if redeemed during the 12-month period beginning on June 15th of the years indicated below:

Period	Percentage
2019	103.375%
2020	101.688%
2021 and thereafter	100.000%

Upon the occurrence of specified change of control events as defined in the Indenture, we must offer to repurchase the Notes at 101% of the principal amount, plus accrued and unpaid interest, if any, to (but excluding) the purchase date.

We were in compliance with all applicable covenants under the indenture governing our Notes as of September 30, 2018.

Cash Flows

Our main sources of liquidity are cash flow from the operations of our subsidiaries, our broker dealer credit facilities (as described above), margin financing provided by our prime brokers and cash on hand.

The table below summarizes our primary sources and uses of cash for the nine months ended September 30, 2018, and 2017.

	Nine Months Ended September 30,	
Net cash provided by (used in):	2018	2017

Operating activities	$313,511	$215,771
Investing activities	363,646	(826,458)
Financing activities	(790,398)	980,151
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(3,713)	8,300
Net increase (decrease) in cash, cash equivalents, and restricted cash	$(116,954)	$377,764

Operating Activities

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Net cash provided by operating activities was $313.5 million for the nine months ended September 30, 2018, compared to $215.8 million for the nine months ended September 30, 2017. The increase of $97.7 million in net cash provided by operating activities was primarily attributable to the Acquisition of KCG, which significantly increased our trading capital.

Investing Activities

Net cash provided by investing activities was $363.6 million for the nine months ended September 30, 2018, compared to net cash used of $826.5 million for the nine months ended September 30, 2017. The increase of $1.2 billion was primarily attributable to the net cash provided by the proceeds received from the sale of BondPoint, see Note 4 "Sale of BondPoint" of Part I “Financial Information” of this quarterly report on Form 10-Q.

Financing Activities

Net cash used in financing activities was $790.4 million for the nine months ended September 30, 2018, while net cash provided by financing activities was $1.0 billion for the nine months ended September 30, 2017. The decrease in cash provided of $1.8 billion compared to the prior year was primarily attributable to the $1.1 billion proceeds from long term borrowings during the nine months ended September 30, 2017, compared to financing cash outflows during the nine months ended September 30, 2018, including repayments of our senior secured credit facility of $500 million.

Off-Balance Sheet Arrangements

We do not invest in any off-balance sheet vehicles that provide liquidity, capital resources, market or credit risk support, or engage in any activities that expose us to any liability that is not reflected in our condensed consolidated financial statements.

Inflation

We believe inflation has not had a material effect on our financial condition, results of operations, or cash flows for the three and nine months ended September 30, 2018 and 2017.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with U.S. 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 condensed consolidated financial statements, as well as the reported amounts of revenue and expenses during the applicable reporting period. Critical accounting policies are those that are the most important portrayal of our financial condition, results of operations and cash flows, and that require our most difficult, subjective and complex judgments as a result of the need to make estimates about the effect of matters that are inherently uncertain. While our significant accounting policies are described in more detail in the notes to our condensed consolidated financial statements, our most critical accounting policies are discussed below. In applying such policies, we must use some amounts that are based upon our informed judgments and best estimates. Estimates, by their nature, are based upon judgments and available information. The estimates that we make are based upon historical factors, current circumstances and the experience and judgment of management. We evaluate our assumptions and estimates on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

Valuation of Financial Instruments

Due to the nature of our operations, substantially all of our financial instrument assets, comprised of financial instruments owned, securities purchased under agreements to resell, and receivables from brokers, dealers and clearing organizations are carried at fair value based on published market prices and are marked to market daily, or are assets which are short-term in nature and are reflected at amounts approximating fair value. Similarly, all of our financial instrument liabilities that arise from financial instruments sold but not yet purchased, securities sold under agreements to repurchase, securities loaned, and payables to brokers, dealers and clearing organizations are short-term in nature and are reported at quoted market prices or at amounts approximating fair value.

Fair value is defined as the price that would be received to sell an asset or would be paid to transfer a liability (i.e., the exit price) in an orderly transaction between market participants at the measurement date. Financial instruments measured and reported at fair value are classified and disclosed in one of the following categories based on inputs:

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Level 1 — Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2 — Quoted prices in markets that are not active and financial instruments for which all significant inputs are observable, either directly or indirectly; or

Level 3 — Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable

The fair values for substantially all of our financial instruments owned and financial instruments sold but not yet purchased are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Instruments categorized within level 3 of the fair value hierarchy are those which require one or more significant inputs that are not observable. Estimating the fair value of level 3 financial instruments requires judgments to be made. See Note 11 "Financial Assets and Liabilities" of Part I "Financial Information" of this quarterly report on Form 10-Q for further information about fair value measurements.

Revenue Recognition

Trading Income, Net

Trading income, net, consists of trading gains and losses that are recorded on a trade date basis and reported on a net basis. Trading income, net, is comprised of changes in fair value of financial instruments owned and financial instruments sold, not yet purchased assets and liabilities (i.e., unrealized gains and losses) and realized gains and losses on equities, fixed income securities, currencies and commodities.

Interest and Dividends Income/Interest and Dividends Expense

Interest income and interest expense are accrued in accordance with contractual rates. Interest income consists of income earned on collateralized financing arrangements and on cash held by brokers. Interest expense includes interest expense from collateralized transactions, margin and related short-term lending facilities. Dividends are recorded on the ex-dividend date, and interest is recognized on an accrual basis.

