UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2019

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.)
One Liberty Plaza **165 Broadway** **New York, New York**	**10006**
(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 ☒ 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 ☒ 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 ☐
			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. ☐

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

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Class A common stock, par value $0.00001 per share	VIRT	The NASDAQ Stock Market LLC

Class of Stock	Shares outstanding as of August 9, 2019
Class A common stock, par value $0.00001 per share	117,380,768
Class C common stock, par value $0.00001 per share	13,138,402
Class D common stock, par value $0.00001 per share	60,091,740

VIRTU FINANCIAL, INC. AND SUBSIDIARIES
INDEX TO FORM 10-Q
FOR THE QUARTER ENDED JUNE 30, 2019

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.

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Index to Condensed Consolidated Financial Statements

Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Financial Condition (Unaudited)

(in thousands, except share data)	June 30, 2019	December 31, 2018
Assets		
Cash and cash equivalents	$ 458,064	$ 729,547
Cash restricted or segregated under regulations and other	39,497	6,500
Securities borrowed	1,201,327	1,399,684
Securities purchased under agreements to resell	22,974	15,475
Receivables from broker-dealers and clearing organizations	1,287,091	1,101,449
Trading assets, at fair value:		
Financial instruments owned	2,435,001	1,848,806
Financial instruments owned and pledged	670,001	791,115
Receivables from customers	254,650	—
Property, equipment and capitalized software (net of accumulated depreciation of $481,871 and $323,718 as of June 30, 2019 and December 31, 2018, respectively)	117,899	113,322
Operating lease right-of-use assets	318,269	—
Goodwill	1,196,548	836,583
Intangibles (net of accumulated amortization of $180,172 and $148,644 as of June 30, 2019 and December 31, 2018, respectively)	532,061	83,989
Deferred tax assets	252,229	200,359
Other assets ($49,199 and $48,273, at fair value, as of June 30, 2019 and December 31, 2018, respectively)	295,786	254,149
Total assets	$ 9,081,397	$ 7,380,978
Liabilities and equity		
Liabilities		
Short-term borrowings	$ 146,847	$ 15,128
Securities loaned	778,351	1,130,039
Securities sold under agreements to repurchase	295,803	281,861
Payables to broker-dealers and clearing organizations	668,545	567,441
Payables to customers	131,303	—
Trading liabilities, at fair value:		
Financial instruments sold, not yet purchased	2,716,418	2,475,395
Tax receivable agreement obligations	256,700	214,403
Deferred tax liabilities	65,848	—
Accounts payable, accrued expenses and other liabilities	349,832	294,975
Operating lease liabilities	388,070	—
Long-term borrowings	1,931,811	907,037
Total liabilities	$ 7,729,528	$ 5,886,279
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 — 119,491,416 and 108,955,048 shares, Outstanding — 117,312,645 and 106,776,277 shares at June 30, 2019 and December 31, 2018, 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 June 30, 2019 and December 31, 2018, respectively	—	—
Class C common stock (par value $0.00001), Authorized — 90,000,000 and 90,000,000 shares, Issued and Outstanding — 13,138,402 and 13,749,886 shares at June 30, 2019 and December 31, 2018, respectively	—	—
Class D common stock (par value $0.00001), Authorized — 175,000,000 and 175,000,000 shares, Issued and Outstanding — 60,091,740 and 69,091,740 shares at June 30, 2019 and December 31, 2018, respectively	1	1
Treasury stock, at cost, 2,178,771 and 2,178,771 shares at June 30, 2019 and December 31, 2018, respectively	(55,005)	(55,005)
Additional paid-in capital	1,057,587	1,010,468
Retained earnings	(5,949)	96,513
Accumulated other comprehensive income (loss)	(1,670)	(82)
Total Virtu Financial Inc. stockholders' equity	$ 994,965	$ 1,051,896

Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Financial Condition (Unaudited)

(in thousands, except share data)	June 30, 2019	December 31, 2018
Noncontrolling interest	356,904	442,803
Total equity	$ 1,351,869	$ 1,494,699
Total liabilities and equity	$ 9,081,397	$ 7,380,978

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

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

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
(in thousands, except share and per share data)	**2019**	**2018**	**2019**	**2018**
Revenues:				
Trading income, net	$ 205,923	$ 258,593	$ 463,463	$ 664,755
Interest and dividends income	24,162	21,937	53,293	39,886
Commissions, net and technology services	145,120	46,565	220,267	100,409
Other, net	3,251	1,031	4,425	338,129
Total revenue	378,456	328,126	741,448	1,143,179
Operating Expenses:				
Brokerage, exchange and clearance fees, net	75,851	73,318	139,904	161,141
Communication and data processing	54,423	48,791	96,237	98,277
Employee compensation and payroll taxes	83,702	41,226	191,540	105,896
Payments for order flow	23,636	15,842	47,197	32,098
Interest and dividends expense	36,824	35,009	82,193	68,633
Operations and administrative	34,808	16,610	56,885	36,416
Depreciation and amortization	14,810	16,194	31,260	31,546
Amortization of purchased intangibles and acquired capitalized software	20,606	6,838	31,528	13,675
Termination of office leases	65,207	1,777	65,208	21,860
Debt issue cost related to debt refinancing and prepayment	(1,319)	2,359	7,894	8,380
Transaction advisory fees and expenses	1,798	1,750	16,907	9,246
Charges related to share based compensation at IPO	—	10	—	24
Financing interest expense on long-term borrowings	34,689	18,780	57,478	37,827
Total operating expenses	445,035	278,504	824,231	625,019
Income (loss) before income taxes and noncontrolling interest	(66,579)	49,622	(82,783)	518,160
Provision for (benefit from) income taxes	(11,094)	3,000	(13,679)	61,515
Net income (loss)	(55,485)	46,622	(69,104)	456,645
Noncontrolling interest	25,594	(21,413)	32,540	(256,684)
Net income (loss) available for common stockholders	$ (29,891)	$ 25,209	$ (36,564)	$ 199,961
Earnings (loss) per share				
Basic	$ (0.27)	$ 0.25	$ (0.34)	$ 2.06
Diluted	$ (0.27)	$ 0.24	$ (0.34)	$ 2.02
Weighted average common shares outstanding				
Basic	112,828,240	99,542,659	110,076,375	95,124,675
Diluted	112,828,240	101,619,651	110,076,375	97,155,104
Net income (loss)	$ (55,485)	$ 46,622	$ (69,104)	$ 456,645
Other comprehensive income (loss)				
Foreign exchange translation adjustment, net of taxes	884	(5,576)	(2,860)	(3,047)
Comprehensive income (loss)	(54,601)	41,046	(71,964)	453,598
Less: Comprehensive income (loss) attributable to noncontrolling interest	25,258	(18,972)	33,812	(255,531)
Comprehensive income (loss) attributable to common stockholders	$ (29,343)	$ 22,074	$ (38,152)	$ 198,067

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

Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Changes in Equity (Unaudited)
Three and Six Months Ended June 30, 2019 and 2018

(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 (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total Virtu Financial Inc. Stockholders' Equity	Non-Controlling Interest	Total Equity
	Shares	Amounts	Shares	Amounts	Shares	Amounts	Shares	Amounts	Amounts					
Balance at December 31, 2018	108,955,048	$ 1	13,749,886	$ —	69,091,740	$ 1	(2,178,771)	$ (55,005)	$ 1,010,468	$ 96,513	$ (82)	$ 1,051,896	$ 442,803	$ 1,494,699
Share based compensation	965,421	—	—	—	—	—	—	—	30,764	—	—	30,764	—	30,764
Repurchase of Class C common stock	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Treasury stock purchases	(325,195)	—	—	—	—	—	—	—	—	(8,805)	—	(8,805)	—	(8,805)
Stock options exercised	86,224	—	—	—	—	—	—	—	859	—	—	859	—	859
Net income (loss)	—	—	—	—	—	—	—	—	—	(6,673)	—	(6,673)	(6,946)	(13,619)
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	(2,136)	(2,136)	(1,608)	(3,744)
Distribution from Virtu Financial to non-controlling interest	—	—	—	—	—	—	—	—	—	—	—	—	(37,196)	(37,196)
Dividends	—	—	—	—	—	—	—	—	—	(26,312)	—	(26,312)	—	(26,312)
Issuance of common stock in connection with employee exchanges	240,000	—	—	—	—	—	—	—	—	—	—	—	—	—
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(240,000)	—	—	—	—	—	—	—	—	—	—	—
Balance at March 31, 2019	109,921,498	$ 1	13,509,886	$ —	69,091,740	$ 1	(2,178,771)	$ (55,005)	$ 1,042,091	$ 54,723	$ (2,218)	$ 1,039,593	$ 397,053	$ 1,436,646
Share based compensation	257,750	—	—	—	—	—	—	—	16,443	—	—	16,443	—	16,443
Repurchase of Class C common stock	—	—	(3,584)	—	—	—	—	—	—	(96)	—	(96)	—	(96)
Treasury stock purchases	(90,852)	—	—	—	—	—	—	—	—	(2,093)	—	(2,093)	—	(2,093)
Stock option exercised	35,120	—	—	—	—	—	—	—	72	—	—	72	—	72
Net income (loss)	—	—	—	—	—	—	—	—	—	(29,891)	—	(29,891)	(25,594)	(55,485)
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	548	548	336	884
Distribution from Virtu Financial to non-controlling interest	—	—	—	—	—	—	—	—	—	—	—	—	(14,891)	(14,891)
Dividends	—	—	—	—	—	—	—	—	—	(28,592)	—	(28,592)	—	(28,592)
Issuance of common stock in connection with employee exchanges	367,900	—	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of Common Stock in connection with secondary offering, net of offering costs	9,000,000	—	—	—	(9,000,000)	—	—	—	(375)	—	—	(375)	—	(375)
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(367,900)	—	—	—	—	—	—	—	—	—	—	—
Issuance of tax receivable agreements in connection with employee exchange	—	—	—	—	—	—	—	—	(644)	—	—	(644)	—	(644)
Balance at June 30, 2019	119,491,416	$ 1	13,138,402	$ —	60,091,740	$ 1	(2,178,771)	$ (55,005)	$ 1,057,587	$ (5,949)	$ (1,670)	$ 994,965	$ 356,904	$ 1,351,869

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(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 (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total Virtu Financial Inc. Stockholders' Equity	Non-Controlling Interest	Total Equity
	Shares	Amounts	Shares	Amounts	Shares	Amounts	Shares	Amounts	Amounts					
Balance at December 31, 2017	90,415,532	$ 1	17,880,239	$ —	79,610,490	$ 1	(616,923)	$ (11,041)	$ 900,746	$ (62,129)	$ 2,991	$ 830,569	$ 321,009	$ 1,151,578
Share based compensation	744,536	—	—	—	—	—	—	—	16,632	—	—	16,632	—	16,632
Repurchase of Class C common stock	—	—	(18,154)	—	—	—	—	—	(332)	—	—	(332)	—	(332)
Treasury stock purchases	—	—	—	—	—	—	(558,084)	(14,444)	—	—	—	(14,444)	—	(14,444)
Stock options exercised	732,000	—	—	—	—	—	—	—	13,908	—	—	13,908	—	13,908
Net income	—	—	—	—	—	—	—	—	—	174,751	—	174,751	235,271	410,022
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	1,241	1,241	1,288	2,529
Distribution from Virtu Financial to non-controlling interest	—	—	—	—	—	—	—	—	—	—	—	—	(99,038)	(99,038)
Dividends	—	—	—	—	—	—	—	—	—	(22,380)	—	(22,380)	—	(22,380)
Issuance of common stock in connection with employee exchanges	795,521	—	—	—	—	—	—	—	—	—	—	—	—	—
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(795,521)	—	—	—	—	—	—	—	—	—	—	—
Balance at March 31, 2018	92,687,589	$ 1	17,066,564	$ —	79,610,490	$ 1	(1,175,007)	$ (25,485)	$ 930,954	$ 90,242	$ 4,232	$ 999,945	$ 458,530	$ 1,458,475
Share based compensation	(150,000)	—	—	—	—	—	—	—	6,011	—	—	6,011	—	6,011
Repurchase of Class C common stock	—	—	(22,601)	—	—	—	—	—	(756)	—	—	(756)	—	(756)
Treasury stock purchases	—	—	—	—	—	—	(1,003,764)	(29,520)	—	—	—	(29,520)	—	(29,520)
Stock option exercised	3,317,057	—	—	—	—	—	—	—	63,024	—	—	63,024	—	63,024
Net income	—	—	—	—	—	—	—	—	—	25,209	—	25,209	21,413	46,622
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	(3,135)	(3,135)	(2,441)	(5,576)
Distribution from Virtu Financial to non-controlling interest	—	—	—	—	—	—	—	—	—	—	—	—	(66,575)	(66,575)
Dividends	—	—	—	—	—	—	—	—	—	(25,930)	—	(25,930)	—	(25,930)
Issuance of common stock in connection with employee exchanges	2,712,696	—	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of Common Stock in connection with secondary offering, net of offering costs	10,518,750	—	—	—	(10,518,750)	—	—	—	(710)	—	—	(710)	—	(710)
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(2,712,696)	—	—	—	—	—	—	—	—	—	—	—
Issuance of tax receivable agreements in connection with employee exchange	—	—	—	—	—	—	—	—	(3,439)	—	—	(3,439)	—	(3,439)
Balance at June 30, 2018	109,086,092	$ 1	14,331,267	$ —	69,091,740	$ 1	(2,178,771)	$ (55,005)	$ 995,084	$ 89,521	$ 1,097	$ 1,030,699	$ 410,927	$ 1,441,626

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

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

	Six Months Ended June 30,	
(in thousands)	2019	2018
Cash flows from operating activities		
Net income (loss)	$ (69,104)	$ 456,645
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	31,260	31,546
Amortization of purchased intangibles and acquired capitalized software	31,528	13,675
Debt issue cost related to debt refinancing and prepayment	7,894	8,380
Amortization of debt issuance costs and deferred financing fees	6,361	5,427
Termination of office leases	65,208	21,860
Share based compensation	37,289	14,751
Reserve for legal matters	—	400
Write-down of assets	—	2,697
Connectivity early termination	—	7,062
Deferred taxes	6,965	5,546
Gain on sale of businesses	—	(337,550)
Other	(636)	765
Changes in operating assets and liabilities:		
Securities borrowed	211,539	254,000
Securities purchased under agreements to resell	(7,499)	(5,163)
Receivables from broker-dealers and clearing organizations	142,470	(79,904)
Trading assets, at fair value	(464,558)	(60,461)
Receivables from customers	(131,953)	—
Other assets	(5,804)	136,833
Securities loaned	(369,351)	34,156
Securities sold under agreements to repurchase	13,942	(110,882)
Payables to broker-dealers and clearing organizations	(50,939)	31,408
Payables to customers	14,884	—
Trading liabilities, at fair value	241,012	21,766
Accounts payable, accrued expenses and other liabilities	(87,833)	(142,660)
Net cash provided by (used in) operating activities	(377,325)	310,297
Cash flows from investing activities		
Development of capitalized software	(16,628)	(12,891)
Acquisition of property and equipment	(9,175)	(13,593)
Proceeds from sale of BondPoint	—	400,192
ITG Acquisition, net of cash acquired, described in Note 3	(835,581)	—
Investment in joint ventures	(3,000)	—
Net cash provided by (used in) investing activities	(864,384)	373,708
Cash flows from financing activities		
Distribution from Virtu Financial to non-controlling interest	(52,087)	(165,612)
Dividends	(54,904)	(48,311)
Repurchase of Class C common stock	(96)	(1,088)
Purchase of treasury stock	(10,898)	(43,964)
Stock options exercised	931	76,932
Short-term borrowings, net	116,245	15,000
Proceeds from long-term borrowings	1,492,500	—
Repayment of long term borrowings	(450,000)	(384,846)
Debt issuance costs	(35,702)	(1,179)
Issuance of common stock in connection with secondary offering, net of offering costs	(375)	(710)
Net cash provided by (used in) financing activities	1,005,614	(553,778)
Effect of exchange rate changes on cash and cash equivalents	(2,391)	(3,047)
Net increase (decrease) in cash and cash equivalents	(238,486)	127,180

	Six Months Ended June 30,	
(in thousands)	2019	2018
Cash and cash equivalents beginning of period	736,047	532,887
Cash and cash equivalents, end of period	$ 497,561	$ 660,067
Supplementary disclosure of cash flow information		
Cash paid for interest	$ 90,726	$ 65,063
Cash paid for taxes	1,746	77,021
Non-cash investing activities		
Share based compensation to developers relating to capitalized software	1,441	1,325
Non-cash financing activities		
Tax receivable agreement described in Note 6	(644)	(3,439)

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

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

1. Organization and Basis of Presentation

Organization

The accompanying condensed consolidated financial statements include the accounts and operations of Virtu Financial, Inc. ("VFI" or, collectively with its wholly owned or controlled subsidiaries, "Virtu" or the "Company"). VFI is a Delaware corporation whose primary asset is its ownership interest in Virtu Financial LLC ("Virtu Financial"). As of June 30, 2019, VFI owned approximately 62.0% 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 its subsidiaries (the "Group").

The Company is a leading financial firm that leverages cutting edge technology to deliver transparent trading solutions to its clients. The Company provides deep liquidity in over 25,000 financial instruments, at over 235 venues, in 36 countries worldwide to help create more efficient markets. It also leverages its market structure expertise and scaled, multi-asset technology infrastructure to provide a complete suite of client solutions, including transparent agency execution and broker-neutral offerings.

On July 20, 2017 (the "KCG Closing Date"), the Company completed the all-cash acquisition of KCG Holdings, Inc. ("KCG") (the "Acquisition of KCG").

On March 1, 2019 (the "ITG Closing Date"), the Company completed the acquisition of Investment Technology Group, Inc. and its subsidiaries ("ITG") in an all-cash transaction valued at $30.30 per ITG share, for a total of approximately $1.0 billion (the "ITG Acquisition"). See Note 3 "ITG Acquisition" for further details. ITG was a global financial technology company that will contribute to the Company's Execution Services segment.

Virtu Financial's principal subsidiaries include Virtu Financial BD LLC ("VFBD"), Virtu Americas LLC ("VAL"), Virtu ITG LLC ("VITG"), Virtu Alternet Securities LLC ("VALT") and Virtu Financial Capital Markets LLC ("VFCM", collectively with VFBD, VAL, VITG, and VALT, the "broker-dealers"), which are self-clearing U.S. broker-dealers. Other principal U.S. subsidiaries include Virtu Financial Global Markets LLC, a U.S. trading entity focused on futures and currencies; Virtu ITG Analytics LLC, a provider of pre and post-trade analysis, fair value, and trade optimization services; and Virtu ITG Platforms LLC, a provider of workflow technology solutions and network connectivity services. Principal foreign subsidiaries include Virtu Financial Ireland Limited and Virtu ITG Europe Limited, each formed in Ireland; Virtu ITG Canada Corp., formed in Canada; Virtu Financial Asia Pty Ltd. and Virtu ITG Australia Limited, each formed in Australia; Virtu ITG Hong Kong Limited, formed in Hong Kong; and Virtu Financial Singapore Pte. Ltd. and Virtu ITG Singapore Pte. Ltd., each formed in Singapore, all of which are trading entities focused on asset classes in their respective geographic regions.

