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	Smaller reporting company
		(Do not check if a 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

VIRTU FINANCIAL, INC. AND SUBSIDIARIES
INDEX TO FORM 10-Q
FOR THE QUARTER ENDED SEPTEMBER 30, 2018

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
Index to Condensed Consolidated Financial Statements (Unaudited)

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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	2017	For the 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 (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
	Shares	Amounts	Shares	Amounts	Shares	Amounts	Shares	Amounts	Amounts	Deficit)
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)

	Nine Months Ended September 30,	
(in thousands)	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).

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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	
(in thousands)	Asset	Liability	Exposure to Loss	VIEs' 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	
(in thousands)	Asset	Liability	Exposure to Loss	VIEs' 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	106,692,734	79,499,142	99,038,084	53,520,346
Issuable pursuant to 2015 Management Incentive Plan (1)	436,172	—	1,430,776	—
	107,128,906	79,699,142	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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		At September 30, 2018				
(in thousands)	Maturity Date	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

		At December 31, 2017				
(in thousands)	Maturity Date	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

		Consolidated	Condensed	of Financial Condition		
(in thousands)		Statement of Financial Condition	Consolidated Statement 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	1,942,681	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)	