Commissions, net and Technology Services

Commissions, net, which primarily comprise commissions and commission equivalents earned on institutional client orders, are recorded on a trade date basis, which is the point at which the performance obligation to the customer is satisfied. Under a commission management program, we allow institutional clients to allocate a portion of their gross commissions to pay for research and other services provided by third parties. As we act as an agent in these transactions, we record such expenses on a net basis within Commissions and technology services in the condensed consolidated statements of comprehensive income. The Company recognizes the related revenue when the third party research services are rendered and payments are made.

Technology services revenues consist of fees paid by third parties for licensing of our proprietary risk management and trading infrastructure technology and provision of associated management and hosting services. These fees include both upfront and annual recurring fees, as well as, in certain cases, contingent fees based on client revenues, which represents variable consideration. The services offered under these contracts have the same pattern of transfer; accordingly, they are being measured and recognized as a single performance obligation. The performance obligation is satisfied over time, and accordingly, revenue is recognized as time passes. Variable consideration has not been included in the transaction price as the amount of consideration is contingent on factors outside the Company's control

and thus it is not probable that a significant reversal of cumulative revenue recognized will not occur. Recurring fees, which exclude variable consideration, are billed and collected on a monthly basis.

Share-Based Compensation

We account for share-based compensation transactions with employees under the provisions of the Financial Accounting Standards Board's Accounting Standards Codification ("ASC") 718, Compensation: Stock Compensation. Share-based compensation transactions with employees are measured based on the fair value of equity instruments issued.

The fair value of awards issued for compensation prior to the Reorganization Transactions and the IPO was determined by management, with the assistance of an independent third party valuation firm, using a projected annual forfeiture rate, where applicable, on the date of grant.

Share-based awards issued for compensation in connection with or subsequent to the Reorganization Transactions and the IPO pursuant to our 2015 Management Incentive Plan were in the form of stock options, Class A Common Stock and restricted stock units. The fair value of the stock option grants is determined through the application of the Black-Scholes-Merton model. The fair value of the Class A Common Stock and restricted stock units is determined based on the volume weighted average price for the three days preceding the grant, and with respect to the restricted stock units, a projected annual forfeiture rate. The fair value of share-based awards granted to employees is expensed based on the vesting conditions and is recognized on a straight line basis over the vesting period. We record as treasury stock shares repurchased from employees for the purpose of settling tax liabilities incurred upon the issuance of common stock, the vesting of restricted stock units or the exercise of stock options.

Income Taxes and Tax Receivable Agreement Obligations

We conduct our business globally through a number of separate legal entities. Consequently, our effective tax rate is dependent upon the geographic distribution of our earnings or losses and the tax laws and regulations of each legal jurisdiction in which we operate.

Certain of our wholly owned subsidiaries are subject to income taxes in foreign jurisdictions. The provision for income tax is comprised of current tax and deferred tax. Current tax represents the tax on current year tax returns, using tax rates enacted at the balance sheet date. A deferred tax asset is recognized only to the extent that it is probable that future taxable income will be available against which the asset can be utilized.

We are currently subject to audit in various jurisdictions, and these jurisdictions may assess additional income tax liabilities against us. Developments in an audit, litigation, or the relevant laws, regulations, administrative practices, principles, and interpretations could have a material effect on our operating results or cash flows in the period or periods for which that development occurs, as well as for prior and subsequent periods. We recognize the tax benefit from an uncertain tax position, in accordance with ASC 740, Income Taxes only if it is more likely than not that the tax position will be sustained on examination by the applicable taxing authority, including resolution of the appeals or litigation processes, based on the technical merits of the position. The tax benefits recognized in the condensed consolidated financial statements from such a position are measured based on the largest benefit for each such position that has a greater than fifty percent likelihood of being realized upon ultimate resolution. Many factors are considered when evaluating and estimating the tax positions and tax benefits. Such estimates involve interpretations of regulations, rulings, case law, etc. and are inherently complex. Our estimates may require periodic adjustments and may not accurately anticipate actual outcomes as resolution of income tax treatments in individual jurisdictions typically would not be known for several years after completion of any fiscal year.

Our tax receivable agreement obligations are closely tied to our U.S. income tax returns, and may be affected by the aforementioned factors that impact our provision for income taxes and actual tax returns, including the impact of the 2017 Tax Act.

Goodwill and Intangible Assets

Goodwill represents the excess of the purchase price over the underlying net tangible and intangible assets of our acquisitions. Goodwill is not amortized but is tested for impairment on an annual basis and between annual tests whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Goodwill is tested at the reporting unit level, which is defined as an operating segment or one level below the operating segment.

When performing an impairment test, an entity may assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. In evaluating whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, an entity shall assess relevant events and circumstances, including general economic conditions, limitations on accessing capital, fluctuations in foreign exchange rates, or other developments in equity and credit markets, industry and market considerations such as a deterioration in the environment in which an entity operates, an increased competitive environment, a decline in market-dependent multiples or metrics (considered in both absolute terms and relative to peers), a change in the market for an entity's products or services, or a regulatory or political development, cost factors such as increases in raw materials, labor, or other costs that have a negative effect on earnings and cash flows, overall financial performance such as negative or declining cash flows or a decline in actual or planned revenue or earnings compared with actual and projected results of relevant prior periods, or other relevant entity-

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specific events such as changes in management, key personnel, strategy, or customers, contemplation of bankruptcy, or litigation. If, after assessing the totality of such events or circumstances, an entity determines that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then the first and second steps of the goodwill impairment test are unnecessary.