The Company has two operating segments: (i) Market Making and (ii) Execution Services; and one non-operating segment: Corporate. See Note 21 "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 by the Financial Accounting Standards Board ("FASB") in the 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. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted in accordance with SEC rules and regulations. 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, 2018. 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 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 "ITG Acquisition", the Company has accounted for the ITG Acquisition under the acquisition method of accounting. Under the acquisition method of accounting, the assets and liabilities of ITG, as of the ITG 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 ITG Acquisition reflect ITG's and the Company's balances, and reflect the impact of purchase accounting adjustments. The financial results for the three months ended June 30, 2019 comprise our results and the results of ITG for the entire applicable period. The financial results for the six months ended June 30, 2019 comprise our results for the entire applicable period and the results of ITG from the ITG Closing Date through June 30, 2019. All periods prior to the ITG Closing Date comprise solely our results.

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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, leases, 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"), certain of 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.

Cash restricted or segregated under regulations and other represents (i) special reserve bank accounts for the exclusive benefit of customers ("Special Reserve Bank Account") maintained by VAL and VITG in accordance with Rule 15c3-3 of the

Securities Exchange Act of 1934, as amended (“Customer Protection Rule”), or proprietary accounts of broker-dealers, (ii) funds on deposit for Canadian and European trade clearing and settlement activity, (iii) segregated balances under a collateral account control agreement for the benefit of certain customers, and (iv) funds relating to the securitization of bank guarantees supporting certain of the Company’s foreign leases.

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

Receivables from and payables to broker-dealers and clearing organizations primarily represent 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.

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.

Client Commission Arrangements

Institutional customers are permitted to allocate a portion of their gross commissions to pay for research products and other services provided by third parties and the Company's subsidiaries. The amounts allocated for those purposes are commonly referred to as client commission arrangements. The cost of independent research and directed brokerage arrangements is accounted for on an accrual basis. Commission revenue is recorded when earned on a trade date basis. Payments relating to client commission arrangements are netted against the commission revenues. Research receivable, including prepaid research on behalf of customers and balance transfers due from other broker-dealers, net of an allowance is included in Receivables from customers and Receivables from broker-dealers and clearing organizations, while accrued research payable is included in Accounts payable, accrued expenses, and other liabilities in the condensed consolidated statements of financial condition.

Property and Equipment

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.

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 3 years, which represents the estimated useful lives of the underlying software.

Leases

The Company determines if an arrangement is a lease at inception. Operating leases are included in Operating lease right-of use assets and Operating lease liabilities on the condensed consolidated statements of financial condition. Operating lease right-of-use ("ROU") assets are assets that represent the lessee's right to use, or control the use of, a specified asset for the lease term. Finance leases consist primarily of leases for technology and equipment and are included in Property, equipment, and capitalized software and Accounts payable, accrued expenses and other liabilities on the condensed consolidated statements of financial condition. ROU assets and lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at the commencement date. The Company uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of future payments. The ROU assets are reduced by lease incentives and initial direct costs incurred. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for operating leases and amortization of the finance lease ROU asset is recognized on a straight-line basis over the lease term. Certain of the Company's lease agreements contain fixed lease payments that contain lease and non-lease components; for such leases, the Company accounts for the lease and non-lease components as a single lease component.

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 assessed for impairment on an annual basis and between annual assessments whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Goodwill is assessed at the reporting unit level, which is defined as an operating segment or one level below the operating segment.

The Company assesses goodwill for impairment on an annual basis on July 1 and on an interim basis when certain events occur or certain circumstances exist. In the impairment assessment 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 of KCG and the ITG 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.

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, net 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.

The Company also provides order management software (“OMS”) and related software products and connectivity services to customers and recognizes license fee revenues and monthly connectivity fees. License fee revenues, generated for the use of the Company’s OMS and other software products, is fixed and recognized at the point in time at which the customer is able to use and benefit from the license. Connectivity revenue is variable in nature, based on the number of live connections, and is recognized over time on a monthly basis using a time-based measure of progress.

The Company also provides analytics products and services to customers and recognizes subscription fees, which are fixed for the contract term, based on when the products and services are delivered. Analytics products and services may be bundled with trade execution services, in which case commissions are allocated to the analytics performance obligations using an allocation methodology.

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

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.

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 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 utilize the Euro and Pound Sterling 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 Company's initial public offering in April 2015 (the “IPO”) and certain reorganization transactions consummated in connection with the IPO (the “Reorganization Transactions”) 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 Virtu Financial, Inc. 2015 Management Incentive Plan (as amended, the “Amended and Restated 2015 Management Incentive Plan”) and pursuant to the Amended and Restated Investment Technology Group, Inc. 2007 Omnibus Equity Compensation Plan, dated as of June 8, 2017 (the “Amended and Restated ITG 2007 Equity Plan”), were in the form of stock options, Class A common stock, par value $0.00001 per share (the “Class A Common Stock”) and RSUs, as applicable. 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.

In October 2016, the Company invested in a joint venture (“JV”) with nine other parties. One of the parties was KCG. Upon the Acquisition of KCG, KCG was required to relinquish its ownership in the JV. As of June 30, 2019, each of the parties owns approximately 10% of the voting shares and 10% 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 Company also has an interest in a JV that offers derivatives trading technology and execution services to broker-dealers, professional traders and select hedge funds. As of June 30, 2019, the Company held approximately a 10% indirect minority stake in this JV.

The Company's three 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 Accounts Payable, 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 June 30, 2019:

	Carrying Amount			
(in thousands)	Asset	Liability	Maximum Exposure to Loss	VIEs' assets
Equity investment	$ 18,520	$ —	$ 18,520	$ 52,892

The following table presents the Company's nonconsolidated VIEs at December 31, 2018:

	Carrying Amount			
(in thousands)	Asset	Liability	Maximum Exposure to Loss	VIEs' assets
Equity investment	$ 18,254	$ —	$ 18,254	$ 49,450

Accounting Pronouncements, Recently Adopted

Revenue Recognition - In May 2014, the FASB issued Accounting Standard Update ("ASU") 2014-09, *Revenue from Contracts with Customers*. ASU 2014-09 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 2014-09 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. For a discussion of the impact of the new standard on the Company's revenues as well as the additional disclosures required by the new standard, see Note 13 "Revenues from Contracts with Customers".

Leases — In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. Under the new ASU, a lessee is required to recognize assets and liabilities for leases with lease terms of more than 12 months. The liability is equal to the present value of the future lease payments. The ROU asset is based on the liability, subject to adjustment, such as for initial direct costs. For statement of comprehensive income purposes, leases are classified as either operating or finance. Operating leases result in straight-line expense (similar to previous operating lease guidance) while finance leases result in a front-loaded expense pattern (similar to previous capital lease guidance). Classification is based on criteria that are largely similar to those applied in previous lease accounting, but without explicit bright lines.

The Company adopted this ASU on January 1, 2019 using the modified retrospective method of implementation. The Company elected to recognize the cumulative effect adjustment to the opening balance of retained earnings in the period of adoption rather than in the earliest period presented. The Company elected not to recognize lease assets and lease liabilities for leases with a determined lease term of twelve months or less that are not expected to be renewed. The Company elected several practical expedients upon transition, including the expedient not to re-assess the lease population as long as contracts were properly scoped as a lease under previous guidance, not to re-assess existing lease classification for existing leases, not to adjust existing costs that were capitalized, and not to separate lease and non-lease components of fixed lease payments.

The standard had a material impact on the Company's condensed consolidated statements of financial condition due to the recognition of ROU assets and lease liabilities for operating leases, while the Company's accounting for finance leases remained substantially unchanged. The standard had an immaterial impact on the condensed consolidated statements of comprehensive income. The additional disclosures required by the new standard have been included in Note 16 "Leases".

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 are required to measure non-employee awards at the fair value of the instruments issued at the grant date. Entities can also consider the probability of the recipient satisfying any performance conditions. The Company adopted this standard on January 1, 2019. The Company does not currently make share-based awards to non-employees, and the adoption of this ASU did not have a material impact on its condensed consolidated financial statements.

Goodwill - In January 2017, the FASB issued ASU 2017-04, *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. The Company early adopted this standard as of January 1, 2019, and the adoption of this ASU did not have a material impact on its condensed consolidated financial statements.

Accounting Pronouncements, Not Yet Adopted as of June 30, 2019

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.

Consolidation - In October 2018, the FASB issued ASU 2018-17, *Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities*, which modified how VIEs are assessed for consolidation purposes under ASC Topic 810, Consolidation. Under the update, indirect interests held through related parties in common control arrangements should be considered on a proportional basis for determining whether fees paid to decision makers and service providers are variable interests. 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.

Measurement of Credit Losses on Financial Instruments - In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326) -Measurement of Credit Losses on Financial Instruments*. This ASU amends several aspects of the measurement of credit losses on financial instruments, including replacing the existing incurred credit loss model and other models with the Current Expected Credit Losses model ("CECL"). Under CECL, the allowance for losses for financial assets that are measured at amortized cost reflects management's estimate of credit losses over the remaining expected life of the financial assets. Expected credit losses for newly recognized financial assets, as well as changes to expected credit losses during the period, would be recognized in earnings, and adoption of the ASU will generally result in earlier recognition of credit losses. Expected credit losses will be measured based on historical experience, current conditions and forecasts that affect the collectability of the reported amount, and credit losses will be generally recognized earlier than under current U.S. GAAP. In June 2019, the FASB issued ASU 2019-05, *Financial Instruments-Credit Losses* (Topic 326): *Targeted Transition Relief* , which provides entities with an option to irrevocably elect the fair value option on an instrument-by-instrument basis for certain instruments upon adoption of the new Credit Losses standard. The ASUs are effective for periods beginning after December 15, 2019, including interim periods within that fiscal year.

The Company is currently in the process of identifying and developing the changes to the Company's existing models and processes that will be required under CECL. As of June 30, 2019, the ASU is expected to impact only those financial instruments that are carried by the Company at amortized cost such as collateralized financing arrangements (repurchase agreements and securities borrowing/ lending transactions) and receivables from customers, broker-dealers and clearing organizations, and therefore the Company expects the ASU to have a limited impact on its financial condition, results of operations and cash flows. However, the ultimate impact of adoption of this ASU on the firm's financial condition, results of operations and cash flows will depend on, among other things, the economic environment and the type of financial assets held by the firm on the date of adoption.

3. ITG Acquisition

Background

On the ITG Closing Date, the Company completed the ITG Acquisition. In connection with the ITG Acquisition, Virtu Financial, VFH Parent LLC, a Delaware limited liability company and a subsidiary of Virtu Financial ("VFH") and Impala Borrower LLC (the "Acquisition Borrower"), a subsidiary of the Company, entered into a Credit Agreement dated as of March 1, 2019 (the "Credit Agreement"), with the lenders party thereto, Jefferies Finance LLC, as administrative agent and Jefferies Finance LLC and RBC Capital Markets, as joint lead arrangers and joint bookrunners. The Credit Agreement provides (i) a senior secured first lien term loan in an aggregate principal amount of $1.5 billion, drawn in its entirety on the ITG Closing Date, with approximately $404.5 million being borrowed by VFH to repay all amounts outstanding under its existing term loan facility and the remaining approximately $1,095.0 million being borrowed by the Acquisition Borrower to finance the consideration and fees and expenses paid in connection with the ITG Acquisition, and (ii) a $50.0 million senior secured first lien revolving facility to VFH, with a $5.0 million letter of credit subfacility and a $5.0 million swingline subfacility. After the closing of the ITG Acquisition, VFH assumed the obligations of the Acquisition Borrower in respect of the acquisition term loans. Additionally, on the ITG Closing Date, the Company's 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, was terminated.

Accounting treatment of the ITG Acquisition

The ITG Acquisition has been accounted for as a business combination pursuant to ASC 805, *Business Combinations* by the Company using the acquisition method of accounting. Under the acquisition method, the assets and liabilities of ITG, as of the ITG 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 and results of operations of the Company for the periods following the ITG Closing Date reflect ITG's and the Company's balances and reflect the impact of purchase accounting adjustments. As the Company is the accounting acquirer, the financial results for the three and six months ended June 30, 2019 comprise the results of the Company for the entire applicable period and the results of ITG from the ITG Closing Date through June 30, 2019. All periods prior to the ITG Closing Date comprise solely the results of the Company.

Certain former ITG management employees were terminated upon the ITG Acquisition, and as a result were paid an aggregate of $17.6 million pursuant to their existing employment contracts and arrangements. This amount has been recognized as an expense by the Company and is included in Employee compensation and payroll taxes in the condensed consolidated statements of comprehensive income for the six months ended June 30, 2019.

Purchase price and goodwill

The aggregate cash purchase price of $1.0 billion was determined as the sum of the fair value, at $30.30 per share, of ITG shares outstanding held by former ITG stockholders at closing and the fair value of certain ITG employee stock-based awards that were outstanding, and which vested at the ITG Closing Date.

The purchase price has been allocated to the assets acquired and liabilities assumed using their estimated fair values at the ITG Closing Date. The Company has not yet completed its analysis to finalize the allocation of the purchase price to the ITG acquired assets and liabilities. The allocation of the purchase price may be modified over the measurement period, as more information is obtained about the fair values of assets acquired and liabilities assumed. The Company has engaged third party specialists for the purchase price allocation.

The amounts in the table below represent the allocation of the purchase price and are subject to revision during the remainder of the measurement period, a period not to exceed twelve months from the ITG Closing Date. Adjustments to the provisional fair values of Other assets and Accounts Payable and accrued expenses and other liabilities were recorded during the three months ended June 30, 2019. Further adjustments during the measurement period will be recorded in the reporting period in which the adjustment amounts are determined. The following table summarizes the estimated fair values of the assets acquired and liabilities assumed at the ITG Closing Date:

(in thousands)	**March 31, 2019**	**Measurement Period**	**June 30, 2019**
Cash and equivalents	$ 197,072	$ —	$ 197,072
Cash and securities segregated under federal regulations	14,232	—	14,232
Securities borrowed	13,182	—	13,182
Receivables from broker dealers and clearing organizations	328,112	—	328,112
Financial instruments owned, at fair value	523	—	523
Receivables from customers	122,697	—	122,697
Property, equipment and capitalized software (net)	46,408	—	46,408
Intangibles	479,600	—	479,600
Deferred tax assets	17,221	—	17,221
Operating lease right-of-use assets	87,236	—	87,236
Other assets	31,653	4,400	36,053
Total Assets	1,337,936	4,400	1,342,336
Short-term borrowings	18,651	—	18,651
Securities loaned	17,663	—	17,663
Payables to broker dealers and clearing organizations	152,043	—	152,043
Payables to customers	116,419	—	116,419
Financial instruments sold, not yet purchased, at fair value	11	—	11
Accounts payable and accrued expenses and other liabilities	172,727	7,500	180,227
Operating lease liabilities	104,983	—	104,983
Deferred tax liabilities	65,888	—	65,888
Total Liabilities	648,385	7,500	655,885
Total identified assets acquired, net of assumed liabilities	689,551	(3,100)	686,451
Goodwill	357,334	3,100	360,434
Total Purchase Price	$ 1,046,885	$ —	$ 1,046,885

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

(in thousands)		Amount	Amortization Years
Technology	$	93,000	5
Customer relationships		383,000	10
Trade names		3,600	3
Intangible assets		479,600	
Goodwill		360,434	
Total	$	840,034	

The total Goodwill of $360.4 million has been assigned to the Execution Services segment. Such goodwill is attributable to the expansion of product offerings and expected synergies of the combined workforce, products and technologies of the Company and ITG.

Assumption of Equity Compensation Plan

On the ITG Closing Date, the Company assumed the Amended and Restated ITG 2007 Equity Plan and certain stock option awards, restricted stock unit awards, deferred stock unit awards and performance stock unit awards granted under the Amended and Restated ITG 2007 Equity Plan (the "Assumed Awards"). The Assumed Awards are subject to the same terms and conditions that were applicable to them under the Amended and Restated ITG 2007 Equity Plan, except that (i) the Assumed Awards relate to shares of the Company's Class A Common Stock, (ii) the number of shares of Class A Common Stock subject to the Assumed Awards was the result of an adjustment based upon an Exchange Ratio (as defined in the Agreement and Plan of Merger by and between the Company, Impala Merger Sub, Inc., a Delaware corporation and an indirect wholly owned subsidiary of the Company, and ITG, dated as of November 6, 2018, the "ITG Merger Agreement") and (iii) the performance share unit awards were converted into service-based vesting restricted stock unit awards that were no longer subject to any performance-based vesting conditions. As of the ITG Closing Date, the aggregate number of shares of Class A Common Stock subject to such Assumed Awards was 2,497,028 and the aggregate number of shares of Class A Common Stock that remained issuable pursuant to the Amended and Restated ITG 2007 Equity Plan was 1,230,406. The Company filed with the Securities and Exchange Commission a Registration Statement on Form S-8 on the ITG Closing Date to register such shares of Class A Common Stock.

Tax treatment of the ITG Acquisition

The Company believes that the ITG Acquisition will be treated as a tax-free transaction as described in Section 351 of the Internal Revenue Code. ITG's tax basis in its assets and liabilities therefore generally carried over to the Company following the ITG Acquisition. None of the goodwill is expected to be deductible for tax purposes.

The Company recorded deferred tax assets of $17.2 million and deferred tax liabilities of $65.9 million with respect to recording ITG'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 ITG Acquisition, as described in Note 14 "Income Taxes".

Pro forma results

Included in the Company's results for the three and six months ended June 30, 2019 are results from the business acquired as a result of the ITG Acquisition, from the ITG Closing Date through June 30, 2019 as follows:

(in thousands)		Three Months Ended June 30, 2019		Six Months Ended June 30, 2019
Revenues	$	106,160	$	142,061
Income (loss) before income taxes		(1,666)		(50,074)

The financial information in the table below summarizes the combined pro forma results of operations of the Company and ITG, based on adding the pre-tax historical results of ITG and the Company, and adjusting primarily for amortization of intangibles created in the ITG Acquisition, debt raised in conjunction with the ITG Acquisition and nonrecurring costs associated with the ITG Acquisition, which comprise advisory and other professional fees incurred by the Company and ITG of $15.1 million and $18.2 million, respectively. The pro forma data assumes all of ITG's issued and outstanding shares of common stock, par value $0.01 per share, were cancelled and extinguished and converted into the right to receive $30.30 in cash, without interest, less any applicable withholding taxes on January 1, 2018 and does not include adjustments to reflect the Company's operating costs or expected differences in the way funds generated by the Company are invested.

This pro forma financial information is based on estimates and assumptions that have been made solely for purposes of developing such pro forma information, including, without limitation, preliminary purchase accounting adjustments. The pro forma financial information does not reflect any synergies or operating cost reductions that may be achieved from the combined operations. The pro forma financial information combines the historical results for the Company and ITG for the three and six months ended June 30, 2019 and 2018:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
(in thousands)	2019	2018	2019	2018
Revenue	$ 378,456	$ 456,584	$ 816,706	$ 1,403,140
Net income (loss)	(53,235)	11,851	(70,890)	380,844
Net income (loss) available for common stockholders	(31,477)	12,021	(37,510)	166,768

4. Sale of BondPoint

In October 2017, the Company entered into an Asset Purchase 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.

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 included 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 six months ended June 30, 2018.

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

(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 (loss) before noncontrolling interest to net income (loss) available for common stockholders:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2019**	**2018**	**2019**	**2018**
Income (loss) before income taxes and noncontrolling interest	$ (66,579)	$ 49,622	$ (82,783)	$ 518,160
Provision for (benefit from) income taxes	(11,094)	3,000	(13,679)	61,515
Net income (loss)	(55,485)	46,622	(69,104)	456,645
Noncontrolling interest	25,594	(21,413)	32,540	(256,684)
Net income (loss) available for common stockholders	$ (29,891)	$ 25,209	$ (36,564)	$ 199,961

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

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except for share or per share data)	**2019**	**2018**	**2019**	**2018**
Basic earnings (loss) per share:				
Net income (loss) available for common stockholders	$ (29,891)	$ 25,209	$ (36,564)	$ 199,961
Less: Dividends and undistributed earnings allocated to participating securities	(466)	(443)	(907)	(3,611)
Net income (loss) available for common stockholders, net of dividends and undistributed earnings allocated to participating securities	(30,357)	24,766	(37,471)	196,350
Weighted average shares of common stock outstanding:				
Class A	112,828,240	99,542,659	110,076,375	95,124,675
Basic earnings (loss) per share	$ (0.27)	$ 0.25	$ (0.34)	$ 2.06

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except for share or per share data)	**2019**	**2018**	**2019**	**2018**
Diluted earnings (loss) per share:				
Net income (loss) available for common stockholders, net of dividends and undistributed earnings allocated to participating securities	$ (30,357)	$ 24,766	$ (37,471)	$ 196,350
Weighted average shares of common stock outstanding:				
Class A				
Issued and outstanding	112,828,240	99,542,659	110,076,375	95,124,675
Issuable pursuant to Amended and Restated 2015 Management Incentive Plan (1)	—	2,076,992	—	2,030,429
	112,828,240	101,619,651	110,076,375	97,155,104
Diluted earnings (loss) per share	$ (0.27)	$ 0.24	$ (0.34)	$ 2.02

(1) The dilutive impact excludes from the computation of earnings (loss) per share for the three and six months ended June 30, 2019, respectively, 669,064 and 746,392 unexercised stock options and 299,288 and 262,785 restricted stock units issuable pursuant to Amended and Restated Investment Technology Group, Inc. 2007 Omnibus Equity Compensation Plan because the inclusion of the options and restricted stock units 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 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, par value $0.00001 per share (the “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 $12.4 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, par value $0.00001 per share (the "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 November 2015 (the "November 2015 Secondary Offering") and September 2016 (the "September 2016 Secondary Offering"), and (iv) the purchase of Virtu Financial Units (along with corresponding shares of the Company's Class D common stock, par value $0.00001 per share (the "Class D Common Stock") the May 2018 Secondary Offering (defined below) and the May 2019 Secondary Offering (defined below, and, together with the November 2015 Secondary Offering, the September 2016 Secondary Offering, and the May 2018 Secondary Offering, the "Secondary Offerings"), payments to certain Virtu Members in respect of the purchases are expected to range from approximately $2.6 million to $19.9 million per year over the next 15 years.

In connection with the employee exchanges and May 2018 Secondary Offering between the Company and TJMT Holdings LLC and the other selling stockholders, both as described in Note 18 "Capital Structure", the Company recorded an additional deferred tax asset of $78.7 million and payment liability pursuant to the tax receivable agreements of $79.7 million, with the $1.0 million difference recorded as a decrease to additional paid-in capital.

In connection with the May 2019 Secondary Offering, as described in Note 18 "Capital Structure", the Company recorded an additional deferred tax asset of $41.7 million and payment liability pursuant to the tax receivable agreements of $42.3 million, with the $0.6 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 June 30, 2019 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.

At December 31, 2017, the Company recorded a reduction of its tax receivable agreement obligation of $86.6 million due to the change in the corporate income tax rate. At June 30, 2019 and December 31, 2018, the Company's remaining deferred tax assets that relate to the matters described above were approximately $200.4 million and $167.1 million, respectively, and the Company's liabilities over the next 15 years pursuant to the tax receivable agreements were approximately $256.7 million and $214.4 million, respectively.

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

The Company has two operating segments: (i) Market Making; (ii) Execution Services; and one non-operating segment: Corporate. As of June 30, 2019 and December 31, 2018, the Company's total amount of goodwill recorded was $1,196.5 million and $836.6 million, respectively. The Company recognized $360.4 million of goodwill in connection with the ITG Acquisition, which was recorded in the Execution Services segment. No goodwill impairment was recognized during the three and six months ended June 30, 2019 and 2018.

The following table presents the details of goodwill by segment:

(in thousands)	Market Making	Execution Services	Corporate	Total
Balance as of December 31, 2018	$ 755,292	$ 81,291	$ —	$ 836,583
Goodwill recognized in ITG Acquisition	—	360,434	—	360,434
Currency translation adjustment	—	(469)	$ —	(469)
Balance as of June 30, 2019	$ 755,292	$ 441,256	$ —	$ 1,196,548

As of June 30, 2019 and December 31, 2018, the Company's total amount of intangible assets recorded was $532.1 million and $84.0 million, respectively. The Company acquired $479.6 million of intangible assets in connection with the ITG Acquisition. Acquired intangible assets consisted of the following as of June 30, 2019 and December 31, 2018:

	As of June 30, 2019					
(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	718	232		9	
ETF buyer relationships	950	718	232		9	
Technology	153,000	45,990	107,010	1	to	6
Customer relationships	432,000	20,715	411,285	10	to	12
Trade name	3,600	400	3,200		3	
Favorable occupancy leases	5,895	1,631	4,264	3	to	15
Exchange memberships	5,838	—	5,838		Indefinite	
	$ 712,233	$ 180,172	$ 532,061			

	As of December 31, 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	665	285		9	
ETF buyer relationships	950	665	285		9	
Technology	60,000	30,185	29,815	1	to	6
Customer relationships	49,000	5,905	43,095		12	
Favorable occupancy leases	5,895	1,224	4,671	3	to	15
Exchange memberships	5,838	—	5,838		Indefinite	
	$ 232,633	$ 148,644	$ 83,989			

Amortization expense relating to finite-lived intangible assets was approximately $20.6 million and $6.8 million for the three months ended June 30, 2019 and 2018, respectively, and $31.5 million and $13.7 million for the six months ended June 30, 2019 and 2018, respectively. This is included in Amortization of purchased intangibles and acquired capitalized software in the accompanying condensed consolidated statements of comprehensive income.

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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 June 30, 2019 and December 31, 2018:

(in thousands)	June 30, 2019	December 31, 2018
Assets		
Due from prime brokers	$ 250,936	$ 302,152
Deposits with clearing organizations	224,049	84,509
Net equity with futures commission merchants	254,237	294,884
Unsettled trades with clearing organization	321,210	193,544
Securities failed to deliver	229,086	218,663
Commissions and fees	7,573	7,697
Total receivables from broker-dealers and clearing organizations	$ 1,287,091	$ 1,101,449
Liabilities		
Due to prime brokers	$ 339,899	$ 354,300
Net equity with futures commission merchants	44,084	47,998
Unsettled trades with clearing organization	148,949	90,021
Securities failed to receive	133,946	73,547
Commissions and fees	1,667	1,575
Total payables to broker-dealers and clearing organizations	$ 668,545	$ 567,441

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 $156.9 million and $184.6 million as of June 30, 2019 and December 31, 2018, 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.

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 June 30, 2019 and December 31, 2018, substantially all of the securities received as collateral have been repledged. The fair value of the collateralized transactions at June 30, 2019 and December 31, 2018 are summarized as follows:

(in thousands)	June 30, 2019	December 31, 2018
Securities received as collateral:		
Securities borrowed	$ 1,173,186	$ 1,361,635
Securities purchased under agreements to resell	22,974	15,475
	$ 1,196,160	$ 1,377,110

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 June 30, 2019 and December 31, 2018 consisted of the following:

(in thousands)	June 30, 2019	December 31, 2018
Equities	$ 618,707	$ 748,846
Exchange traded notes	51,294	42,269
	$ 670,001	$ 791,115

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 with an aggregate borrowing limit of $200 million and is collateralized by the trading and deposit account of one of the Company's broker-dealer subsidiaries maintained at the financial institution.

On November 3, 2017, the Company entered into the second credit facility (the "Committed Facility") with the same financial institution for an aggregate borrowing limit of $500 million. The Committed Facility was subsequently amended and restated March 1, 2019 to increase the borrowing limit to $600 million and to enable a broker-dealer subsidiary of ITG as a borrower thereunder. The Committed Facility consists of 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 National Securities Clearing Corporation. Each of the three broker-dealers has a sublimit under Borrowing Base A Loan, from $400 million to $600 million, which bears interest at the adjusted LIBOR or base rate plus 1.25% per annum. Each of the three broker-dealers has a sublimit under Borrowing Base B Loan, from $40 million to $150 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:

	At June 30, 2019				
(in thousands)	**Interest Rate**	**Financing Available**	**Borrowing Outstanding**	**Deferred Debt Issuance Cost**	**Outstanding Borrowings, net**
Broker-dealer credit facilities:					
Uncommitted facility	3.38%	$ 200,000	$ 20,000	$ (1,477)	$ 18,523
Committed facility	3.65%	600,000	72,000	(2,793)	69,207
		$ 800,000	$ 92,000	$ (4,270)	$ 87,730

	At December 31, 2018				
(in thousands)	**Interest Rate**	**Financing Available**	**Borrowing Outstanding**	**Deferred Debt Issuance Cost**	**Outstanding Borrowings, net**
Broker-dealer credit facilities:					
Uncommitted facility	3.40%	$ 200,000	$ 10,000	$ (832)	$ 9,168
Committed facility	3.75%	500,000	7,000	(1,040)	5,960
		$ 700,000	$ 17,000	$ (1,872)	$ 15,128

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 June 30,		Six Months Ended June 30,	
(in thousands)	**2019**	**2018**	**2019**	**2018**
Broker-dealer credit facilities:				
Uncommitted facility	$ 177	$ 584	$ 361	$ 1,030
Committed facility	181	54	254	152
	$ 358	$ 638	$ 615	$ 1,182

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 June 30, 2019		
	Weighted Average Interest Rate	Financing Available	Borrowing Outstanding
Short-Term Credit Facilities:			
Short-term credit facilities (1)	4.93%	$ 566,000	$ 156,894
		$ 566,000	$ 156,894

	At December 31, 2018		
	Weighted Average Interest Rate	Financing Available	Borrowing Outstanding
Short-Term Credit Facilities:			
Short-term credit facilities (1)	5.03%	$ 566,000	$ 184,608
		$ 566,000	$ 184,608

(1) Outstanding borrowings are included with Receivables from/ Payables to broker-dealers and clearing organizations within the condensed consolidated statements of financial condition.

Interest expense in relation to the facilities was approximately $1.8 million and $1.9 million for the three months ended June 30, 2019 and 2018, respectively, and $3.7 million and $3.4 million for the six months ended June 30, 2019 and 2018, respectively.

Short-Term Bank Loans

The Company's international securities clearance and settlement activities are funded with operating cash or with short-term bank loans in the form of overdraft facilities. At June 30, 2019, there was $59.5 million outstanding under these facilities at a weighted average interest rate of approximately 2.7% associated with international settlement activities.

Long-Term Borrowings

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

		At June 30, 2019				
(in thousands)	Maturity Date	Interest Rate	Outstanding Principal	Discount	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Long-term borrowings:						
First Lien Term Loan Facility	March 2026	6.04%	$ 1,450,000	$ (6,904)	$ (28,489)	$ 1,414,607
Senior Secured Second Lien Notes	June 2022	6.75%	500,000	—	(15,236)	484,764
SBI bonds	January 2020	5.00%	32,452	—	(12)	32,440
			$ 1,982,452	$ (6,904)	$ (43,737)	$ 1,931,811

		At December 31, 2018				
(in thousands)	Maturity Date	Interest Rate	Outstanding Principal	Discount	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Long-term borrowings:						
Fourth Amended and Restated Credit Facility	December 2021	5.55%	$ 400,000	$ (332)	$ (6,704)	$ 392,964
Senior Secured Second Lien Notes	June 2022	6.75%	500,000	—	(17,811)	482,189
SBI bonds	January 2020	5.00%	31,908	—	(24)	31,884
			$ 931,908	$ (332)	$ (24,539)	$ 907,037

Credit Agreement

As described in Note 3 "ITG Acquisition", in connection with the ITG Acquisition, Virtu Financial, VFH and the Acquisition Borrower entered into the Credit Agreement, with the lenders party thereto, Jefferies Finance LLC, as administrative agent and Jefferies Finance LLC and RBC Capital Markets, as joint lead arrangers and joint bookrunners.

The Credit Agreement provides (i) a senior secured first lien term loan (the "First Lien Term Loan Facility") in an aggregate principal amount of $1,500 million, drawn in its entirety on the ITG Closing Date, with approximately $404.5 million borrowed by VFH to repay all amounts outstanding under the Existing Term Loan Facility (as defined below) and the remaining approximately $1,095 million borrowed by the Acquisition Borrower to finance the consideration and fees and expenses paid in connection with the ITG Acquisition, and (ii) a $50.0 million senior secured first lien revolving facility to VFH (the "First Lien Revolving Facility"), with a $5.0 million letter of credit subfacility and a $5.0 million swingline subfacility. After the ITG Closing Date, VFH assumed the obligations of the Acquisition Borrower in respect of the acquisition term loans. During the three months ended June 30, 2019, $50.0 million was repaid under the First Lien Term Loan Facility. As of June 30, 2019, $1,450 million was outstanding under the First Lien Term Loan Facility.

The term loan borrowings and revolver borrowings under the Credit Agreement will bear interest at a per annum rate equal to, at the Company's election, either (i) the greatest of (a) the prime rate in effect, (b) the greater of (1) the federal funds effective rate and (2) the overnight bank funding rate, in each case plus 0.5%, (c) an adjusted LIBOR rate for a Eurodollar borrowing with an interest period of one month plus 1% and (d) 1.00%, plus, in each case, 2.50%, with a stepdown to 2.25% based on VFH's first lien leverage ratio, or (ii) the greater of (x) an adjusted LIBOR rate for the interest period in effect and (y) 0%, plus, in each case, 3.50%, with a stepdown to 3.25% based on VFH's first lien leverage ratio. In addition, a commitment fee accrues at a rate of 0.50% per annum on the average daily unused amount of the First Lien Revolving Facility, with stepdowns to 0.375% and 0.25% per annum based on VFH's first lien leverage ratio, and is payable quarterly in arrears.

The First Lien Revolving Facility under the Credit Agreement is subject to a springing net first lien leverage ratio which may spring into effect as of the last day of a fiscal quarter based on the usage of the aggregate revolving commitments as of such date. VFH is also subject to contingent principal prepayments based on excess cash flow and certain other triggering events. Borrowings under the Credit Agreement are guaranteed by Virtu Financial and VFH's material non-regulated restricted subsidiaries and secured by substantially all of the assets of VFH and the guarantors, in each case, subject to certain exceptions.

Under the Credit Agreement, term loans will mature on March 1, 2026; provided that unless at least $400 million of VFH's existing 6.750% second lien notes due 2022 have been repaid or refinanced (the "repayment requirement") prior to the date that is 91 days prior to the maturity of the second lien notes (the "term springing maturity date"), the term loans will mature on the term springing maturity date. The term loans amortize in annual installments equal to 1.0% of the original aggregate principal amount of the term loans. The revolving commitments will terminate on March 1, 2022; provided that unless the repayment requirement is satisfied on or prior to the date that is 182 days prior to the maturity of the second lien notes (the "revolving springing maturity date"), the revolving commitments will terminate on the revolving springing maturity date.

The 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 Credit Agreement will be entitled to take various actions, including the acceleration of amounts outstanding under the Credit Agreement and all actions permitted to be taken by a secured creditor in respect of the collateral securing the obligations under the Credit Agreement.

To finance the Acquisition of KCG, on June 30, 2017, Virtu Financial and VFH previously entered into the Fourth Amended and Restated Credit Agreement which, upon the closing of the Acquisition of KCG, provided for an aggregate $1.15 billion of first lien secured term loans (the "Existing Term Loan Facility"). As described above, the Existing Term Loan Facility was fully terminated following its repayment in full with the proceeds of the First Lien Term Loan Facility.

Senior Secured Second Lien Notes

To finance the Acquisition of KCG, on June 16, 2017, Orchestra Borrower LLC (the "Escrow Issuer"), a wholly owned subsidiary of Virtu Financial, 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. The Notes mature on June 15, 2022.

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 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 the KCG Closing Date and were used to finance, in part, the Acquisition of KCG, and to repay certain indebtedness of the Company and KCG.

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 ($32.5 million) as of June 30, 2019 and ¥3.5 billion ($31.9 million) as of December 31, 2018. The Company recorded a gain of $0.9 million and a gain of $1.4 million due to the change in currency rates during the three months ended June 30, 2019 and 2018, respectively, and a gain of $0.5 million and a loss of $0.5 million during the six months ended June 30, 2019 and 2018, respectively.

As of June 30, 2019, aggregate future required minimum principal payments based on the terms of the long-term borrowings were as follows:

(in thousands)	June 30, 2019
2019	$ —
2020	47,452
2021	15,000
2022	515,000
2023 and thereafter	1,405,000
Total principal of long-term borrowings	$ 1,982,452

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 a number of banks 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.

The Company prices 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.

There were no transfers of financial instruments between levels during the three and six months ended June 30, 2019 and 2018.

Fair value measurements for those items measured on a recurring basis are summarized below as of June 30, 2019:

	June 30, 2019				
(in thousands)	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	$ 864,371	$ 1,338,106	$ —	$ —	$ 2,202,477
U.S. and Non-U.S. government obligations	68,114	14,716	—	—	82,830
Corporate Bonds	—	104,667	—	—	104,667
Exchange traded notes	184	18,328	—	—	18,512
Currency forwards	—	2,407,155	—	(2,384,305)	22,850
Options	3,665	—	—	—	3,665
	936,334	3,882,972	—	(2,384,305)	2,435,001
Financial instruments owned, pledged as collateral:					
Equity securities	308,315	310,392	—	—	618,707
Exchange traded notes	11	51,283	—	—	51,294
	308,326	361,675	—	—	670,001
Other Assets					
Equity investment	—	—	46,351	—	46,351
Exchange stock	2,848	—	—	—	2,848
	2,848	—	46,351	—	49,199
Liabilities					
Financial instruments sold, not yet purchased, at fair value:					
Equity securities	1,307,307	1,150,367	—	—	2,457,674
U.S. and Non-U.S. government obligations	52,658	2,905	—	—	55,563
Corporate Bonds	—	170,432	—	—	170,432
Exchange traded notes	104	17,807	—	—	17,911
Currency forwards	—	2,402,231	—	(2,390,972)	11,259
Options	3,579	—	—	—	3,579
	$ 1,363,648	$ 3,743,742	$ —	$ (2,390,972)	$ 2,716,418

Fair value measurements for those items measured on a recurring basis are summarized below as of December 31, 2018:

(in thousands)	December 31, 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	$ 587,680	$ 1,022,221	$ —	$ —	$ 1,609,901
U.S. and Non-U.S. government obligations	91,466	14,547	—	—	106,013
Corporate Bonds	—	87,500	—	—	87,500
Exchange traded notes	3,396	27,966	—	—	31,362
Currency forwards	—	2,792,373	—	(2,790,242)	2,131
Options	11,899	—	—	—	11,899
	694,441	3,944,607	—	(2,790,242)	1,848,806
Financial instruments owned, pledged as collateral:					
Equity securities	389,810	359,036	—	—	748,846
U.S. and Non-U.S. government obligations	—	—	—	—	—
Exchange traded notes	6,968	35,301	—	—	42,269
	396,778	394,337	—	—	791,115
Other Assets					
Equity investment	—	—	45,856	—	45,856
Exchange stock	2,417	—	—	—	2,417
	2,417	—	45,856	—	48,273
Liabilities					
Financial instruments sold, not yet purchased, at fair value:					
Equity securities	931,992	1,336,338	—	—	2,268,330
U.S. and Non-U.S. government obligations	112,058	3,054	—	—	115,112
Corporate Bonds	—	40,123	—	—	40,123
Exchange traded notes	371	39,613	—	—	39,984
Currency forwards	—	2,720,749	—	(2,719,954)	795
Options	11,051	—	—	—	11,051
	$ 1,055,472	$ 4,139,877	$ —	$ (2,719,954)	$ 2,475,395

SBI Investment

The Company has a minority investment (the “SBI Investment”) in SBI Japannext Co., Ltd. (“SBI”), a proprietary trading system based in Tokyo. In connection with the SBI Investment, the Company issued the SBI Bonds (as described in Note 10 “Borrowings”) and used the proceeds to partially finance the transaction. As of June 30, 2019, the fair value of the 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 12.6x average price/earnings multiples of comparable companies to corroborate the income approach. The fair value of the SBI Investment at June 30, 2019 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.