The goodwill impairment test is a two-step process. The first step is used to identify potential impairment and compares the fair value of a reporting unit with its carrying amount, including goodwill. If the carrying amount of a reporting unit exceeds its fair value, the second step of the goodwill impairment test must be performed. The second step is used to measure the amount of impairment loss, if any, and compares the implied fair value of reporting unit goodwill with the carrying amount of that goodwill. If the carrying amount of reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss must be recognized in an amount equal to that excess.

We test goodwill for impairment on an annual basis on July 1 and on an interim basis when certain events or circumstances exist. In the impairment test as of July 1, 2018, we performed a qualitative assessment as described in ASC 350-20-35 (as described above) for each reporting unit. No impairment of goodwill was identified.

We amortize finite-lived intangible assets over their estimated useful lives. We test finite-lived intangible assets for impairment when impairment indicators are present, and if impaired, they are written down to fair value.

Recent Accounting Pronouncements

For a discussion of recently issued accounting developments and their impact or potential impact on our condensed consolidated financial statements, see Note 2 “Summary of Significant Accounting Policies” of Part I “Financial Information” of this quarterly report on Form 10-Q.

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ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk

We are exposed to various market risks in the ordinary course of business. The risks primarily relate to changes in the value of financial instruments due to factors such as market prices, interest rates, and currency rates.

Our on-exchange market making activities are not dependent on the direction of any particular market and are designed to minimize capital at risk at any given time by limiting the notional size of our positions. Our on-exchange market making strategies involve continuously quoting two-sided markets in various financial instruments with the intention of profiting by capturing the spread between the bid and offer price. If another market participant executes against the strategy's bid or offer by crossing the spread, the strategy will instantaneously attempt to lock in a return by either exiting the position or hedging in one or more different correlated instruments that represent economically equivalent value to the primary instrument. Such primary or hedging instruments include but are not limited to securities and derivatives such as: common shares, exchange traded products, American Depositary Receipts ("ADRs"), options, bonds, futures, spot currencies and commodities. Substantially all of the financial instruments we trade are liquid and can be liquidated within a short time frame at low cost.

The market making activities, where we interact with customers, involve taking on position risks. The risks at any point in time are limited by the notional size of positions as well as other factors. The overall portfolio risks are quantified using internal risk models and monitored by the Company's Chief Risk Officer (the "CRO"), the independent risk group and senior management.

We use various proprietary risk management tools in managing our market risk on a continuous basis (including intraday). In order to minimize the likelihood of unintended activities by our market making strategies, if our risk management system detects a trading strategy generating revenues outside of our preset limits, it will freeze, or "lockdown", that strategy and alert risk management personnel and management.

For working capital purposes, we invest in money market funds and maintain interest and non-interest bearing balances at banks and in our trading accounts with clearing brokers, which are classified as Cash and cash equivalents and Receivables from brokers, dealers and clearing organizations, respectively, on the condensed consolidated statements of financial condition. These financial instruments do not have maturity dates; the balances are short term, which helps to mitigate our market risks. We also invest our working capital in short-term U.S. government securities, which are included in Financial instruments owned on the condensed consolidated statements of financial condition. Our cash and cash equivalents held in foreign currencies are subject to the exposure of foreign currency fluctuations. These balances are monitored daily and are hedged or reduced when appropriate and therefore not material to our overall cash position.

In the normal course of business, we maintain inventories of exchange-listed and other equity securities, and to a lesser extent, fixed income securities and listed equity options. The fair value of these financial instruments at September 30, 2018 and December 31, 2017 was $2.9 billion and $2.7 billion, respectively, in long positions and$2.4 billion and $2.4 billion, respectively, in short positions. We also enter into futures contracts, which are recorded on our condensed consolidated statements of financial condition within Receivable from brokers, dealers and clearing organizations or Payable to brokers, dealers and clearing organizations as applicable.

We calculate daily the potential losses that might arise from a series of different stress events. These include both single factor and multi factor shocks to asset prices based off both historical events and hypothetical scenarios. The stress calculations include a full recalculation of any option positions, non-linear positions and leverage. Senior

management and the independent risk group carefully monitor the highest stress scenarios to help mitigate the risk of exposure to extreme events.

The potential change in fair value is estimated to be a gain of $6.3 million using a hypothetical 10% increase in equity prices as of September 30, 2018, and an estimated loss of $4.4 million using a hypothetical 10% decrease in equity prices at September 30, 2018. These estimates take into account the offsetting effect of such hypothetical price movements on the fair value of short positions against long positions, the effect on the fair value of options, futures, nonlinear positions and leverage as well as assumed correlations with non-equity asset classes, such as fixed income, commodities and foreign exchange. The Company relies on internally developed systems in order to model and calculate stress risks to a variety of different scenarios.