Financial Instruments Not Measured at Fair Value

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 based on quoted prices from the market for similar instruments, and is categorized as Level 2 in the fair value hierarchy.

The table below summarizes financial assets and liabilities not carried at fair value on a recurring basis as of June 30, 2019:

	June 30, 2019				
(in thousands)	Carrying Value	Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets					
Cash and cash equivalents	$ 458,064	$ 458,064	$ 458,064	$ —	$ —
Cash restricted or segregated under regulations and other	39,497	39,497	39,497	—	—
Securities borrowed	1,201,327	1,201,327	—	1,201,327	—
Securities purchased under agreements to resell	22,974	22,974	—	22,974	—
Receivables from broker-dealers and clearing organizations	1,287,091	1,287,091	39,394	1,247,697	—
Total Assets	3,008,953	3,008,953	536,955	2,471,998	—
Liabilities					
Short-term borrowings	146,847	146,847	—	146,847	—
Long-term borrowings	1,931,811	2,003,866	—	2,003,866	—
Securities loaned	778,351	778,351	—	778,351	—
Securities sold under agreements to repurchase	295,803	295,803	—	295,803	—
Payables to broker-dealers and clearing organizations	668,545	668,545	15,876	652,669	—
Total Liabilities	$ 3,821,357	$ 3,893,412	$ 15,876	$ 3,877,536	$ —

The table below summarizes financial assets and liabilities not carried at fair value on a recurring basis as of December 31, 2018:

	December 31, 2018				
(in thousands)	Carrying Value	Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets					
Cash and cash equivalents	$ 736,047	$ 736,047	$ 736,047	$ —	$ —
Securities borrowed	1,399,684	1,399,684	—	1,399,684	—
Securities purchased under agreements to resell	15,475	15,475	—	15,475	—
Receivables from broker-dealers and clearing organizations	1,101,449	1,101,449	71,288	1,030,161	—
Total Assets	3,252,655	3,252,655	807,335	2,445,320	—
Liabilities					
Short-term borrowings	15,128	15,128	—	15,128	—
Long-term borrowings	907,037	916,465	—	916,465	—
Securities loaned	1,130,039	1,130,039	—	1,130,039	—
Securities sold under agreements to repurchase	281,861	281,861	—	281,861	—
Payables to broker dealer and clearing organizations	567,441	567,441	1,031	566,410	—
Total Liabilities	$ 2,901,506	$ 2,910,934	$ 1,031	$ 2,909,903	$ —

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

	Six Months Ended June 30, 2019						
(in thousands)	Balance at December 31, 2018	Purchases	Total Realized and Unrealized Gains / (Losses)	Net Transfers into (out of) Level 3	Settlement	Balance at June 30, 2019	Change in Net Unrealized Gains / (Losses) on Investments still held at June 30, 2019
Assets							
Other assets:							
Equity investment	$ 45,856	$ —	$ 495	$ —	$ —	$ 46,351	$ 495
Total	45,856	—	495	—	—	46,351	495

	Six Months Ended June 30, 2018						
(in thousands)	Balance at December 31, 2017	Purchases	Total Realized and Unrealized Gains / (Losses)	Net Transfers into (out of) Level 3	Settlement	Balance at June 30, 2018	Change in Net Unrealized Gains / (Losses) on Investments still held at June 30, 2018
Assets							
Other assets:							
Equity investment	$ 40,588	$ —	$ 505	$ —	$ —	$ 41,093	$ 505
Total	40,588	—	505	—	—	41,093	505

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 June 30, 2019 and December 31, 2018:

	June 30, 2019					
				Gross Amounts Not Offset in the Condensed Consolidated Statement of Financial Condition		
(in thousands)	**Gross Amounts of Recognized Assets**	**Gross Amounts Offset in the Condensed Consolidated Statement of Financial Condition**	**Net Amounts of Assets Presented in the Condensed Consolidated Statement of Financial Condition**	**Financial Instruments**	**Cash Collateral Received**	**Net Amount**
Offsetting of Financial Assets:						
Securities borrowed	$ 1,201,327	$ —	$ 1,201,327	$ (1,173,186)	$ (1,691)	$ 26,450
Securities purchased under agreements to resell	22,974	—	22,974	(22,974)	—	—
Trading assets, at fair value:						
Currency forwards	2,407,155	(2,384,305)	22,850	—	—	22,850
Options	3,665	—	3,665	(3,665)	—	—
Total	$ 3,635,121	$ (2,384,305)	$ 1,250,816	$ (1,199,825)	$ (1,691)	$ 49,300

				Gross Amounts Not Offset in the Condensed Consolidated Statement of Financial Condition		
(in thousands)	**Gross Amounts of Recognized Liabilities**	**Gross Amounts Offset in the Condensed Consolidated Statement of Financial Condition**	**Net Amounts of Liabilities Presented in the Condensed Consolidated Statement of Financial Condition**	**Financial Instruments**	**Cash Collateral Pledged**	**Net Amount**
Offsetting of Financial Liabilities:						
Securities loaned	$ 778,351	$ —	$ 778,351	$ (728,309)	$ (6,644)	$ 43,398
Securities sold under agreements to repurchase	295,803	—	295,803	(295,803)	—	—
Trading liabilities, at fair value:						
Currency forwards	2,402,231	(2,390,972)	11,259	—	—	11,259
Options	3,579	—	3,579	(3,579)	—	—
Total	$ 3,479,964	$ (2,390,972)	$ 1,088,992	$ (1,027,691)	$ (6,644)	$ 54,657

	December 31, 2018					
				Gross Amounts Not Offset in the Consolidated Statement of Financial Condition		
(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**	**Financial Instruments**	**Cash Collateral Received**	**Net Amount**
Offsetting of Financial Assets:						
Securities borrowed	$ 1,399,684	$ —	$ 1,399,684	$ (1,361,635)	$ (8,822)	$ 29,227
Securities purchased under agreements to resell	15,475	—	15,475	(15,475)	—	—
Trading assets, at fair value:						
Currency forwards	2,792,373	(2,790,242)	2,131	—	—	2,131
Options	11,899	—	11,899	(11,899)	—	—
Total	$ 4,219,431	$ (2,790,242)	$ 1,429,189	$ (1,389,009)	$ (8,822)	$ 31,358

(in thousands)	Gross Amounts of Recognized Liabilities	Gross Amounts Offset in the Consolidated Statement of Financial Condition	Net Amounts of Liabilities Presented in the Consolidated Statement of Financial Condition	Gross Amounts Not Offset in the Consolidated Statement of Financial Condition: Financial Instruments	Gross Amounts Not Offset in the Consolidated Statement of Financial Condition: Cash Collateral Pledged	Net Amount
Offsetting of Financial Liabilities:						
Securities loaned	$ 1,130,039	$ —	$ 1,130,039	$ (1,108,461)	$ (8,822)	$ 12,756
Securities sold under agreements to repurchase	281,861	—	281,861	(281,861)	—	—
Trading liabilities, at fair value:						
Currency forwards	2,720,749	(2,719,954)	795	—	(792)	3
Options	11,051	—	11,051	(11,051)	—	—
Total	$ 4,143,700	$ (2,719,954)	$ 1,423,746	$ (1,401,373)	$ (9,614)	$ 12,759

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:

	June 30, 2019				
	Remaining Contractual Maturity				
(in thousands)	Overnight and Continuous	Less than 30 days	30 - 60 days	61 - 90 Days	Total
Securities sold under agreements to repurchase:					
Equity securities	$ —	$ 65,000	$ 65,000	$ 160,000	$ 290,000
U.S. and Non-U.S. government obligations	5,803	—	—	—	5,803
Total	5,803	65,000	65,000	160,000	295,803
Securities lending transactions:					
Equity securities	778,351	—	—	—	778,351
Total	$ 778,351	$ —	$ —	$ —	$ 778,351

	December 31, 2018				
	Remaining Contractual Maturity				
(in thousands)	Overnight and Continuous	Less than 30 days	30 - 60 days	61 - 90 Days	Total
Securities sold under agreements to repurchase:					
Equity securities	$ —	$ 45,000	$ 65,000	$ 160,000	$ 270,000
U.S. and Non-U.S. government obligations	11,861	—	—	—	11,861
Total	11,861	45,000	65,000	160,000	281,861
Securities loaned:					
Equity securities	1,130,039	—	—	—	1,130,039
Total	$ 1,130,039	$ —	$ —	$ —	$ 1,130,039

12. Derivative Instruments

The fair value of the Company's derivative instruments on a gross basis consisted of the following at June 30, 2019 and December 31, 2018:

(in thousands)		June 30, 2019		December 31, 2018	
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	$ 1,426	$ 2,902,864	$ (15,382)	$ 2,891,606
Commodity futures	Receivables from broker-dealers and clearing organizations	39,317	9,777,946	69,235	11,595,215
Currency futures	Receivables from broker-dealers and clearing organizations	(36)	2,401,655	(9,432)	3,756,914
Fixed income futures	Receivables from broker-dealers and clearing organizations	3	553	(28)	18,694
Options	Financial instruments owned	3,665	296,807	11,899	659,101
Currency forwards	Financial instruments owned	2,407,155	174,182,937	2,792,373	171,288,432
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	$ (302)	$ 160,909	$ 468	$ 106,487
Commodity futures	Payables to broker-dealers and clearing organizations	(11,522)	5,129,312	(375)	54,782
Currency futures	Payables to broker-dealers and clearing organizations	(4,790)	2,543,167	(30,643)	6,239,725
Fixed income futures	Payables to broker-dealers and clearing organizations	—	—	93	8,591
Options	Financial instruments sold, not yet purchased	3,579	310,548	11,051	608,756
Currency forwards	Financial instruments sold, not yet purchased	2,402,231	174,180,475	2,720,749	171,252,224
Derivative instruments designated as hedging instruments:					
Currency forwards	Financial instruments sold, not yet purchased	—	—	(792)	13,501

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 instruments under ASC 815, which are recorded in accumulated other comprehensive income in the accompanying condensed consolidated statements of comprehensive income for the three and six months ended June 30, 2019 and 2018.

		Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**Financial Statements Location**	**2019**	**2018**	**2019**	**2018**
Derivative instruments not designated as hedging instruments:					
Futures	Trading income, net	$ 83,225	$ 6,909	$ 155,610	$ (429,506)
Currency forwards	Trading income, net	(20,869)	110,828	(45,042)	196,588
Options	Trading income, net	4,335	(9,837)	4,997	(8,736)
		$ 66,691	$ 107,900	$ 115,565	$ (241,654)
Derivative instruments designated as hedging instruments:					
Foreign exchange - forward contract	Accumulated other comprehensive income	$ —	$ 6	$ —	$ 156

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. As a result of the ITG Acquisition, subsequent to the ITG Closing Date, the Company has additional revenue streams as described below.

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 market making 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 Company's Execution Services revenue streams discussed below, all of which are presented within Commissions, net and technology services on the Company's condensed consolidated statements of comprehensive income.

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, net and technology services in the condensed consolidated statements of comprehensive income.

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.

Workflow technology. Through its front-end workflow solutions and network capabilities, the Company provides order and trade execution management and order routing services.

The Company provides trade order routing from its execution management system ("EMS") to its execution services offerings, with each trade order routed through the EMS representing a separate performance obligation that is satisfied at a point in time. Commissions earned are fixed and revenue is recognized on the trade date. A portion of the commissions earned on the trade is then allocated to workflow technology based on the stand-alone selling price paid by third-party brokers for order routing. The remaining commission is allocated to commissions, net using a residual allocation approach.

The Company participates in commission share arrangements, where trade orders are routed to third-party brokers from its EMS and its order management system ("OMS"). Commission share revenues from third-party brokers are generally fixed and revenue is recognized at a point in time on the trade date.

The Company provides OMS and related software products and connectivity services to customers and recognizes license fee revenues and monthly connectivity fees. License fee revenues, generated for the use of the Company's OMS and other software products, is fixed and recognized at the point in time at which the customer is able to use and benefit from the license. Connectivity revenue is variable in nature, based on the number of live connections, and is recognized over time on a monthly basis using a time-based measure of progress.

Analytics. The Company provides customers with analytics products and services, including trading and portfolio analytics tools. The Company provides analytics products and services to customers and recognizes subscription fees, which are fixed for the contract term, based on when the products and services are delivered. Analytics services can be delivered either over time (when customers are provided with distinct ongoing access to analytics data) or at a point in time (when reports are only delivered to the customer on a periodic basis). Over time performance obligations are recognized using a time-based measure of progress on a monthly basis, since the analytics products and services are continually provided to the client. Point in time performance obligations are recognized when the analytics reports are delivered to the client.

Analytics products and services can also be paid for through variable bundled arrangements with trade execution services. Customers agree to pay for analytics products and services with commissions generated from trade execution services, and commissions are allocated to the analytics performance obligation(s) using:

(i) the commission value for each customer for the products and services it receives, which is priced using the value for similar stand-alone subscription arrangements; and

(ii) a calculated ratio of the commission value for the products and services relative to the total amount of commissions generated from the customer.

For these bundled commission arrangements, the allocated commissions to each analytics performance obligation are then recognized as revenue when the analytics product is delivered, either over time or at a point in time. These allocated commissions may be deferred if the allocated amount exceeds the amount recognizable based on delivery.

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 segments, for the three and six months ended June 30, 2019:

	Three Months Ended June 30, 2019			
(in thousands)	**Market Making**	**Execution Services**	**Corporate**	**Total**
Revenues from contracts with customers:				
Commissions, net	$ 4,961	$ 103,727	$ —	$ 108,688
Workflow technology	—	25,455	—	25,455
Analytics	—	10,977	—	10,977
Total revenue from contracts with customers	4,961	140,159	—	145,120
Other sources of revenue	230,043	1,865	1,428	233,336
Total Revenues	235,004	142,024	1,428	378,456
Timing of revenue recognition:				
Services transferred at a point in time	235,004	121,763	1,428	358,195
Services transferred over time	—	20,261	—	20,261
Total Revenues	$ 235,004	$ 142,024	$ 1,428	$ 378,456

(in thousands)	Six Months Ended June 30, 2019 Market Making	Execution Services	Corporate	Total
Revenues from contracts with customers:				
Commissions, net	$ 9,961	$ 161,482	$ —	$ 171,443
Workflow technology	—	34,327	—	34,327
Analytics	—	14,497	—	14,497
Total revenue from contracts with customers	9,961	210,306	—	220,267
Other sources of revenue	504,264	15,236	1,681	521,181
Total revenues	514,225	225,542	1,681	741,448
Timing of revenue recognition:				
Services transferred at a point in time	514,225	198,492	1,681	714,398
Services transferred over time	—	27,050	—	27,050
Total revenues	$ 514,225	$ 225,542	$ 1,681	$ 741,448

Remaining Performance Obligations and Revenue Recognized from Past Performance Obligations

As of June 30, 2019, the aggregate amount of the transaction price allocated to the performance obligations relating to technology services, workflow technology, and analytics revenues that are unsatisfied (or partially unsatisfied) was not material.

For the three and six months ended June 30, 2019, the Company recognized $0.5 million of revenue related to performance obligations satisfied in previous periods.

Contract Assets and Contract Liabilities

The timing of the revenue recognition may differ from the timing of payment from customers. The Company records a receivable when revenue is recognized prior to payment, and when the Company has an unconditional right to payment. The Company records a contract liability when payment is received prior to the time at which the satisfaction of the service obligation occurs.

Receivables related to revenues from contracts with customers amounted to $57.0 million and $1.7 million as of June 30, 2019 and December 31, 2018, respectively. The Company did not identify any contract assets. There were no impairment losses on receivables as of June 30, 2019.

Deferred revenue primarily relates to deferred commissions allocated to analytics products and subscription fees billed in advance of satisfying the performance obligations. Deferred revenue related to contracts with customers was $11.9 million as of June 30, 2019. During the three and six months ended June 30, 2019, the Company recognized revenue of $7.8 million and $14.9 million, respectively, that was initially recorded as deferred revenue.

The Company has not identified any costs to obtain or fulfill associated with its contracts under ASC 606.

14. Income Taxes

The Company is subject to U.S. federal, state and local income tax at the rate applicable to corporations less the rate attributable to the noncontrolling interest in Virtu Financial. These noncontrolling interests are subject to U.S. taxation as partnerships. Accordingly, for the three months ended June 30, 2019 and 2018, the income attributable to these noncontrolling interests is reported in the condensed consolidated statements of comprehensive income, but the related U.S. income tax expense attributable to these noncontrolling interests is not reported by the Company as it is the obligation of the individual partners. The Company's provisions for (benefits from) income taxes and effective tax rates were $(11.1) million and 16.7%, and $3.0 million and 6.0%, for the three months ended June 30, 2019 and 2018, respectively, and $(13.7) million and 16.5%, and $61.5 million and 13.1% for the six months ended June 30, 2019 and 2018, respectively. Income tax expense is also affected by the differing effective tax rates in foreign, state and local jurisdictions where certain of the Company's subsidiaries are subject to corporate taxation.

Included in Other assets on the condensed consolidated statements of financial condition at June 30, 2019 and December 31, 2018 are current income tax receivables of $62.6 million and $41.1 million, respectively. The balances at June 30, 2019 and December 31, 2018 primarily comprise income tax benefits due to the Company from federal, state and local, and foreign tax jurisdictions based on income before taxes. Included in Accounts payable, accrued expenses and other liabilities on the condensed consolidated statements of financial condition at June 30, 2019 and December 31, 2018 are current tax liabilities of $13.6 million and $10.0 million, respectively. The balances at June 30, 2019 and December 31, 2018 primarily comprise income taxes owed to federal, state and local, and foreign tax jurisdictions based on income before taxes.

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

There are no expiration dates on the deferred tax assets. The provisions of ASC 740 require that carrying amounts of deferred tax assets be reduced by a valuation allowance if, based on the available evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Accordingly, the need to establish valuation allowances for deferred tax assets is assessed periodically with appropriate consideration given to all positive and negative evidence related to the realization of the deferred tax assets. As a result of the Acquisition of KCG, the Company has non-U.S. net operating losses at June 30, 2019 and December 31, 2018 of $239.3 million and $239.3 million, respectively, and has recorded a related deferred tax asset of $44.9 million and $44.9 million, respectively. A full valuation allowance was also recorded against this deferred tax asset at June 30, 2019 and December 31, 2018 as it is more likely than not that this deferred tax asset will not be realized. No valuation allowance against the remaining deferred taxes was recorded as of June 30, 2019 and December 31, 2018 because it is more likely than not that these deferred tax assets will be fully realized.

The Company is subject to taxation in U.S. federal, state, local and foreign jurisdictions. As of June 30, 2019, the Company's tax years for 2013 through 2017 and 2010 through 2017 are subject to examination by U.S. and non-U.S. tax authorities, respectively. As a result of the ITG Acquisition and the Acquisition of KCG, the Company has assumed any ITG and KCG tax exposures. In addition, the Company is subject to state and local income tax examinations in various jurisdictions for the tax years 2013 through 2017. The final outcome of these examinations is not yet determinable. However, the Company anticipates that adjustments to the unrecognized tax benefits, if any, will not result in a material change to the financial condition, results of operations and cash flows.

The Company's policy for recording interest and penalties associated with audits is to record such items as a component of income or loss before income taxes and noncontrolling interest. Penalties, if any, are recorded in Operations and administrative expense and interest received or paid is recorded in Other, net or Operations and administrative expense in the condensed consolidated statement of comprehensive income.

The Company had $9.2 million of unrecognized tax benefits as of June 30, 2019, all of which would affect the Company's effective tax rate if recognized. The Company has determined that there are no uncertain tax positions that would have a material impact on the Company's financial position as of June 30, 2019.

15. Commitments, Contingencies and Guarantees

Legal Proceedings

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

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

On January 29, 2019, the Company was named as a defendant in *Ford v. ProShares Trust II, et al.*, No. 19-cv-886. The complaint was filed in federal district court in New York on behalf of a putative class, and asserts claims against the Company and numerous other financial institutions under Section 11 of the Securities Act of 1933 in connection with trading in a ProShares inverse-volatility ETF. Additionally, on February 27, 2019, and March 1, 2019, the Company was named as a defendant in *Bittner v. ProShares Trust II, et al.*, No. 19-cv-1840, and *Mareno v. ProShares Trust II*, et al., No. 19-cv-1955, respectively. The complaints were filed in federal district court in New York on behalf of putative classes, and assert substantially similar claims against the Company and other financial institutions. On April 29, 2019, these three actions were consolidated in federal district court in New York as In re ProShares Trust II Securities Litigation, No. 19-cv-886-DLC. A consolidated amended complaint, which does not specify the amount of alleged damages, was filed in the consolidated action on June 21, 2019. The Company believes that the claims are without merit and intends to defend itself vigorously.

As a result of the ITG Acquisition, the Company assumed potential liabilities relating to ITG's business, including but not limited to those potential liabilities arising from or related to pending, threatened or potential litigation or regulatory matters. These matters include but not are not necessarily limited to a Statement of Claim filed on July 27, 2018 by a former employee of ITG requesting a FINRA arbitration. The former ITG employee alleges that ITG breached the non-disparagement clause in his July 2011 separation agreement and tortiously interfered with his business relations. On June 26, 2019, the former employee informed the Company that he is seeking damages of approximately $65 million (exclusive of claims for pre-judgment interest, punitive damages, costs and fees). The Company believes that the claims are without merit and is defending itself against these claims vigorously.

Other Legal and Regulatory Matters

The Company owns subsidiaries including regulated entities that are subject to extensive oversight under federal, state and applicable international laws as well as self-regulatory organization (“SRO”) rules. Changes in market structure and the need to remain competitive require constant changes to the Company's systems, order routing and order handling procedures. The Company makes these changes while continuously endeavoring to comply with many complex laws and rules. Compliance, surveillance and trading issues common in the securities industry are monitored by, reported to, and/or reviewed in the ordinary course of business by the Company's regulators in the U.S. and abroad. As a major order flow execution destination, the Company is named from time to time in, or is asked to respond to a number of regulatory matters brought by U.S. regulators, foreign regulators, SROs, as well as actions brought by private plaintiffs, which arise from its business activities. There has recently been an increased focus by regulators on Anti-Money Laundering and sanctions compliance by broker-dealers and similar entities, as well as an enhanced interest on suspicious activity reporting and transactions involving microcap and low-priced securities. In addition, there has been an increased focus by Congress, federal and state regulators, SROs and the media on market structure issues, and in particular, high frequency trading, best execution, internalization, alternative trading system (“ATS”) manner of operations, market fragmentation and complexity, colocation, cybersecurity, access to market data feeds and remuneration arrangements, such as payment for order flow and exchange fee structures. From time to time, the Company is the subject of requests for information and documents from the SEC, the Financial Industry Regulatory Authority and other regulators. It is the Company's practice to cooperate and comply with the requests for information and documents.

The Company is currently the subject of various regulatory reviews and investigations by federal and foreign regulators and SROs, including the SEC and the Financial Industry Regulatory Authority. In some instances, these matters may result in a disciplinary action and/or a civil or administrative action. For example, in December 2015, the Autorité des Marchés Financiers (“AMF”) fined the Company’s European subsidiary in the amount of €5.0 million (approximately $5.4 million) based on its allegations that the subsidiary of a predecessor entity engaged in price manipulation and violations of the AMF General Regulation and Euronext Market Rules. The fine was subsequently reduced in 2017 to €3.3 million (approximately $3.9 million) and in 2018 was reduced to €3.0 million (approximately $3.4 million). The Company has fully reserved for the monetary penalty as of June 30, 2019 and anticipates paying the fine during the year ending December 31, 2019.

Representations and Warranties; Indemnification Arrangements

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

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

16. Leases

The Company adopted ASU 2016-02 on January 1, 2019, and elected the modified retrospective method of implementation. The standard requires the recognition of ROU assets and lease liabilities for leases, which are defined as a contract, or part of a contract, that conveys the right to control the use of identified property, plant or equipment for a period of time in exchange for consideration. The Company has elected the practical expedient which allows for leases with an initial term of 12 months or less to be excluded from recognition on the condensed consolidated statement of financial condition and for which lease expense is recognized on a straight-line basis over the lease term.

For the Company, Topic 842 primarily affected the accounting treatment for operating lease agreements in which the Company is the lessee. These leases are primarily for corporate office space, datacenters, and technology equipment. The leases have remaining terms of 1 year to 13 years, some of which include options to extend the initial term at the Company's discretion. The lease terms used in calculating ROU assets and lease liabilities include the options to extend the initial term when the Company is reasonably certain of exercising the options. The Company's lease agreements do not contain any material residual value guarantees, restrictions or covenants. In addition to the base rental costs, the Company's lease agreements for corporate office space generally provide for rent escalations resulting from increased assessments for operating expenses, real estate taxes and other charges. Payments for such reimbursable expenses are considered variable and are recognized as variable lease costs in the period in which the obligation for those payments was incurred.

The Company also subleases certain office space and facilities to third parties. The subleases have remaining terms of 1 to 13 years. The Company recognizes sublease income on a straight-line basis over the term of the sublease within Other, net on the condensed consolidated statement of comprehensive income.

As the implied discount rate for most of the Company's leases is not readily determinable, the Company uses its incremental borrowing rate on its secured borrowings, which was based on the information available as of the initial transition date, January 1, 2019, in determining the present value of lease payments.

During the three months ended June 30, 2019, the Company ceased use of certain office lease premises as part of its ongoing effort to consolidate office space. For the three and six months ended June 30, 2019, the Company recognized $65.2 million in Termination of office leases on the condensed consolidated statement of comprehensive income related to these premises, comprising $25.9 million of impairments of ROU assets, $37.9 million of write-offs of leasehold improvements and fixed assets, and $1.4 million of dilapidation charges.

Lease assets and liabilities are summarized as follows:

(in thousands)	**Financial Statement Location**		**June 30, 2019**
Operating leases			
Operating lease right-of-use assets	Operating lease right-of-use assets	$	318,269
Operating lease liabilities	Operating lease liabilities		388,070
Finance leases			
Property and equipment, at cost	Property, equipment, and capitalized software, net		37,258
Accumulated depreciation	Property, equipment, and capitalized software, net		(20,139)
Finance lease liabilities	Accounts payable, accrued expenses, and other liabilities		17,566

Weighted average remaining lease term and discount rate are as follows:

	June 30, 2019
Weighted average remaining lease term	
Operating leases	7.84 years
Finance leases	1.64 years
Weighted average discount rate	
Operating leases	5.70%
Finance leases	3.58%

The components of lease expense for the three and six months ended June 30, 2019 were as follows:

(in thousands)	Three Months Ended June 30, 2019	Six Months Ended June 30, 2019
Operating lease cost:		
Fixed	$ 19,288	$ 34,084
Variable	1,869	3,447
Impairment of ROU Asset	25,857	25,857
Total Operating lease cost	47,014	63,388
Finance lease cost:		
Amortization of right-of-use assets	3,082	6,052
Interest on lease liabilities	175	361
Total Finance lease cost	3,257	6,413
Sublease income	3,355	5,915

Future minimum lease payments under operating and finance leases with non-cancelable lease terms, as of June 30, 2019, are as follows:

(in thousands)	Operating Leases	Finance Leases
2019	$ 37,768	$ 6,784
2020	75,066	10,062
2021	71,830	2,436
2022	65,920	131
2023	63,178	—
2024 and thereafter	171,840	—
Total lease payments	485,602	19,413
Less imputed interest	(97,532)	(1,847)
Total lease liability	$ 388,070	$ 17,566

Future lease payments under non-cancelable leases and sublease receipts as of December 31, 2018 are as follows:

(thousands)	Capital	Operating	Subleases
2019	$ 21,983	$ 32,755	$ (8,979)
2020	11,283	30,473	(9,324)
2021	1,651	25,564	(8,844)
2022	—	22,710	(8,552)
2023	—	21,456	(8,695)
Thereafter	—	113,779	(36,312)
Total minimum lease payments	$ 34,917	$ 246,737	$ (80,706)

17. Cash

The following table provides a reconciliation of cash and cash equivalents together with restricted cash as reported within the condensed consolidated statements of financial condition to the sum of the same such amounts shown in the condensed consolidated statements of cash flows.

(in thousands)	June 30, 2019	December 31, 2018
Cash and cash equivalents	$ 458,064	$ 729,547
Cash restricted or segregated under regulations and other	39,497	6,500
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ 497,561	$ 736,047

18. Capital Structure

The Company has four classes of authorized common stock. The Class A Common Stock and the Class C Common Stock have one vote per share. The Class B Common Stock and the Class D Common Stock have 10 votes per share. Shares of the Company’s common stock generally vote together as a single class on all matters submitted to a vote of the Company’s stockholders.

During the period prior to the Reorganization Transactions and IPO, Class A-2 profits interests and Class B interests in Virtu Financial were issued to Employee Holdco (as defined below) on behalf of certain key employees and stakeholders. In connection with the Reorganization Transactions, all Class A-2 profits interests and Class B interests were reclassified into Virtu Financial Units. As of June 30, 2019 and December 31, 2018, there were 8,150,771 and 8,760,755 Virtu Financial Units outstanding held by Employee Holdco, respectively, and 609,984 and 2,958,931 of such Virtu Financial Units and corresponding Class C Common Stock were exchanged into Class A Common Stock, forfeited or repurchased during the six months ended June 30, 2019 and 2018, respectively.

Amended and Restated 2015 Management Incentive Plan

The Company’s board of directors and stockholders adopted the 2015 Management Incentive Plan, which became effective upon consummation of the IPO, and was subsequently amended and restated following receipt of approval from the Company’s stockholders on June 30, 2017. The Amended and Restated 2015 Management Incentive Plan provides for the grant of stock options, restricted stock units, and other awards based on an aggregate of 16,000,000 shares of Class A Common Stock, subject to additional sublimits, including limits on the total option grant to any one participant in a single year and the total performance award to any one participant in a single year.

Amended and Restated Investment Technology Group, Inc. 2007 Omnibus Equity Compensation Plan

On the ITG Closing Date, the Company assumed the Amended and Restated ITG 2007 Equity Plan and the Assumed Awards. As of the ITG Closing Date, the aggregate number of shares of Class A Common Stock subject to such Assumed Awards was 2,497,028 and the aggregate number of shares of Class A Common Stock that remained issuable pursuant to the Amended and Restated ITG 2007 Equity Plan was 1,230,406.

Acquisition of KCG

On the KCG Closing Date, the Company completed the all-cash Acquisition of KCG. In connection with the Acquisition of KCG, the Company issued 8,012,821 shares of the Company’s Class A Common Stock to Aranda Investments Pte. Ltd. (“Aranda”), an affiliate of Temasek Holdings (Private) Limited (“Temasek”), for an aggregate purchase price of approximately $125.0 million and 40,064,103 shares of the Company’s Class A Common Stock to North Island Holdings I, LP (the “North Island Stockholder”) for an aggregate purchase price of approximately $618.7 million, in each case in accordance with terms of an investment agreement in a private placement exempt from the registration requirements of the Securities Act of 1933, as amended (the “Securities Act”), pursuant to Section 4(a)(2) of the Securities Act. The investment agreements are described in, and the full text thereof is filed as an exhibit to, the Company’s 2018 annual report on Form 10-K filed with the Securities and Exchange Commission on March 1, 2019.

Share Repurchase Program

In February 2018, the Company's board of directors authorized a new share repurchase program of up to $50.0 million in Class A Common Stock and Virtu Financial Units by March 31, 2019. On July 27, 2018, the Company's board of directors authorized the expansion of the Company's share repurchase program, increasing the total authorized amount by $50.0 million to $100.0 million and extending the duration of the program through September 30, 2019. Since the inception of the program in February 2018, the Company has repurchased approximately 2.6 million shares of Class A Common Stock and Virtu Financial Units for approximately $65.9 million. The Company now has approximately $34.1 million remaining capacity for future purchases of shares of Class A Common Stock and Virtu Financial Units under the program. Pursuant to the program, the Company may repurchase shares from time to time in open market transactions, privately negotiated transactions or by other means. Repurchases may also be made under Rule 10b5-1 plans. The timing and amount of repurchase transactions will be determined by the Company's management based on its evaluation of market conditions, share price, legal requirements and other factors. The program may be suspended, modified or discontinued at any time without prior notice.

Secondary Offerings

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

In connection with the May 2018 Secondary Offering, the Company, TJMT Holdings LLC, the North Island Stockholder, Havelock Fund Investments Pte. Ltd. (“Havelock”) and Aranda entered into that certain Amendment No. 1 to the Amended and Restated Registration Rights Agreement dated April 20, 2017, by and among the Company, TJMT Holdings LLC, the North Island Stockholder, Havelock, Aranda and certain direct or indirect equityholders of the Company (the “Amended and Restated Registration Rights Agreement”) to add Mr. Vincent Viola and Mr. Michael Viola, directors of the Company, and to confirm that certain other persons (including the Company’s CEO) remain parties to the Amended and Restated Registration Rights Agreement.

In May 2019, the Company completed a public offering (the “May 2019 Secondary Offering”) of 9,000,000 shares of Class A Common Stock at a purchase price per share paid by the underwriters of $22.00, the proceeds of which were used to purchase an equivalent number of Virtu Financial Units and corresponding shares of Class D Common Stock from TJMT Holdings LLC pursuant to that certain Member Purchase Agreement, entered into on May 14, 2019 by and between the Company and TJMT Holdings LLC.

Employee Exchanges

During the six months ended June 30, 2019 and 2018, pursuant to the exchange agreement by and among the Company, Virtu Financial and holders of Virtu Financial Units, certain current and former employees elected to exchange 609,984 and 3,508,217 units, respectively in Virtu Financial held directly or on their behalf by Virtu Employee Holdco LLC (“Employee Holdco”) on a one-for-one basis for shares of Class A Common Stock.

As a result of the completion of the IPO, the Reorganization Transactions, the Secondary Offerings, employee exchanges, and the share issuance in connection with the Acquisition of KCG, the Company holds approximately a 62.0% interest in Virtu Financial at June 30, 2019.

19. Share-based Compensation

Pursuant to the Amended and Restated 2015 Management Incentive Plan as described in Note 18 “Capital Structure”, and in connection with the IPO, non-qualified stock options to purchase shares of Class A Common Stock were granted, each of which vests in equal annual installments over a period of four years from grant date and expires not later than 10 years from the date of grant.

The following table summarizes activity related to stock options for the six months ended June 30, 2019 and 2018:

	Options Outstanding			Options Exercisable	
	Number of Options	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Life	Number of Options	Weighted Average Exercise Price Per Share
At December 31, 2017	7,783,000	$ 19.00	7.29	3,891,500	$ 19.00
Granted	—	—	—	—	—
Exercised	(4,049,058)	19.00	—	(4,049,058)	19.00
Forfeited or expired	(83,750)	—	—	—	—
At June 30, 2018	3,650,192	19.00	6.80	1,779,442	19.00
At December 31, 2018	3,486,150	19.00	6.30	1,660,400	19.00
Granted	156,129	13.60	4.87	156,129	13.60
Exercised	(353,500)	19.00	—	(353,500)	19.00
Forfeited or expired	(40,000)	—	—	—	—
At June 30, 2019	3,248,779	$ 18.74	5.74	3,248,779	$ 18.74

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

The Company recognized $1.5 million for the three months ended June 30, 2018, and $1.4 million and $2.9 million for the six months ended June 30, 2019 and 2018, respectively, of compensation expense in relation to the stock options issued and outstanding. As of June 30, 2019 the stock options to purchase shares of Class A Common Stock were fully vested. As of December 31, 2018, total unrecognized share-based compensation expense related to unvested stock options was $1.6 million, and the amount was to be recognized over a weighted average period of 0.3 years.

Amended and Restated Investment Technology Group, Inc. 2007 Omnibus Equity Compensation Plan

On the ITG Closing Date, the Company assumed the Amended and Restated ITG 2007 Equity Plan and the Assumed Awards. The Assumed Awards are subject to the same terms and conditions that were applicable to them under the Amended and Restated ITG 2007 Equity Plan, except that (i) the Assumed Awards relate to shares of the Company's Class A Common Stock, (ii) the number of shares of Class A Common Stock subject to the Assumed Awards was the result of an adjustment based upon an Exchange Ratio (as defined in the ITG Merger Agreement) and (iii) the performance share unit awards were converted into service-based vesting restricted stock unit awards that were no longer subject to any performance based vesting conditions. As of the ITG Closing Date, the aggregate number of shares of Class A Common Stock subject to such Assumed Awards was 2,497,028 and the aggregate number of shares of Class A Common Stock that remained issuable pursuant to the Amended and Restated ITG 2007 Equity Plan was 1,230,406. The Company filed a Registration Statement on Form S-8 on the ITG Closing Date to register such shares of Class A Common Stock.

Class A Common Stock and Restricted Stock Units

Pursuant to the Amended and Restated 2015 Management Incentive Plan as described in Note 18 "Capital Structure", subsequent to the IPO, shares of immediately vested Class A Common Stock and restricted stock units were granted, with the latter vesting over a period of up to 4 years. The fair value of the Class A Common Stock and RSUs was determined based on a volume weighted average price and is being recognized on a straight-line basis over the vesting period. For the six months ended June 30, 2019 and 2018, respectively, there were 423,393 and 594,536 shares of immediately vested Class A Common Stock granted as part of year-end compensation. In addition, the Company recorded compensation expense adjustment of $(0.2) million for the three months ended June 30, 2019, and accrued compensation expense of $0.8 million for the three months ended 2018. The Company accrued $2.5 million and $4.7 million for the six months ended June 30, 2019 and 2018, respectively, related to immediately vested Class A Common Stock expected to be awarded as part of year-end incentive compensation, which was included in Employee compensation and payroll taxes on the condensed consolidated statements of comprehensive income and Accounts payable, accrued expenses and other liabilities on the condensed consolidated statements of financial condition.