The purchase and sale of futures contracts requires margin deposits with a Futures Commission Merchant (“FCM”). The Commodity Exchange Act requires an FCM to segregate all customer transactions and assets from the FCM’s proprietary activities. A customer’s cash and other equity deposited with an FCM are considered commingled with all other customer funds

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subject to the FCM's segregation requirements. In the event of an FCM's insolvency, recovery may be limited to the Company's pro rata share of segregated customer funds available. It is possible that the recovery amount could be less than the total cash and other equity deposited.

Interest Rate Risk, Derivative Instruments

In the normal course of business, we utilize derivative financial instruments in connection with our proprietary trading activities. We do not designate our derivative financial instruments as hedging instruments under ASC 815 Derivatives and Hedging, other than derivatives used to reduce the impact of fluctuations in foreign exchange rates on our net investment in certain non-U.S. operations as discussed in Note 12 "Derivative Instruments" of Part I "Financial Information" of this quarterly report on Form 10-Q. Instead, we carry our derivative instruments at fair value with gains and losses included in trading income, net, in the accompanying condensed consolidated statements of comprehensive income (loss). Fair value of derivatives that are freely tradable and listed on a national exchange is determined at their last sale price as of the last business day of the period. Since gains and losses are included in earnings, we have elected not to separately disclose gains and losses on derivative instruments, but instead to disclose gains and losses within trading revenue for both derivative and non-derivative instruments.

Futures Contracts. As part of our proprietary market making trading strategies, we use futures contracts to gain exposure to changes in values of various indices, commodities, interest rates or foreign currencies. A futures contract represents a commitment for the future purchase or sale of an asset at a specified price on a specified date. Upon entering into a futures contract, we are required to pledge to the broker an amount of cash, U.S. government securities or other assets equal to a certain percentage of the contract amount. Subsequent payments, known as variation margin, are made or received by us each day, depending on the daily fluctuations in the fair values of the underlying securities. We recognize a gain or loss equal to the daily variation margin.

Due from Broker Dealers and Clearing Organizations. Management periodically evaluates our counterparty credit exposures to various brokers and clearing organizations with a view to limiting potential losses resulting from counterparty insolvency.

Foreign Currency Risk

As a result of our international market making activities and accumulated earnings in our foreign subsidiaries, our income and net worth are subject to fluctuation in foreign exchange rates. While we generate revenues in several currencies, a majority of our operating expenses are denominated in U.S. dollars. Therefore, depreciation in these other currencies against the U.S. dollar would negatively impact revenue upon translation to the U.S. dollar. The impact of any translation of our foreign denominated earnings to the U.S. dollar is mitigated, however, through the impact of daily hedging practices that are employed by the company.

Assets and liabilities of subsidiaries with non-U.S. dollar functional currencies are translated into U.S. dollars at period-end exchange rates. Income, expense and cash flow items are translated at average exchange rates prevailing during the period. The resulting currency translation adjustments are recorded as foreign exchange translation adjustment in our condensed consolidated statements of comprehensive income (loss) and changes in equity. Our primary currency translation exposures historically relate to net investments in subsidiaries having functional currencies denominated in the Euro.

Financial Instruments with Off Balance Sheet Risk

We enter into various transactions involving derivatives and other off-balance sheet financial instruments. These financial instruments include futures, forward contracts, and exchange-traded options. These derivative financial

instruments are used to conduct trading activities and manage market risks and are, therefore, subject to varying degrees of market and credit risk. Derivative transactions are entered into for trading purposes or to economically hedge other positions or transactions.

Futures and forward contracts provide for delayed delivery of the underlying instrument. In situations where we write listed options, we receive a premium in exchange for giving the buyer the right to buy or sell the security at a future date at a contracted price. The contractual or notional amounts related to these financial instruments reflect the volume and activity and do not necessarily reflect the amounts at risk. Futures contracts are executed on an exchange, and cash settlement is made on a daily basis for market movements, typically with a central clearing house as the counterparty. Accordingly, futures contracts generally do not have credit risk. The credit risk for forward contracts, options, and swaps is limited to the unrealized market valuation gains recorded in the statements of financial condition. Market risk is substantially dependent upon the value of the

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underlying financial instruments and is affected by market forces, such as volatility and changes in interest and foreign exchange rates.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, management has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) of the Securities Exchange Act of 1934, (the “Exchange Act”)) as of September 30, 2018. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of September 30, 2018, our disclosure controls and procedures were effective to ensure information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the periods specified in the Securities and Exchange Commission’s rules and forms and is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, with the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error and mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of controls.

The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, a control may become inadequate because of changes in conditions or because the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and may not be detected.

Changes to Internal Control over Financial Reporting

No change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) occurred during the three months ended September 30, 2018 that has or is reasonably likely to materially affect, our internal control over financial reporting.

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PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

The information required by this item is set forth in the “Legal Proceedings” section in Note 15 "Commitments, Contingencies and Guarantees" to the Company’s Condensed Consolidated Financial Statements included in Part I “Financial Information”, which is incorporated by reference herein.

ITEM 1A. RISK FACTORS

There have been no material changes to the Risk Factors described in Part I “Item 1A. Risk factors” in our 2017 Form 10-K as filed with the Securities and Exchange Commission (“SEC”) on March 13, 2018 other than those set forth below.

Risks Related to the ITG Transactions

There is no assurance when or if the ITG Acquisition will be completed. Any delay in completing the ITG Acquisition may substantially reduce the benefits that we expect to obtain from the ITG Acquisition and increase the transaction costs.