The following table summarizes activity related to the RSUs (including the Assumed Awards):

	Number of Shares	Weighted Average Fair Value
At December 31, 2017	853,047	$ 17.94
Granted	1,070,917	20.93
Forfeited	(127,493)	18.30
Vested	—	—
At June 30, 2018	1,796,471	19.70
At December 31, 2018	1,378,922	20.03
Granted	3,305,045	25.76
Forfeited	(189,149)	20.97
Vested	(820,287)	23.81
At June 30, 2019	3,674,531	24.29

The Company recognized $16.4 million and $4.5 million for the three months ended June 30, 2019 and 2018, respectively, and $39.6 million and $8.4 million for the six months ended June 30, 2019 and 2018, respectively, of compensation expense in relation to the restricted stock units. As of June 30, 2019 and December 31, 2018, total unrecognized share-based compensation expense related to unvested RSUs was $67.9 million and $21.3 million, respectively, and this amount is to be recognized over a weighted average period of 2 and 1.7 years, respectively.

20. Regulatory Requirement

As of June 30, 2019 and December 31, 2018, U.S. broker-dealer subsidiaries of the Company are subject to the SEC Uniform Net Capital Rule 15c3-1, which requires the maintenance of minimum net capital for each of the five U.S. broker-dealers as detailed in the table below. Pursuant to NYSE rules, VAL was also required to maintain $1.15 million of capital in connection with the operation of its designated market maker ("DMM") business as of June 30, 2019. The required amount is determined under the exchange rules as the greater of (i) $1 million or (ii) $75,000 for every 0.1% of NYSE transaction dollar volume in each of the securities for which the Company is registered as the DMM.

The regulatory capital and regulatory capital requirements of the U.S broker-dealer subsidiaries as of June 30, 2019 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Virtu Americas LLC	$ 328,965	$ 4,406	$ 324,559
Virtu Financial BD LLC	101,477	1,000	100,477
Virtu Financial Capital Markets LLC	9,633	1,000	8,633
Virtu ITG LLC	45,020	1,000	44,020
Virtu Alternet Securities LLC	2,189	100	2,089

The regulatory capital and regulatory capital requirements of the U.S. broker-dealer subsidiaries as of December 31, 2018 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Virtu Americas LLC	$ 381,211	$ 2,035	$ 379,176
Virtu Financial BD LLC	133,850	1,000	132,850
Virtu Financial Capital Markets LLC	9,457	1,000	8,457

As of June 30, 2019, VAL and VITG had $23.0 million and $7.4 million, respectively, of cash in special reserve bank accounts for the benefit of customers pursuant to SEC Rule 15c3-3, *Computation for Determination of Reserve Requirements,* and $1.0 million and $4.4 million, respectively, of cash in reserve bank accounts for the benefit of proprietary accounts of brokers.

The Company's foreign subsidiaries are subject to regulatory capital requirements set by local regulatory bodies, including the Investment Industry Regulatory Organization of Canada ("IIROC"), the Central Bank of Ireland, the Financial Conduct Authority in the United Kingdom, the Australian Securities Exchange, the Securities and Futures Commission in Hong

Kong, and the Monetary Authority of Singapore. Virtu Financial Canada ULC was admitted to membership in IIROC in March 2019. The regulatory net capital balances and regulatory capital requirements applicable to these subsidiaries as of June 30, 2019 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Canada			
Virtu ITG Canada Corp	$ 17,854	$ 191	$ 17,663
TriAct Canada Marketplace LP	1,518	191	1,327
Virtu Financial Canada ULC	2,591	191	2,400
Ireland			
Virtu ITG Europe Limited	52,855	31,324	21,531
Virtu Financial Ireland Limited	79,308	35,537	43,771
United Kingdom			
Virtu ITG UK Limited	1,335	952	383
KCG Europe Limited	50,672	32,000	18,672
Asia Pacific			
Virtu ITG Australia Limited	26,682	14,545	12,137
Virtu ITG Hong Kong Limited	2,071	538	1,533
Virtu ITG Singapore Pte Limited	1,034	74	960

21. Geographic Information and Business Segments

The Company operates its business in the U.S. and internationally, primarily in Europe and Asia. Significant transactions and balances between geographic regions occur primarily as a result of certain of the Company's subsidiaries incurring operating expenses such as employee compensation, communications and data processing and other overhead costs, for the purpose of providing execution, clearing and other support services to affiliates. Charges for transactions between regions are designed to approximate full costs. Intra-region income and expenses and related balances have been eliminated in the geographic information presented below to accurately reflect the external business conducted in each geographical region. The revenues are attributed to countries based on the locations of the subsidiaries. The following table presents total revenues by geographic area for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2019	2018	2019	2018
Revenues:				
United States (1)	$ 274,074	$ 277,263	$ 565,410	$ 1,020,414
Ireland	48,890	24,601	84,565	38,624
United Kingdom	(817)	3,245	(533)	14,845
Singapore	29,707	22,626	56,545	68,837
Canada	15,088	—	20,300	—
Australia	10,591	—	13,893	—
Others	923	391	1,268	459
Total revenues	$ 378,456	$ 328,126	$ 741,448	$ 1,143,179

(1) Includes $337.6 million gain on sale of BondPoint for the six months ended June 30, 2018.

The Company has two operating segments: (i) Market Making and (ii) Execution Services; and one non-operating segment: Corporate.

The Market Making segment principally consists of market making in the cash, futures and options markets across global equities, options, fixed income, currencies and commodities. As a market maker, the Company commits capital on a principal basis by offering to buy securities from, or sell securities to, broker-dealers, banks and institutions. The Company engages in principal trading in the Market Making segment direct to clients as well as in a supplemental capacity on exchanges, ECNs and ATSs. The Company is an active participant on all major global equity and futures exchanges and also trades on substantially all domestic electronic options exchanges. As a complement to electronic market making, the cash trading business handles specialized orders and also transacts on the OTC Link ATS operated by OTC Markets Group Inc. and the AIM.

The Execution Services segment comprises agency-based trading and trading venues, offering execution services in global equities, options, futures and fixed income on behalf of institutions, banks and broker-dealers as well as technology services revenues. The Company earns commissions and commission equivalents as an agent on behalf of clients as well as between principals to transactions; in addition, the Company will commit capital on behalf of clients as needed. Agency-based, execution-only trading in the segment is done primarily through a variety of access points including: (i) algorithmic trading and order routing in global equities and options; (ii) institutional sales traders who offer portfolio trading and single stock sales trading which provides execution expertise for program, block and riskless principal trades in global equities and ETFs; and (iii) matching of client orders in POSIT Alert and in the Company's ATSs, including Virtu MatchIt, POSIT, and MATCHNow. The Execution Services segment also includes revenues derived from providing (a) proprietary risk management and trading infrastructure technology to select third parties for a service fee, (b) workflow technology, the Company's integrated, broker-neutral trading tools delivered across the globe including trade order and execution management and order management software applications and network connectivity and (c) trading analytics, including (1) tools enabling portfolio managers and traders to improve pre-trade, real-time and post-trade execution performance, (2) portfolio construction and optimization decisions and (3) securities valuation.

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

Management evaluates the performance of its segments on a pre-tax basis. Segment assets and liabilities are not used for evaluating segment performance or in deciding how to allocate resources to segments. The Company's total revenues and income before income taxes and noncontrolling interest ("Pre-tax earnings") by segment for the three months ended June 30, 2019 and 2018 are summarized in the following table:

(in thousands)	Market Making	Execution Services	Corporate (1)	Consolidated Total
2019:				
Total revenue	$ 235,004	$ 142,024	$ 1,428	$ 378,456
Income before income taxes and noncontrolling interest	21,962	(21,697)	(66,844)	(66,579)
2018:				
Total revenue	287,695	40,774	(343)	328,126
Income (loss) before income taxes and noncontrolling interest	60,003	389	(10,770)	49,622

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

The Company's Pre-tax earnings by segment for the six months ended June 30, 2019 and 2018 are summarized in the following table:

(in thousands)	Market Making	Execution Services	Corporate (1)	Consolidated Total
2019				
Total revenue	$ 514,225	$ 225,542	$ 1,681	$ 741,448
Income before income taxes and noncontrolling interest	69,501	(66,102)	(86,182)	(82,783)
2018				
Total revenue	720,231	424,553	(1,605)	1,143,179
Income (loss) before income taxes and noncontrolling interest	223,166	331,574	(36,580)	518,160

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

22. Related Party Transactions

The Company incurs expenses and maintains balances with its affiliates in the ordinary course of business. As of June 30, 2019, and December 31, 2018 the Company had payables of $1.2 million and $3.0 million to its affiliates, respectively.

The Company has held a minority interest in SBI since 2016 (see Note 11 "Financial Assets and Liabilities"). The Company pays exchange fees to SBI for the trading activities conducted on its proprietary trading system. The Company paid

$2.7 million and $2.3 million for the three months ended June 30, 2019 and 2018, respectively, and $6.1 million and $4.6 million for the six months ended June 30, 2019 and 2018, respectively, to SBI for these trading activities.

The Company makes payments to two JVs (see Note 2 "Summary of Significant Accounting Policies") to fund the construction of the microwave communication networks, and to purchase microwave communication networks, which are recorded within communications and data processing on the condensed consolidated statements of comprehensive income. The Company made payments of $5.2 million and $4.4 million to the JVs for the three months ended June 30, 2019 and 2018, respectively, and $10.4 million and $10.1 million for the six months ended June 30, 2019 and 2018, respectively.

The Company purchases network connections services from affiliates of Level 3 Communications ("Level 3"). Temasek and its affiliates have a significant ownership interest in Level 3. The Company paid $0.5 million and $0.8 million for the three months ended June 30, 2019 and 2018, respectively, and $0.8 million and $1.5 million for the six months ended June 30, 2019 and 2018, respectively, to Level 3 for these services.

23. Subsequent Events

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

On August 8, 2019, the Company's board of directors declared a dividend of $0.24 per share of Class A Common Stock and Class B Common Stock and per Restricted Stock Unit that will be paid on September 16, 2019 to holders of record as of September 3, 2019.

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

The following management’s discussion and analysis covers the three and six months ended June 30, 2019, and 2018 and should be read in conjunction with the condensed consolidated financial statements of Virtu Financial, Inc. (the “Company”). This management's discussion and analysis contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Unless otherwise stated, all amounts are presented in thousands of dollars.

Forward-Looking Statements

This quarterly report on Form 10-Q contains forward-looking statements. You should not place undue reliance on forward-looking statements because they are subject to numerous uncertainties and factors relating to our operations and business environment, all of which are difficult to predict and many of which are beyond our control. Forward-looking statements include information concerning our possible or assumed future results of operations, including descriptions of our business strategy. These forward-looking statements can be identified by the use of forward-looking terminology, including the terms “may,” “will,” “should,” “believe,” “expect,” “anticipate,” “intend,” “plan,” “estimate,” “project” or, in each case, their negative, or other variations or comparable terminology and expressions. These statements are based on assumptions that we have made in light of our experience in the industry as well as our perceptions of historical trends, current conditions, expected future developments and other factors we believe are appropriate under the circumstances. As you read and consider this quarterly report on Form 10-Q, you should understand that forward-looking statements are not guarantees of performance or results and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate, may differ materially from those made in or suggested by the forward-looking statements contained in this quarterly report on Form 10-Q. By their nature, forward-looking statements involve known and unknown risks and uncertainties, including those described under the heading “Risk Factors” in this quarterly report on Form 10-Q, because they relate to events and depend on circumstances that may or may not occur in the future. Although we believe that the forward-looking statements contained in this quarterly report on Form 10-Q are based on reasonable assumptions, you should be aware that many factors, including those described under the heading “Risk Factors” in this quarterly report on Form 10-Q or in Part I, Item 1A. “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2018 as filed with the Securities and Exchange Commission (“SEC”) on March 1, 2019 (the “2018 Form 10-K”), could affect our actual financial results or results of operations and cash flows, and could cause actual results to differ materially from those in such forward-looking statements, including but not limited to:

- reduced levels of overall trading activity;
- dependence upon trading counterparties and clearing houses performing their obligations to us;
- failures of our customized trading platform;
- risks inherent to the electronic market making business and trading generally;
- increased competition in market making activities and execution services;
- dependence on continued access to sources of liquidity;
- risks associated with self-clearing and other operational elements of our business;
- obligations to comply with applicable regulatory capital requirements;
- litigation or other legal and regulatory-based liabilities;
- proposed legislation that would impose taxes on certain financial transactions in the European Union, the U.S. and other jurisdictions;
- obligations to comply with laws and regulations applicable to our operations in the U.S. and abroad;
- enhanced media and regulatory scrutiny and its impact upon public perception of us or of companies in our industry;
- need to maintain and continue developing proprietary technologies;
- the effect of the ITG Acquisition (as defined below) on existing business relationships, operating results, and ongoing business operations generally;
- the significant costs and significant indebtedness that we have incurred in connection with the ITG Acquisition, and the integration of ITG (as defined below) into our business;

- the risk that we may encounter significant difficulties or delays in integrating the ITG business with ours and that the anticipated benefits, cost savings and synergies or capital release may not be achieved;
- the assumption of potential liabilities and risks relating to ITG's business;
- capacity constraints, system failures, and delays;
- dependence on third party infrastructure or systems;
- use of open source software;
- failure to protect or enforce our intellectual property rights in our proprietary technology;
- failure to protect confidential and proprietary information;
- failure to protect our systems from internal or external cyber threats that could result in damage to our computer systems, business interruption, loss of data or other consequences;
- risks associated with international operations and expansion, including failed acquisitions or dispositions;
- the effects of and changes in economic conditions (such as volatility in the financial markets, inflation, monetary conditions and foreign currency and exchange rate fluctuations, foreign currency controls and/or government mandated pricing controls, as well as in trade, monetary, fiscal and tax policies in international markets) and political conditions (such as military actions and terrorist activities);
- risks associated with potential growth and associated corporate actions;
- inability to access, or delay in accessing the capital markets to sell shares or raise additional capital;
- loss of key executives and failure to recruit and retain qualified personnel; and
- risks associated with losing access to a significant exchange or other trading venue.

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

Basis of Preparation

Our condensed consolidated financial statements for the three and six months ended June 30, 2019 and 2018 reflect our operations and those of our consolidated subsidiaries. As discussed in Note 1 “Organization and Basis of Presentation” and in Note 3 “ITG Acquisition” of Part I Item 1 “Financial Statements” of this quarterly report on Form 10-Q, we have accounted for the ITG Acquisition under the acquisition method of accounting. Under the acquisition method of accounting, the assets and liabilities of ITG, as of the ITG Closing Date (as defined below), were recorded at their respective fair values and added to the carrying value of our existing assets and liabilities. Our reported financial condition, results of operations and cash flows of the Company for the periods following the ITG Closing Date reflect ITG's and our balances, and reflect the impact of purchase accounting adjustments. The financial results for the three months ended June 30, 2019 comprise our results and the results of ITG for the entire applicable period. The financial results for the six months ended June 30, 2019 comprise our results for the entire applicable period and the results of ITG from the ITG Closing Date through June 30, 2019. All periods prior to the ITG Closing Date comprise solely our results.

Overview

We are a leading financial services firm that leverages cutting edge technology to deliver innovative, transparent trading solutions to our clients and liquidity to the global markets. We leverage our market structure expertise and scaled, multi-asset technology infrastructure to provide a complete suite of client solutions, including transparent agency execution and broker-neutral offerings. We believe that our broad diversification, in combination with our proprietary technology platform and low-cost structure, enables us to facilitate risk transfer between global capital markets participants by supplying competitive liquidity while at the same time earning attractive margins and returns.

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

We believe that technology-enabled market makers and execution services providers like Virtu serve an important role in maintaining and improving the overall health and efficiency of the global capital markets by ensuring that market participants have an efficient means to transfer risk and analyze the quality of execution. All market participants benefit from the increased liquidity, lower overall trading costs and execution transparency that Virtu provides.

Our execution services and client solutions products are transparent, because we believe transparency makes markets more efficient and helps investors make better, more informed decisions. We use the best technology to deliver liquidity to global markets and innovative trading solutions and analytics tools to our clients. We interact directly with hundreds of retail brokers, Registered Investment Advisors, private client networks, sell-side brokers, and buy-side institutions.

On July 20, 2017 (the "KCG Closing Date"), the Company completed the all-cash acquisition of KCG Holdings, Inc. ("KCG") (the "Acquisition of KCG"). KCG was a leading independent securities firm offering clients a range of services designed to address trading needs across asset classes, product types and geographies.

As described below, we completed the ITG Acquisition on the ITG Closing Date. ITG was a global financial technology company helping leading brokers and asset managers improve returns for investors around the world. ITG empowered traders to reduce the end-to-end cost of implementing investments via liquidity, execution, analytics and workflow technology solutions.

We have two operating segments: Market Making and Execution Services, and one non-operating segment: Corporate. Our management allocates resources, assesses performance and manages our business according to these segments.

Market Making

We leverage cutting edge technology to provide competitive and deep liquidity that helps to create more efficient markets around the world. We stand ready, at any time, to buy or sell a broad range of securities, and we generate revenue by buying and selling large volumes of securities and other financial instruments and earning small bid/ask spreads. Our market structure expertise, broad diversification, and scalable execution technology enable us to provide competitive bids and offers in over 25,000 securities and other financial instruments, on over 235 venues, in 36 countries worldwide. We use the best technology to deliver liquidity to global markets and automate our market making, risk controls, and post-trade processes. As a market maker, we interact directly with hundreds of retail brokers, Registered Investment Advisors, private client networks, sell-side brokers, and buy-side institutions.

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

Execution Services

We offer agency execution services and trading venues that provide transparent trading in global equities, ETFs, fixed income, currencies, and commodities to institutions, banks and broker-dealers. We generally earn commissions as an agent between principals for transactions. Agency-based, execution-only trading in the segment is done primarily through a variety of access points including: (a) algorithmic trading and order routing; (b) institutional sales traders who offer portfolio trading and single stock sales trading which provides execution expertise for program, block and riskless principal trades in global equities and ETFs; and (c) matching of client orders in POSIT Alert and in our alternative trading systems ("ATS"), including Virtu MatchIt, POSIT and MATCHNow. We also earn revenues (a) by providing our proprietary technology and infrastructure to select third parties for a service fee, (b) through workflow technology, our integrated, broker-neutral trading tools delivered across the globe including trade order and execution management and order management software applications and network connectivity and (c) through trading analytics, including (1) tools enabling portfolio managers and traders to improve pre-trade, real-time and post-trade execution performance, (2) portfolio construction and optimization decisions and (3) securities valuation.

Corporate

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

Acquisition of Investment Technology Group, Inc.

On March 1, 2019 (the "ITG Closing Date"), we announced the completion of our previously announced acquisition of Investment Technology Group, Inc. ("ITG") in a cash transaction valued at $30.30 per ITG share, or a total of approximately $1.0 billion (the "ITG Acquisition"). In connection with the ITG Acquisition, Virtu Financial, VFH Parent LLC, a Delaware limited liability company and a subsidiary of Virtu Financial ("VFH") and Impala Borrower LLC (the "Acquisition Borrower"), a subsidiary of the Company, entered into a Credit Agreement (the "Credit Agreement"), with the lenders party thereto, Jefferies Finance LLC, as administrative agent and Jefferies Finance LLC and RBC Capital Markets, as joint lead arrangers and joint bookrunners. The Credit Agreement provides (i) a senior secured first lien term loan (the "First Lien Term Loan Facility") in an aggregate principal amount of $1.5 billion, drawn in its entirety on the ITG Closing Date, with approximately $404.5 million being borrowed by VFH to repay all amounts outstanding under its existing term loan facility and the remaining approximately $1,095.0 million being borrowed by the Acquisition Borrower to finance the consideration and fees and expenses to be paid in connection with the ITG Acquisition, and (ii) a $50.0 million senior secured first lien revolving facility to VFH (the "First Lien Revolving Facility"), with a $5.0 million letter of credit subfacility and a $5.0 million swingline subfacility. After the closing of the ITG Acquisition, VFH assumed the obligations of the Acquisition Borrower in respect of the acquisition term loans. Additionally, on the ITG Closing Date, the Company's fourth amended and restated credit agreement, dated as of June 30, 2017 (as amended on January 2, 2018 and September 19, 2018, the "Fourth Amended and Restated Credit Agreement") was terminated.