Completion of the ITG Acquisition is subject to the satisfaction or waiver of a number of conditions as set forth in the ITG Merger Agreement, including expiration or termination of applicable waiting periods under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and the receipt of other required governmental or regulatory approvals. We and ITG may not be able to satisfy the closing conditions and closing conditions beyond our or their control may not be satisfied or waived and the ITG Acquisition may not be consummated by reason of failure to so satisfy such conditions. If the ITG Acquisition and the integration of the companies’ respective businesses are not completed within the expected timeframe, such delay may materially and adversely affect the synergies, cost reductions and other benefits that we expect to achieve as a result of the ITG Acquisition and could result in additional transaction costs, loss of revenue or other effects associated with uncertainty about the ITG Acquisition.

Failure to complete the ITG Acquisition could negatively impact our stock price and our future business and financial results.

Consummation of the ITG Acquisition is subject to customary closing conditions. If the ITG Acquisition is not completed for any reason, our ongoing business and financial results may be adversely affected, and we will be subject to a number of risks, including the fact that we will be required to pay certain costs relating to the ITG Acquisition, whether or not the ITG Acquisition is completed, such as legal, accounting, financial advisor and printing fees.

We may also be subject to litigation related to any failure to complete the ITG Acquisition. If the ITG Acquisition is not completed, these risks may materialize and may adversely affect our business, prospects, results of operations, financial condition and/or cash flows, as well as the price of our common stock, which may cause the value of your investment to decline. We cannot provide any assurance that the ITG Acquisition will be completed, that there will not be a delay in the completion of the ITG Acquisition or that all or any of the anticipated benefits of the ITG Acquisition will be obtained. In the event the ITG Acquisition is materially delayed for any reason, the price of our common stock and of our securities may decline.

Significant costs and significant indebtedness will be incurred in connection with the consummation of the ITG Transactions, including the ITG Acquisition, and the integration of ITG into our business, including legal, accounting,

financial advisory and other costs.

We expect to incur significant costs in connection with integrating the operations, products and personnel of ITG into our business, in addition to costs related directly to completing the ITG Transactions. These costs may include:

- employee retention, redeployment, relocation or severance;
- integration of information systems'
- combination of corporate and administrative functions; and
- potential or pending litigation or other proceedings related to the ITG Acquisition.

The costs related to the ITG Transactions could be higher than currently estimated, depending on how difficult it will be to integrate our business with that of ITG, and the expected cost reductions and synergies may not be achieved.

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In addition, we expect to incur a number of non-recurring costs associated with combining the operations of ITG with ours, which cannot be estimated accurately at this time. While we expect to incur a significant amount of transaction fees and other costs related to the consummation of the ITG Transactions, additional unanticipated costs may yet be incurred. Any expected elimination of duplicative costs, as well as the expected realization of other cost reductions, efficiencies and synergies related to the integration of our operations with those of ITG, that may offset incremental transaction and transaction-related costs over time, may not be achieved as projected, or at all.

In addition, we expect to incur up to $1.55 billion of new indebtedness in connection with the ITG Transactions. The debt we incur in connection with the ITG Transactions may limit our financial and operating flexibility, and we may incur additional debt, which could increase the risks associated with our substantial indebtedness. Our substantial indebtedness may have material consequences for our business, prospects, results of operations, financial condition and/or cash flows.

Integrating ITG's business into our business may divert management's attention away from operations, and we may also encounter significant difficulties in integrating the two businesses.

The ITG Transactions involve the integration of two companies that have previously operated independently. The success of the ITG Transactions and their anticipated financial and operational benefits, including increased revenues, synergies and cost reductions, will depend in part on our ability to successfully combine and integrate ITG's business into ours, and there can be no assurance regarding when or the extent to which we will be able to realize these increased revenues, synergies, cost reductions or other benefits. These benefits may not be achieved within the anticipated time frame, or at all.

Successful integration of ITG's operations, products and personnel may place a significant burden on management and other internal resources. The diversion of management's attention, and any difficulties encountered in the transition and integration process, could harm our business, prospects, results of operations, financial condition and/or cash flows.

In addition, the overall integration of the businesses may result in material unanticipated problems, expenses, liabilities, and competitive responses. The difficulties of combining the operations of the companies include, among others:

- difficulties in achieving anticipated cost reductions, synergies, business opportunities and growth prospects from the combination;
- difficulties in the integration of operations and systems;
- conforming standards, controls, procedures and accounting and other policies, business cultures and compensation structures between the two companies;
- difficulties in the assimilation of employees and the integration of the companies' different organizational structure;
- difficulties in managing the expanded operations of a larger and more complex company with increased international operations;
- challenges in integrating the business culture of each company;
- challenges in attracting and retaining key personnel; and
- difficulties in replacing numerous systems, including those involving management information, purchasing, accounting and finance, sales, billing, employee benefits, payroll, data privacy and security and regulatory compliance, many of which may be dissimilar.

These factors could result in increased costs, decreases in the amount of expected revenues and diversion of management's time and energy, which could materially impact our business, prospects, results of operations, financial

condition and/or cash flows.

We may not realize the anticipated synergies, net cost reductions and growth opportunities from the ITG Acquisition.

The benefits that we expect to achieve as a result of the ITG Acquisition will depend, in part, on the ability of the combined company to realize anticipated growth opportunities, net cost reductions and synergies. Our success in realizing these growth opportunities, net cost reductions and synergies, and the timing of this realization, depends on the successful integration of our historical business and operations and the historical business and operations of ITG. Even if we are able to integrate the businesses and operations of the Company and ITG successfully, this integration may not result in the realization of the full benefits of the growth opportunities, net cost reductions and synergies that we currently expect from this integration within the anticipated time frame or at all. For example, we may be unable to eliminate duplicative costs. Moreover, we may incur substantial expenses in connection with the integration of our business and ITG's business. While we anticipate that certain expenses will be incurred, such expenses are difficult to estimate accurately and may exceed current estimates. Accordingly, the benefits from the ITG Acquisition may be offset by costs or delays incurred in integrating the businesses. The projected net cost

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reductions and synergies described in our press release and supplemental materials announcing the ITG Transactions are based on a number of assumptions relating to our business and ITG's business. Those assumptions may be inaccurate, and, as a result, our projected net cost reductions and synergies may be inaccurate, and our business, prospects, results of operations, financial condition and/or cash flows could be materially and adversely affected.

The Company will be subject to business uncertainties that could materially and adversely affect our business.

Uncertainty about the effect of the ITG Acquisition on employees, customers and suppliers may have both a material and adverse effect on both the Company and ITG. These uncertainties may impair both companies' ability to attract, retain and motivate key personnel until the ITG Acquisition is consummated and for a period of time thereafter, and could cause customers, suppliers and others who deal with the Company and ITG to seek to change existing business relationships. If key employees depart because of issues related to the uncertainty and difficulty of integration or a desire not to remain with us after the ITG Transactions are completed, or if customers, suppliers or others seek to change their dealings with us as a result of the ITG Acquisition, our business could be materially and adversely impacted.

In connection with the ITG Acquisition, we will assume potential liabilities relating to ITG's business.

In connection with the ITG Acquisition, we will have assumed potential liabilities and other risks relating to ITG's business, including but not limited to those liabilities and risks arising from or related to pending, threatened or potential litigation or regulatory matters. To the extent we have not identified such liabilities or miscalculated their potential financial or business impact, these liabilities could have a material adverse effect on our business, prospects, results of operations, financial condition and/or cash flows.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Pursuant to the exchange agreement (the "Exchange Agreement") entered into on April 15, 2015 by and among the Company, Virtu Financial and holders of non-voting common interest units in Virtu Financial (the "Virtu Financial Units"), Virtu Financial Units (along with the corresponding shares of our Class C common stock or Class D common stock, as applicable) may be exchanged at any time for shares of our Class A common stock or Class B common stock, as applicable, on a one-for-one basis, subject to customary conversion rate adjustments for stock splits, stock dividends and reclassifications.

On February 8, 2018, the Company's board of directors authorized a new share repurchase program of up to $50.0 million in Class A common stock and common units by March 31, 2019. The Company may repurchase shares from time to time in open market transactions, privately negotiated transactions or by other means. Repurchases may also be made under Rule 10b5-1 plans. The timing and amount of repurchase transactions will be determined by the Company's management based on its evaluation of market conditions, share price, legal requirements and other factors. The program may be suspended, modified or discontinued at any time without prior notice. There are no assurances that any further repurchases will actually occur. The following table contains information about the Company's purchases of its Class A Common Stock during the nine months ended ended September 30, 2018 (in thousands, except average price paid per share):

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Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
January 1, 2018 - January 31, 2018				
Common stock / common units repurchases	—	—	—	
February 1, 2018 - February 28, 2018				
Class A Common stock repurchases	375,000	29.27	375,000	
March 1, 2018 - March 31, 2018				
Common stock / common units repurchases	—	—	—	
April 1, 2018 - April 30, 2018				
Common stock / common units repurchases	—	—	—	
May 1, 2018 - May 31, 2018				
Class A Common stock repurchases	307,391	29.34	307,391	
Class C Common stock/ common units repurchases	696,373	29.44	696,373	
June 1, 2018 - June 30, 2018				
Common stock / common units repurchases	—	—	—	
July 1, 2018 - July 31, 2018				
Common stock / common units repurchases	—	—	—	
August 1, 2018 - August 31, 2018				
Class A Common stock repurchases	480,360	21.33	480,360	
September 1, 2018 - September 30, 2018				
Class A Common stock repurchases	184,090	21.70	184,090	
Class C Common stock/ common units repurchases	330,136	21.59	330,136	
Total Common stock / common units repurchases	2,373,350	$ 26.07	2,373,350	$ 38,135,874

On July 27, 2018, the Company's board of directors authorized $100.0 million share repurchase program through September 30, 2019. Since the inception of the program in February 2018, the Company has repurchased approximately 2.37 million shares of Class A Common Stock and common units for approximately $61.9 million. The Company now has approximately $38.1 million remaining capacity for future purchases of shares of Class A Common Stock and common units under the program.

Pursuant to the Exchange Agreement, on February 15, 2018, certain current and former employees elected to exchange 420,521 Virtu Financial Units (along with the corresponding shares of our Class C common stock) held directly or on their behalf on a one-for-one basis for shares of our Class A Common Stock. The shares of our Class A

Common Stock were issued in reliance on the registration exemption contained in Section 4(a)(2) of the Securities Act, on the basis that the transaction did not involve a public offering. No underwriters were involved in the transaction.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

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None.