Amended and Restated 2015 Management Incentive Plan

The Company's board of directors and stockholders adopted the 2015 Management Incentive Plan, which became effective upon consummation of the Company's initial public offering in April 2015 (the "IPO") and was subsequently amended and restated following receipt of approval from the Company's stockholders on June 30, 2017 (the "Amended and Restated 2015 Management Incentive Plan"). The Amended and Restated 2015 Management Incentive Plan provides for the grant of stock options, restricted stock units, and other awards based on an aggregate of 16,000,000 shares of Class A common stock, par value $0.00001 per share (the "Class A Common Stock"), subject to additional sublimits, including limits on the total option grant to any one participant in a single year and the total performance award to any one participant in a single year.

In connection with the IPO, non-qualified stock options to purchase 9,228,000 shares were granted at the IPO per share price, each of which vests in equal annual installments over a period of four years from the grant date and expires not later than 10 years from the grant date. Subsequent to the IPO and through June 30, 2019, options to purchase 1,613,750 shares in the aggregate were forfeited and 4,521,600 options were exercised. The fair value of the stock option grants was determined through the application of the Black-Scholes-Merton model and is being recognized on a straight-line basis over the vesting period. In connection with and subsequent to the IPO, 1,677,318 shares of immediately vested Class A Common Stock and 2,620,051 restricted stock units were granted, which vest over a period of up to 4 years and are settled in shares of Class A Common Stock. The fair value of the Class A Common Stock and restricted stock units was determined based on the volume weighted average price for the three days preceding the grant, and with respect to the restricted stock units is recognized on a straight-line basis over the vesting period.

Amended and Restated Investment Technology Group, Inc. 2007 Omnibus Equity Compensation Plan

On the ITG Closing Date, the Company assumed the Amended and Restated ITG 2007 Omnibus Equity Compensation Plan, dated as of June 8, 2017 (the "Amended and Restated ITG 2007 Equity Plan") and certain stock option awards, restricted stock unit awards, deferred stock unit awards and performance stock unit awards granted under the Amended and Restated ITG 2007 Equity Plan (the "Assumed Awards"). The Assumed Awards are subject to the same terms and conditions that were applicable to them under the Amended and Restated ITG 2007 Equity Plan, except that (i) the Assumed Awards relate to shares of the Company's Class A Common Stock, (ii) the number of shares of Class A Common Stock subject to the Assumed Awards was the result of an adjustment based upon an Exchange Ratio (as defined in the Agreement and Plan of Merger by and between the Company, Impala Merger Sub, Inc., a Delaware corporation and an indirect wholly owned subsidiary of the Company, and ITG, dated as of November 6, 2018, the "ITG Merger Agreement") and (iii) the performance share unit awards were converted into service-based vesting restricted stock unit awards that were no longer subject to any performance based vesting conditions. As of the ITG Closing Date, the aggregate number of shares of Class A Common Stock subject to such Assumed Awards was 2,497,028 and the aggregate number of shares of Class A Common Stock that remained issuable pursuant to the Amended and Restated ITG 2007 Equity Plan was 1,230,406. The Company filed a Registration Statement on Form S-8 on the ITG Closing Date to register such shares of Class A Common Stock.

Parent Company Financial Information

There are no material differences between our condensed consolidated financial statements and the financial statements of Virtu Financial LLC ("Virtu Financial") except as follows: (i) cash and cash equivalents reflected on our condensed consolidated statement of financial condition in the amount of $0.1 million; (ii) deferred tax assets reflected on our condensed consolidated statement of financial condition in the amount of $222.9 million and tax receivable agreement obligation in the amount of $256.7 million, in each case as described in greater detail in Note 6 "Tax Receivable Agreements" of Part I Item 1 "Financial Statements" of this quarterly report on Form 10-Q; (iii) a portion of the member's equity of Virtu Financial is represented as non-controlling interest on our condensed consolidated statement of financial condition; and (iv) provision for (benefit from) corporate income tax in the amount of $(12.7) million and $(15.2) million reflected on our condensed consolidated statements of comprehensive income for the three and six months ended June 30, 2019, respectively.

Components of Our Results of Operations

The following table shows our i) Total revenue, ii) Total operating expenses, and iii) Income before income taxes and noncontrolling interest by segment for the three and six months ended June 30, 2019 and 2018:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
Market Making	**2019**	**2018**	**2019**	**2018**
Total revenue	$ 235,004	$ 287,695	$ 514,225	$ 720,231
Total operating expenses	213,042	227,692	444,724	497,065
Income before income taxes and noncontrolling interest	21,962	60,003	69,501	223,166
Execution Services				
Total revenue	142,024	40,774	225,542	424,553
Total operating expenses	163,721	40,385	291,644	92,979
Income (loss) before income taxes and noncontrolling interest	(21,697)	389	(66,102)	331,574
Corporate				
Total revenue	1,428	(343)	1,681	(1,605)
Total operating expenses	68,272	10,427	87,863	34,975
Income (loss) before income taxes and noncontrolling interest	(66,844)	(10,770)	(86,182)	(36,580)
Consolidated				
Total revenue	378,456	328,126	741,448	1,143,179
Total operating expenses	445,035	278,504	824,231	625,019
Income (loss) before income taxes and noncontrolling interest	$ (66,579)	$ 49,622	$ (82,783)	$ 518,160

The following table shows our results of operations for the three and six months ended June 30, 2019 and 2018:

(in thousands)	Three Months Ended June 30, 2019	Three Months Ended June 30, 2018	Six Months Ended June 30, 2019	Six Months Ended June 30, 2018
Revenues:				
Trading income, net	$ 205,923	$ 258,593	$ 463,463	$ 664,755
Interest and dividends income	24,162	21,937	53,293	39,886
Commissions, net and technology services	145,120	46,565	220,267	100,409
Other, net	3,251	1,031	4,425	338,129
Total revenue	378,456	328,126	741,448	1,143,179
Operating Expenses:				
Brokerage, exchange and clearance fees, net	75,851	73,318	139,904	161,141
Communication and data processing	54,423	48,791	96,237	98,277
Employee compensation and payroll taxes	83,702	41,226	191,540	105,896
Payments for order flow	23,636	15,842	47,197	32,098
Interest and dividends expense	36,824	35,009	82,193	68,633
Operations and administrative	34,808	16,610	56,885	36,416
Depreciation and amortization	14,810	16,194	31,260	31,546
Amortization of purchased intangibles and acquired capitalized software	20,606	6,838	31,528	13,675
Termination of office leases	65,207	1,777	65,208	21,860
Debt issue cost related to debt refinancing and prepayment	(1,319)	2,359	7,894	8,380
Transaction advisory fees and expenses	1,798	1,750	16,907	9,246
Charges related to share based compensation at IPO	—	10	—	24
Financing interest expense on long-term borrowings	34,689	18,780	57,478	37,827
Total operating expenses	445,035	278,504	824,231	625,019
Income (loss) before income taxes and noncontrolling interest	(66,579)	49,622	(82,783)	518,160
Provision for (benefit from) income taxes	(11,094)	3,000	(13,679)	61,515
Net income (loss)	$ (55,485)	$ 46,622	$ (69,104)	$ 456,645

Total Revenues

Revenues are generated through market marking activities, commissions and fees on execution services activities, which include recurring subscriptions on workflow technology and analytic products. The majority of our revenue is generated through market making activities, which is recorded as Trading income, net and Interest and dividends income. Commissions and fees are derived from commissions charged for trade executions in agency execution services. We earn commissions and commission equivalents, as well as, in certain cases, contingent fees based on client revenues, which represents variable consideration. The services offered under these contracts have the same pattern of transfer; accordingly, they are being measured and recognized as a single performance obligation. The performance obligation is satisfied over time, and accordingly, revenue is recognized as time passes. Variable consideration has not been included in the transaction price as the amount of consideration is contingent on factors outside our control and thus it is not probable that a significant reversal of cumulative revenue recognized will not occur.

Recurring revenues are primarily derived from workflow technology connectivity fees generated for matching client orders, and analytics services to select third parties. Revenues from connectivity fees are recognized and billed to clients on a monthly basis. Revenues from commissions attributable to analytic products under bundled arrangements will be recognized over the course of the year as the performance obligations for those analytics products are satisfied.

Trading income, net. Trading income, net represents revenue earned from bid/ask spreads. Trading income is generated in the normal course of our market making activities and is typically proportional to the level of trading activity, or volumes, in the asset classes we serve. Our trading income is highly diversified by asset class and geography and is comprised of small amounts earned on millions of trades on various exchanges, primarily in the following two categories: Global Equities, and Global FICC, Options and Other. Our trading income, net, results from gains and losses associated with trading strategies, which are designed to capture small bid ask spreads. Trading income, net, accounted for 54% and 79% of our total revenues for the three months ended June 30, 2019 and 2018, respectively, and 63% and 58% for the six months ended June 30, 2019 and 2018, respectively.

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

Commissions, net and technology services. We earn revenues on transactions for which we charge explicit commissions or commission equivalents, which include the majority of our institutional client orders. Commissions and fees are primarily affected by changes in our equities, fixed income and futures transaction volumes with institutional clients, which vary based on client relationships; changes in commission rates; client experience on the various platforms; level of volume based fees from providing liquidity to other trading venues; and the level of our soft dollar and commission recapture activity. Agency commission fees are charged for agency trades executed by us on behalf of third party broker-dealers, institutions and other financial institutions. Revenue is recognized on a trade date basis, which is the point at which the performance obligation to the customer is satisfied, based on the trade volume executed. In addition, we offer workflow technology and analytics services to select third parties. Revenues are derived from connectivity fees generated by matching sell-side and buy-side clients orders, and analytic products delivered to the clients.

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

Other, net. We have interests in multiple strategic investments and telecommunications joint ventures (“JVs”). We record our pro-rata share of each JV’s earnings or losses within other, net, while fees related to the use of communication services provided by the JVs are recorded within communications and data processing. In addition, we also recorded gains or losses on certain one-time transactions, including the sale of our BondPoint business (“BondPoint”) to Intercontinental Exchange (“ICE”) in 2018, within Other, net (see Note 4 “Sale of BondPoint” of Part I Item 1 “Financial Statements” of this quarterly report on Form 10-Q).

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

Operating Expenses

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

Payments for order flow. Payments for order flow represent payments to broker-dealer clients, in the normal course of business, for directing their order flow to us primarily in U.S. equities. Payments for order flow will fluctuate as we modify our rates and as the portion of our clients that do not accept payments for order flow varies. Payments for order flow also fluctuate based on U.S. equity share and option volumes, our profitability and the mix of market orders, limit orders, and customers.

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

Employee compensation and payroll taxes. Employee compensation and payroll taxes include employee salaries, cash and non-cash incentive compensation, employee benefits, payroll taxes, severance and other employee related costs. Employee compensation and payroll taxes also includes non-cash compensation expenses with respect to the stock options and restricted stock units granted in connection with and subsequent to the IPO pursuant to the Amended and Restated 2015 Management Incentive Plan and stock options and restricted stock units granted pursuant to the Amended and Restated ITG 2007 Equity Plan.

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

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

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

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

Termination of office leases. Termination of office leases represents the write-off expense related to certain office space we ceased use of as part of the effort to integrate and consolidate office space in connection with the ITG Acquisition. The aggregate write-off amount includes the impairment of operating lease right-of-use assets, leasehold improvements and fixed assets, and dilapidation charges.

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

Transaction advisory fees and expenses. Transaction advisory fees and expenses primarily reflect professional fees incurred by us in connection with the ITG Acquisition and with the sale of BondPoint in 2018.

Charges related to share based compensation at IPO. At the consummation of the IPO and through the three and six months ended June 30, 2019, we recognized non-cash compensation expenses in respect of the outstanding time-vested Class B interests of Virtu Financial (the “Virtu Class B Interests”) and Class B interests of Virtu East MIP LLC (the “East MIP Class B Interests”), net of capitalization and amortization of costs attributable to employees incurred in development of software for internal use, as defined and discussed in Note 19 “Share-based Compensation” of Part I Item 1 “Financial Statements” of this quarterly report on Form 10-Q.

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

Provision for (benefit from) income taxes

We are subject to U.S. federal, state and local income tax at the rate applicable to corporations less the rate attributable to the noncontrolling interest in Virtu Financial.

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

We regularly assess whether it is more likely than not that we will realize our deferred tax assets in each taxing jurisdiction in which we operate. In performing this assessment with respect to each jurisdiction, we review all available evidence, including actual and expected future earnings, capital gains, and investment in such jurisdiction, the carry-forward periods available to us for tax reporting purposes, and other relevant factors. See Note 14 “Income Taxes” of Part I Item 1 “Financial Statements” of this quarterly report on Form 10-Q for additional information.

Non-GAAP Financial Measures and Other Items

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

- “Adjusted Net Trading Income”, which is the amount of revenue we generate from our market making activities, or trading income, net, plus commissions, net and technology services, plus interest and dividends income, less direct costs associated with those revenues, including brokerage, exchange and clearance fees, net, payments for order flow, and interest and dividends expense. Management believes that this measurement is useful for comparing general operating performance from period to period. Although we use Adjusted Net Trading Income as a financial measure to assess the performance of our business, the use of Adjusted Net Trading Income is limited because it does not include certain material costs that are necessary to operate our business. Our presentation of Adjusted Net Trading Income should not be construed as an indication that our future results will be unaffected by revenues or expenses that are not directly associated with our market making activities.
- “EBITDA”, which measures our operating performance by adjusting net income to exclude financing interest expense on long-term borrowings, debt issue cost related to debt refinancing, depreciation and amortization, amortization of purchased intangibles and acquired capitalized software, and income tax expense, and “Adjusted EBITDA”, which measures our operating performance by further adjusting EBITDA to exclude severance, reserve for legal matters, transaction advisory fees and expenses, termination of office leases, acquisition related retention bonus, connectivity early termination, trading related settlement income, gain on sale of businesses, other, net, write-down of assets, share based compensation, charges related to share based compensation at IPO, Amended and Restated 2015 Management Incentive Plan, and charges related to share based compensation at IPO.

- “Normalized Adjusted Net Income”, “Normalized Adjusted Net Income before income taxes”, “Normalized provision for income taxes”, and “Normalized Adjusted EPS”, which we calculate by adjusting Net Income to exclude certain items including IPO-related adjustments and other non-cash items, assuming that all vested and unvested common interest units in Virtu Financial (“Virtu Financial Units”) have been exchanged for Class A Common Stock, and applying an effective tax rate, which was between approximately 23% and 24% beginning January 1, 2018.
- Operating Margins, which are calculated by dividing net income, EBITDA, and Adjusted EBITDA by Adjusted Net Trading Income.

Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes, Normalized Adjusted EPS, and Operating Margins are non-GAAP financial measures used by management in evaluating operating performance and in making strategic decisions. Additional information provided regarding the breakdown of total Adjusted Net Trading Income by category is also a non-GAAP financial measure but is not used by the Company in evaluating operating performance and in making strategic decisions. In addition, these non-GAAP financial measures or similar non-GAAP financial measures are used by research analysts, investment bankers and lenders to assess our operating performance. Management believes that the presentation of Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes, Normalized Adjusted EPS, and Operating Margins provide useful information to investors regarding our results of operations and cash flows because they assist both investors and management in analyzing and benchmarking the performance and value of our business. Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes, Normalized Adjusted EPS, and Operating Margins provide indicators of general economic performance that are not affected by fluctuations in certain costs or other items. Accordingly, management believes that these measurements are useful for comparing general operating performance from period to period. Furthermore, our Credit Agreement contains covenants and other tests based on metrics similar to Adjusted EBITDA. Other companies may define Adjusted Net Trading Income, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes, Normalized Adjusted EPS, and Operating Margins differently, and as a result our measures of Adjusted Net Trading Income, Adjusted EBITDA, Normalized Adjusted Net Income, Normalized Adjusted Net Income before income taxes, Normalized provision for income taxes, Normalized Adjusted EPS, and Operating Margins may not be directly comparable to those of other companies. Although we use these non-GAAP measures as financial measures to assess the performance of our business, such use is limited because they do not include certain material costs necessary to operate our business.

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

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

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

The following tables reconcile the condensed consolidated statements of comprehensive income to arrive at Adjusted Net Trading Income, EBITDA, Adjusted EBITDA, and Operating Margins for the three and six months ended June 30, 2019 and 2018.

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
(in thousands)	**2019**	**2018**	**2019**	**2018**
Reconciliation of Trading income, net to Adjusted Net Trading Income				
Trading income, net	$ 205,923	$ 258,593	$ 463,463	$ 664,755
Interest and dividends income	24,162	21,937	53,293	39,886
Commissions, net and technology services	145,120	46,565	220,267	100,409
Brokerage, exchange and clearance fees, net	(75,851)	(73,318)	(139,904)	(161,141)
Payments for order flow	(23,636)	(15,842)	(47,197)	(32,098)
Interest and dividends expense	(36,824)	(35,009)	(82,193)	(68,633)
Adjusted Net Trading Income	$ 238,894	$ 202,926	$ 467,729	$ 543,178
Reconciliation of Net Income to EBITDA and Adjusted EBITDA				
Net income (loss)	$ (55,485)	$ 46,622	$ (69,104)	$ 456,645
Financing interest expense on long-term borrowings	34,689	18,780	57,478	37,827
Debt issue cost related to debt refinancing and prepayment	(1,319)	2,359	7,894	8,380
Depreciation and amortization	14,810	16,194	31,260	31,546
Amortization of purchased intangibles and acquired capitalized software	20,606	6,838	31,528	13,675
Provision for (benefit from) income taxes	(11,094)	3,000	(13,679)	61,515
EBITDA	$ 2,207	$ 93,793	$ 45,377	$ 609,588
Severance	7,873	2,590	61,224	6,334
Transaction advisory fees and expenses	1,798	1,750	16,907	9,246
Termination of office leases	65,208	1,777	65,208	21,860
Connectivity early termination	—	4,562	—	7,062
Gain on sale of business	—	—	—	(337,549)
Other, net	104	(631)	1,491	(180)
Write-down of assets	—	1,761	—	2,697
Share based compensation	11,983	5,204	21,796	13,121
Charges related to share based compensation at IPO, Amended and Restated 2015 Management Incentive Plan	(9)	1,534	1,385	2,931
Charges related to share based compensation awards at IPO	—	10	—	24
Adjusted EBITDA	$ 89,164	$ 112,350	$ 213,388	$ 335,134
Selected Operating Margins				
Net Income Margin (1)	(23.2)%	23.0%	(14.8)%	84.1%
EBITDA Margin (2)	0.9 %	46.2%	9.7 %	112.2%
Adjusted EBITDA Margin (3)	37.3 %	55.4%	45.6 %	61.7%

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

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

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
(in thousands, except share and per share data)	**2019**	**2018**	**2019**	**2018**
Reconciliation of Net Income to Normalized Adjusted Net Income				
Net income (loss)	$ (55,485)	$ 46,622	$ (69,104)	$ 456,645
Provision for (benefit from) income taxes	(11,094)	3,000	(13,679)	61,515
Income (loss) before income taxes	(66,579)	49,622	(82,783)	518,160
Amortization of purchased intangibles and acquired capitalized software	20,606	6,838	31,528	13,675
Debt issue cost related to debt refinancing	(1,319)	2,359	7,894	8,380
Severance	7,873	2,590	61,224	6,334
Transaction advisory fees and expenses	1,798	1,750	16,907	9,246
Termination of office leases	65,208	1,777	65,208	21,860
Connectivity early termination	—	4,562	—	7,062
Gain on sale of business	—	—	—	(337,549)
Write-down of assets	—	1,761	—	2,697
Other, net	104	(631)	1,491	(180)
Share based compensation	11,983	5,204	21,796	13,121
Charges related to share based compensation at IPO, 2015 Management Incentive Plan	(9)	1,534	1,385	2,931
Charges related to share based compensation awards at IPO	—	10	—	24
Normalized Adjusted Net Income before income taxes	39,665	77,376	124,650	265,761
Normalized provision for income taxes (1)	9,520	17,796	29,916	61,125
Normalized Adjusted Net Income	$ 30,145	$ 59,580	$ 94,734	$ 204,636
Weighted Average Adjusted shares outstanding (2)	194,217,318	191,142,871	192,959,477	190,320,527
Normalized Adjusted EPS	$ 0.16	$ 0.31	$ 0.49	$ 1.08

(1) Reflects U.S. federal, state, and local income tax rate applicable to corporations of approximately 23% for 2019 and 2018.