ITEM 4. MINE SAFETY DISCLOSURES

None.

ITEM 5. OTHER INFORMATION

None.

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ITEM 6. EXHIBITS

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of Virtu Financial, Inc. (incorporated herein by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q, as amended (File No. 001-37352) filed on May 29, 2015).
3.2	Amended and Restated By-laws of Virtu Financial, Inc. (incorporated herein by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q, as amended (File No. 001-37352), filed on May 29, 2015).
10.1	Amended and Restated Registration Rights Agreement, dated April 20, 2017, by and among Virtu Financial, Inc., TJMT Holdings LLC, Aranda Investments Pte. Ltd., Havelock Fund Investments Pte Ltd., North Island Holdings I, LP and the additional holders named therein (incorporated herein by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q (File No. 001-37352), filed on May 10, 2017).
10.2	Virtu Financial, Inc. 2015 Management Incentive Plan Employee Restricted Stock Unit and Common Stock Award Agreement, dated as of January 23, 2018, by and between Virtu Financial, Inc. and Joseph Molluso (incorporated herein by reference to Exhibit 10.8 to the Company's Annual Report on Form 10-K (File No. 001-37352), filed on March 13, 2018).
10.3	Virtu Financial, Inc. 2015 Management Incentive Plan Employee Restricted Stock Unit and Common Stock Award Agreement, dated as of January 23, 2018, by and between Virtu Financial, Inc. and Douglas A. Cifu (incorporated herein by reference to Exhibit 10.9 to the Company's Annual Report on Form 10-K (File No. 001-37352), filed on March 13, 2018).
10.4	Virtu Financial, Inc. 2015 Amended and Restated Management Incentive Plan Employee Restricted Stock Award Agreement, dated as of February 2, 2018, by and between Virtu Financial, Inc. and Douglas A. Cifu (incorporated herein by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K (File No. 001-37352), filed on March 13, 2018).
10.5*	Amendment No. 2, dated as of September 19, 2018, to the Fourth Amended and Restated Credit Agreement, dated June 30, 2017, by and between Virtu Financial LLC, VFH Parent LLC, the lenders party thereto and JPMorgan Chase Bank, N.A.
10.6	Third Amendment, dated as of January 5, 2018, to the Third Amended and Restated Limited Liability Company Agreement of Virtu Financial LLC, dated as of April 15, 2015 (incorporated herein by reference to Exhibit 10.30 to the Company's Annual Report on Form 10-K (File No. 001-37352), filed on March 13, 2018).
10.7	Employment Agreement, dated as of June 24, 2015, by and between Stephen Cavoli and Virtu Financial Operating LLC (incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q (File No. 001-37352), filed on May 7, 2018).
10.8	Virtu Financial, Inc. 2015 Management Incentive Plan Employee Restricted Stock Unit Award Agreement, dated as of August 24, 2015, by and between Virtu Financial, Inc. and Stephen Cavoli (incorporated by reference to Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q (File No. 001-37352), filed on May 7, 2018).
10.9	Virtu Financial, Inc. 2015 Management Incentive Plan Employee Restricted Stock Unit and Common Stock Award Agreement, dated as of December 31, 2016, by and between Virtu Financial, Inc. and Stephen Cavoli (incorporated by reference to Exhibit 10.9 to the Company's Quarterly Report on Form 10-Q (File No. 001-37352), filed on May 7, 2018).
10.10	Virtu Financial, Inc. Amended and Restated 2015 Management Incentive Plan Employee Restricted Stock Unit Agreement, dated as of March 21, 2018, by and between Virtu Financial, Inc.

	and Joseph Molluso (incorporated by reference to Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q (File No. 001-373352), filed on May 7, 2018).
10.11	Underwriting Agreement, dated May 10, 2018, by and among Virtu Financial, Inc., Virtu Financial LLC, the selling stockholders party thereto and the Underwriters (incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K (File No. 001-37352), filed on May 15, 2018).
10.12	Amendment No. 1 to the Amended and Restated Registration Rights Agreement, dated May 10, 2018, by and among Virtu Financial, Inc., TJMT Holdings LLC, North Island Holdings I, LP, Havelock Fund Investments Pte Ltd and Aranda Investments Pte. Ltd (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-37352), filed on May 15, 2018).

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10.13	Amendment No. 1 to Amended and Restated Lock-up Waivers Agreement, dated May 10, 2018, by and among Virtu Financial, Inc., TJMT Holdings LLC, Mr. Vincent Viola, Havelock Fund Investments Pte Ltd, Aranda Investments Pte. Ltd., North Island Holdings I, LP and the stockholders named therein (incorporated herein by reference to Exhibit 99.8 to the Report on Schedule 13D of Vincent Viola (File No. 005-89306), filed on May 15, 2018).
10.14	Purchase Agreement, dated May 10, 2018, by and among Virtu Financial, Inc. and TJMT Holdings LLC (incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-37352), filed on May 15, 2018).
10.15	Lock-up Agreement, dated May 10, 2018, entered into by Vincent Viola (incorporated herein by reference to Exhibit 99.2 to the Report on Schedule 13D of Vincent Viola (File No. 005-89306), filed on May 15, 2018).
10.16	Lock-up Agreement, dated May 10, 2018, entered into by Michael T. Viola (incorporated herein by reference to Exhibit 99.3 to the Report on Schedule 13D of Vincent Viola (File No. 005-89306), filed on May 15, 2018).
10.17	Lock-up Agreement, dated May 10, 2018, entered into by TJMT Holdings LLC (incorporated herein by reference to Exhibit 99.4 to the Report on Schedule 13D of Vincent Viola (File No. 005-89306), filed on May 15, 2018).
10.18	Lock-up Agreement, dated May 10, 2018, entered into by Virtu Employee Holdco LLC (incorporated herein by reference to Exhibit 99.5 to the Report on Schedule 13D of Vincent Viola (File No. 005-89306), filed on May 15, 2018).
31.1*	Certification of Chief Executive Officer required by Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer required by Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith).
32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith).
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Document

* Filed herewith.

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EXHIBIT INDEX

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of Virtu Financial, Inc. (incorporated herein by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q, as amended (File No. 001-37352) filed on May 29, 2015).
3.2	Amended and Restated By-laws of Virtu Financial, Inc. (incorporated herein by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q, as amended (File No. 001-37352), filed on May 29, 2015).
10.1	Amended and Restated Registration Rights Agreement, dated April 20, 2017, by and among Virtu Financial, Inc., TJMT Holdings LLC, Aranda Investments Pte. Ltd., Havelock Fund Investments Pte Ltd., North Island Holdings I, LP and the additional holders named therein (incorporated herein by reference to Exhibit 10.3 to the Company’s Quarterly Report on Form 10-Q (File No. 001-37352), filed on May 10, 2017).
10.2	Virtu Financial, Inc. 2015 Management Incentive Plan Employee Restricted Stock Unit and Common Stock Award Agreement, dated as of January 23, 2018, by and between Virtu Financial, Inc. and Joseph Molluso (incorporated herein by reference to Exhibit 10.8 to the Company’s Annual Report on Form 10-K (File No. 001-37352), filed on March 13, 2018).
10.3	Virtu Financial, Inc. 2015 Management Incentive Plan Employee Restricted Stock Unit and Common Stock Award Agreement, dated as of January 23, 2018, by and between Virtu Financial, Inc. and Douglas A. Cifu (incorporated herein by reference to Exhibit 10.9 to the Company’s Annual Report on Form 10-K (File No. 001-37352), filed on March 13, 2018).
10.4	Virtu Financial, Inc. 2015 Amended and Restated Management Incentive Plan Employee Restricted Stock Award Agreement, dated as of February 2, 2018, by and between Virtu Financial, Inc. and Douglas A. Cifu (incorporated herein by reference to Exhibit 10.10 to the Company’s Annual Report on Form 10-K (File No. 001-37352), filed on March 13, 2018).
10.5*	Amendment No. 2, dated as of September 19, 2018, to the Fourth Amended and Restated Credit Agreement, dated June 30, 2017, by and between Virtu Financial LLC, VFH Parent LLC, the lenders party thereto and JPMorgan Chase Bank, N.A.
10.6	Third Amendment, dated as of January 5, 2018, to the Third Amended and Restated Limited Liability Company Agreement of Virtu Financial LLC, dated as of April 15, 2015 (incorporated herein by reference to Exhibit 10.30 to the Company’s Annual Report on Form 10-K (File No. 001-37352), filed on March 13, 2018).
10.7	Employment Agreement, dated as of June 24, 2015, by and between Stephen Cavoli and Virtu Financial Operating LLC (incorporated by reference to Exhibit 10.7 to the Company’s Quarterly Report on Form 10-Q (File No. 001-37352), filed on May 7, 2018).
10.8	Virtu Financial, Inc. 2015 Management Incentive Plan Employee Restricted Stock Unit Award Agreement, dated as of August 24, 2015, by and between Virtu Financial, Inc. and Stephen Cavoli (incorporated by reference to Exhibit 10.8 to the Company’s Quarterly Report on Form 10-Q (File No. 001-37352), filed on May 7, 2018).
10.9	Virtu Financial, Inc. 2015 Management Incentive Plan Employee Restricted Stock Unit and Common Stock Award Agreement, dated as of December 31, 2016, by and between Virtu Financial, Inc. and Stephen Cavoli (incorporated by reference to Exhibit 10.9 to the Company’s Quarterly Report on Form 10-Q (File No. 001-37352), filed on May 7, 2018).
10.10	Virtu Financial, Inc. Amended and Restated 2015 Management Incentive Plan Employee Restricted Stock Unit Agreement, dated as of March 21, 2018, by and between Virtu Financial, Inc. and Joseph Molluso (incorporated by reference to Exhibit 10.10 to the Company’s Quarterly Report

	on Form 10-Q (File No. 001-37352), filed on May 7, 2018).
10.11	Underwriting Agreement, dated May 10, 2018, by and among Virtu Financial, Inc., Virtu Financial LLC, the selling stockholders party thereto and the Underwriters (incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K (File No. 001-37352), filed on May 15, 2018).
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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.

			Virtu Financial, Inc.
DATE:	November 8, 2018	By:	/s/ Douglas A. Cifu
			Douglas A. Cifu
			Chief Executive Officer
DATE:	November 8, 2018	By:	/s/ Joseph Molluso
			Joseph Molluso
			Chief Financial Officer