(2) Assumes that (1) holders of all vested and unvested non-vesting Virtu Financial Units (together with corresponding shares of the Company's Class C common stock, par value $0.00001 per share (the "Class C Common Stock"), have exercised their right to exchange such Virtu Financial Units for shares of Class A Common Stock on a one-for-one basis, (2) holders of all Virtu Financial Units (together with corresponding shares of the Company's Class D common stock, par value $0.00001 per share (the "Class D Common Stock") have exercised their right to exchange such Virtu Financial Units for shares of the Company's Class B common stock, par value $0.00001 per share (the "Class B Common Stock") on a one-for-one basis, and subsequently exercised their right to convert the shares of Class B Common Stock into shares of Class A Common Stock on a one-for-one basis. Includes additional shares from dilutive impact of options and restricted stock units outstanding under the Amended and Restated 2015 Management Incentive Plan and the Amended and Restated ITG 2007 Equity Plan during the three and six months ended June 30, 2018.

The following tables reconcile trading income, net to Adjusted Net Trading Income by segment for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30, 2019			
(in thousands)	Market Making	Execution Services	Corporate	Total
Trading income, net	$ 205,568	$ 355	$ —	$ 205,923
Commissions, net and technology services	4,961	140,159	—	145,120
Interest and dividends income	23,284	878	—	24,162
Brokerage, exchange and clearance fees, net	(40,013)	(35,838)	—	(75,851)
Payments for order flow	(23,617)	(19)	—	(23,636)
Interest and dividends expense	(36,395)	(429)	—	(36,824)
Adjusted Net Trading Income	$ 133,788	$ 105,106	$ —	$ 238,894

	Three Months Ended June 30, 2018			
(in thousands)	Market Making	Execution Services	Corporate	Total
Trading income, net	$ 258,629	$ (36)	$ —	$ 258,593
Commissions, net and technology services	6,798	39,767	—	46,565
Interest and dividends income	21,592	345	—	21,937
Brokerage, exchange and clearance fees, net	(59,794)	(13,524)	—	(73,318)
Payments for order flow	(15,827)	(15)	—	(15,842)
Interest and dividends expense	(34,747)	(262)	—	(35,009)
Adjusted Net Trading Income	$ 176,651	$ 26,275	$ —	$ 202,926

	Six Months Ended June 30, 2019			
	Market Making	Execution Services	Corporate	Total
Trading income, net	$ 460,689	$ 2,774	$ —	$ 463,463
Commissions, net and technology services	9,961	210,306	—	220,267
Interest and dividends income	41,787	11,506	—	53,293
Brokerage, exchange and clearance fees, net	(83,040)	(56,864)	—	(139,904)
Payments for order flow	(47,157)	(40)	—	(47,197)
Interest and dividends expense	(70,655)	(11,538)	—	(82,193)
Adjusted Net Trading Income	$ 311,585	$ 156,144	$ —	$ 467,729

	Six Months Ended June 30, 2018			
	Market Making	Execution Services	Corporate	Total
Trading income, net	$ 664,338	$ 417	$ —	$ 664,755
Commissions, net and technology services	15,299	85,110	—	100,409
Interest and dividends income	39,361	490	35	39,886
Brokerage, exchange and clearance fees, net	(128,866)	(32,275)	—	(161,141)
Payments for order flow	(32,023)	(75)	—	(32,098)
Interest and dividends expense	(67,954)	(679)	—	(68,633)
Adjusted Net Trading Income	$ 490,155	$ 52,988	$ 35	$ 543,178

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The following tables reconcile our Market Making segment trading income, net to Adjusted Net Trading Income by category for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30, 2019			
(in thousands)	Global Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$ 163,044	$ 41,126	$ 1,398	$ 205,568
Commissions, net and technology services	4,961	—	—	4,961
Brokerage, exchange and clearance fees, net	(26,453)	(10,024)	(3,536)	(40,013)
Payments for order flow	(23,617)	—	—	(23,617)
Interest and dividends, net	(10,395)	(2,754)	38	(13,111)
Adjusted Net Trading Income	$ 107,540	$ 28,348	$ (2,100)	$ 133,788

	Three Months Ended June 30, 2018			
(in thousands)	Global Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$ 198,404	$ 55,755	$ 4,470	$ 258,629
Commissions, net and technology services	6,709	89	—	6,798
Brokerage, exchange and clearance fees, net	(40,687)	(16,311)	(2,796)	(59,794)
Payments for order flow	(15,827)	—	—	(15,827)
Interest and dividends, net	(9,190)	(3,246)	(719)	(13,155)
Adjusted Net Trading Income	$ 139,409	$ 36,287	$ 955	$ 176,651

	Six Months Ended June 30, 2019			
	Global Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$ 371,677	$ 90,916	$ (1,904)	$ 460,689
Commissions, net and technology services	9,989	(28)	—	9,961
Brokerage, exchange and clearance fees, net	(64,434)	(20,712)	2,106	(83,040)
Payments for order flow	(47,157)	—	—	(47,157)
Interest and dividends, net	(22,927)	(5,743)	(198)	(28,868)
Adjusted Net Trading Income	$ 247,148	$ 64,433	$ 4	$ 311,585

	Six Months Ended June 30, 2018			
	Global Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$ 523,286	$ 137,825	$ 3,227	$ 664,338
Commissions, net and technology services	15,231	68	—	15,299
Brokerage, exchange and clearance fees, net	(97,721)	(28,850)	(2,295)	(128,866)
Payments for order flow	(32,023)	—	—	(32,023)
Interest and dividends, net	(20,317)	(6,497)	(1,779)	(28,593)
Adjusted Net Trading Income	$ 388,456	$ 102,546	$ (847)	$ 490,155

The following table shows our Adjusted Net Trading Income and average daily Adjusted Net Trading Income and percentage of Adjusted Net Trading Income by asset class for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,		
Adjusted Net Trading Income by Category:	**2019**	**2018**	**% Change**
Market Making:			
Global Equities	$ 107,540	$ 139,409	(22.9)%
Global FICC, Options and Other	28,348	36,287	(21.9)%
Unallocated(1)	(2,100)	955	NM
Total Market Making	133,788	176,651	(24.3)%
Execution Services	105,106	26,275	300.0%
Corporate	—	—	NM
Adjusted Net Trading Income	$ 238,894	$ 202,926	17.7%

	Three Months Ended June 30,		
Average Daily Adjusted Net Trading Income by Category:	**2019**	**2018**	**% Change**
Market Making:			
Global Equities	$ 1,707	$ 2,178	(21.6)%
Global FICC, Options and Other	450	567	(20.6)%
Unallocated(1)	(33)	15	NM
Total Market Making	2,124	2,760	(23.0)%
Execution Services	1,668	411	305.8%
Corporate	—	—	NM
Average Daily Adjusted Net Trading Income	$ 3,792	$ 3,171	19.6%

	Six Months Ended June 30,		
Adjusted Net Trading Income by Category:	**2019**	**2018**	**% Change**
Market Making:			
Americas Equities	$ 247,148	$ 388,456	(36.4)%
Global FICC, Options and Other	64,433	102,546	(37.2)%
Unallocated(1)	4	(847)	NM
Total Market Making	311,585	490,155	(36.4)%
Execution Services	156,144	52,988	194.7%
Corporate	—	35	NM
Adjusted Net Trading Income	$ 467,729	$ 543,178	(13.9)%

	Six Months Ended June 30,		
Average Daily Adjusted Net Trading Income by Category:	**2019**	**2018**	**% Change**
Market Making:			
Americas Equities	$ 1,977	$ 3,108	(36.4)%
Global FICC, Options and Other	515	820	(37.2)%
Unallocated(1)	—	(7)	NM
Total Market Making	2,492	3,921	(36.4)%
Execution Services	1,249	424	194.6%
Corporate	—	—	NM
Adjusted Net Trading Income	$ 3,741	$ 4,345	(13.9)%

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

Three Months Ended June 30, 2019 Compared to Three Months Ended June 30, 2018

Total Revenues

Our total revenues increased $50.3 million, or 15.3%, to $378.5 million for the three months ended June 30, 2019, compared to $328.1 million for the three months ended June 30, 2018. We had an increase in Commissions, net and technology services of $98.6 million for the three months ended June 30, 2019 as compared to the prior-year period, which was primarily attributable to the results of ITG for the three months ended June 30, 2019.

The following table shows total revenues by segment for the three months ended June 30, 2019 and 2018.

(in thousands, except for percentage)	Three Months Ended June 30, 2019		2018		% Change
Market Making					
Trading income, net	$	205,568	$	258,629	(20.5)%
Interest and dividends income		23,284		21,592	7.8%
Commissions, net and technology services		4,961		6,798	(27.0)%
Other, net		1,191		676	76.2%
Total revenues from Market Making	$	235,004	$	287,695	(18.3)%
Execution Services					
Trading income, net	$	355	$	(36)	NM
Interest and dividends income		878		345	154.5%
Commissions, net and technology services		140,159		39,767	252.5%
Other, net		632		698	(9.5)%
Total revenues from Execution Services	$	142,024	$	40,774	248.3%
Corporate					
Trading income, net	$	—	$	—	NM
Interest and dividends income		—		—	NM
Commissions, net and technology services		—		—	NM
Other, net		1,428		(343)	NM
Total revenues from Corporate	$	1,428	$	(343)	NM
Consolidated					
Trading income, net	$	205,923	$	258,593	(20.4)%
Interest and dividends income		24,162		21,937	10.1%
Commissions, net and technology services		145,120		46,565	211.7%
Other, net		3,251		1,031	215.3%
Total revenues	$	378,456	$	328,126	15.3%

Trading income, net. Trading income, net was primarily earned by our Market Making segment. Trading income, net decreased $52.7 million, or 20.4%, to $205.9 million for the three months ended June 30, 2019, compared to $258.6 million for the three months ended June 30, 2018. The decrease was primarily attributable to the lack of volatility and low trading volume across major asset categories during the three months ended June 30, 2019 compared to the prior period. Rather than analyzing trading income, net, in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income, together with interest and dividends income, interest and dividends expense, payments for flow order, and brokerage, exchange and clearance fees, net, each of which are described below.

Interest and dividends income. Interest and dividends income was primarily earned by our Market Making segment. Interest and dividends income increased $2.2 million, or 10.1%, to $24.2 million for the three months ended June 30, 2019, compared to $21.9 million for the three months ended June 30, 2018. This increase was primarily attributable to the higher interest income earned on cash collateral posted as part of securities loaned transactions. As indicated above, rather than analyzing interest and dividends income in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Commissions, net and technology services. Commissions, net and technology services revenues were primarily earned by our Execution Services segment. Commissions, net and technology services revenues increased $98.6 million, or 211.7%, to $145.1 million for the three months ended June 30, 2019, compared to $46.6 million for the three months ended June 30, 2018. The increase was primarily attributable to the ITG Acquisition, as ITG's entire business is included in our Execution Services segment. The ITG Acquisition also brought recurring connectivity revenues generated from workflow technology and subscription revenues from analytics services to Commissions, net and technology services during the three months ended June 30, 2019.

Other, net. Other, net revenues were primarily earned by our Corporate segment. Other, net was $3.3 million for the three months ended June 30, 2019, compared to $1.0 million for the three months ended June 30, 2018. The increase was primarily due to higher rental income from sublet office space compared to the prior period.

Adjusted Net Trading Income

Adjusted Net Trading Income increased $36.0 million, or 17.7%, to $238.9 million for the three months ended June 30, 2019, compared to $202.9 million for the three months ended June 30, 2018. This increase was primarily attributable to higher Commissions, net and technology services as a result of the ITG Acquisition, which was partially offset by lower Trading income, net, driven by the lack of volatility and low trading volume across major asset categories during the three months ended June 30, 2019 compared to the prior period. There were decreases in Global Equities of $31.9 million, or 22.9%, and Global FICC, Options and Other of $7.9 million, or 21.9%, from the Market Making segment for the three months ended June 30, 2019. These decreases were partially offset by an increase of $78.8 million, or 300.0%, from the Execution Services segment. Adjusted Net Trading Income per day increased $0.6 million, or 19.6%, to $3.8 million for the three months ended June 30, 2019, compared to $3.2 million for the three months ended June 30, 2018. There were 63 and 64 trading days for the three months ended June 30, 2019 and 2018, respectively. Adjusted Net Trading Income is a non-GAAP measure. For a full description of Adjusted Net Trading Income and a reconciliation of Adjusted Net Trading Income to trading income, net, see “Non-GAAP Financial Measures and Other Items” in this Item 2. “Management's Discussion and Analysis of Financial Condition and Results of Operations”.

Operating Expenses

Our operating expenses increased $166.5 million, or 59.8%, to $445.0 million for the three months ended June 30, 2019, compared to $278.5 million for the three months ended June 30, 2018. The increase in operating expenses is primarily due to the ITG Acquisition, which caused an overall increase in expenses in multiple expense categories as described in more detail below.

Brokerage, exchange and clearance fees, net. Brokerage exchange and clearance fees, net, increased $2.5 million, or 3.5%, to $75.9 million for the three months ended June 30, 2019, compared to $73.3 million for the three months ended June 30, 2018. This increase was primarily attributable to the ITG Acquisition, and was partially offset by a decrease in volume we traded in Global Equities instruments and other asset categories. As indicated above, rather than analyzing brokerage, exchange and clearance fees, net, in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Communication and data processing. Communication and data processing expense increased $5.6 million, or 11.5%, to $54.4 million for the three months ended June 30, 2019, compared to $48.8 million for the three months ended June 30, 2018. This increase was primarily due to the additional connectivity and market data service subscriptions acquired as part of the ITG Acquisition. The increase was partially offset by reductions in connectivity connections as a result of an on-going effort to consolidate various communication and data processing subscriptions.

Employee compensation and payroll taxes. Employee compensation and payroll taxes increased $42.5 million, or 103.0%, to $83.7 million for the three months ended June 30, 2019, compared to $41.2 million for the three months ended June 30, 2018. The increase in compensation levels was primarily attributable to the increases in headcount subsequent to the ITG Acquisition. Incentive compensation is recorded at management’s discretion and is generally accrued in connection with the overall level of profitability. We have capitalized and therefore excluded employee compensation and benefits related to software development of $9.9 million, and $7.0 million for the three months ended June 30, 2019, and 2018, respectively.

Payments for order flow. Payments for order flow increased $7.8 million, or 49.2%, to $23.6 million for the three months ended June 30, 2019, compared to $15.8 million for the three months ended June 30, 2018. The increase was primarily attributable to the increase in volumes from our broker-dealer clients eligible for payments for order flow, including a new counterparty onboarded during 2019. Payments for order flow also fluctuate based on U.S. equity share and option volumes, our profitability and the mix of market orders, limit orders, and customer mix. As indicated above, rather than analyzing payments for order flow, in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Interest and dividends expense. Interest and dividends expense increased $1.8 million, or 5.2%, to $36.8 million for the three months ended June 30, 2019, compared to $35.0 million for the three months ended June 30, 2018. This increase was primarily attributable to higher interest expense incurred on cash collateral received as part of securities lending transactions, as well as increased interest expense resulting from the ITG Acquisition. As indicated above, rather than analyzing interest and dividends expense in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Operations and administrative. Operations and administrative expense increased $18.2 million, or 109.6%, to $34.8 million for the three months ended June 30, 2019, compared to $16.6 million for the three months ended June 30, 2018. This increase was primarily attributable to the additional occupancy, professional and consulting expenses resulting from the ITG Acquisition, offset by on-going efforts to consolidate office premises and professional services.

Depreciation and amortization. Depreciation and amortization decreased $1.4 million, or 8.5%, to $14.8 million for the three months ended June 30, 2019, compared to $16.2 million for the three months ended June 30, 2018. This decrease was primarily attributable to lower depreciation due to write-offs of leasehold improvements and other fixed assets associated with abandoned office space during the second quarter of 2019. This decrease was partially offset by depreciation and amortization of additional assets resulting from the ITG Acquisition.

Amortization of purchased intangibles and acquired capitalized software. Amortization of purchased intangibles and acquired capitalized software increased $13.8 million, or 201.3%, to $20.6 million for the three months ended June 30, 2019, compared to $6.8 million for the three months ended June 30, 2018. This increase was due to the amortization of intangible assets acquired in connection with the ITG Acquisition.

Termination of office leases. Termination of office leases increased $63.4 million, or 3,569.5%, to $65.2 million for the three months ended June 30, 2019, compared to $1.8 million for the three months ended June 30, 2018. The increase in termination of office leases is due to the impairment of operating lease right-of-use assets and leasehold improvements and fixed assets for certain abandoned office space as part of the effort to integrate and consolidate office space in connection with the ITG Acquisition.

Debt issue cost related to debt refinancing and prepayment. Debt issue costs related to debt refinancing decreased $3.7 million, or 155.9%, to $(1.3) million for the three months ended June 30, 2019, compared to $2.4 million for the three months ended June 30, 2018. The $(1.3) million includes $1.2 million of accelerated amortization of the related debt issuance costs from prepayment of long-term debt during the three months ended June 30, 2019, offset by a ($2.5) million decrease to the provisional debt issue costs previously accelerated in connection with the ITG Acquisition.

Transaction advisory fees and expenses. Transaction advisory fees and expenses were $1.8 million for the three months ended June 30, 2019, consistent with the three months ended June 30, 2018.

Charges related to share based compensation at IPO. There were no charges related to share-based compensation at IPO for the three months ended June 30, 2019, due to the fact that certain Virtu Class B Interests and East MIP Class B Interests became fully vested. Such charges were $10 thousand for the three months ended June 30, 2018.

Financing interest expense on long-term borrowings. Financing interest expense on long-term borrowings increased $15.9 million, or 84.7%, to $34.7 million for the three months ended June 30, 2019, compared to $18.8 million for the three months ended June 30, 2018. This increase was primarily attributable to the increase in outstanding principal as a result of the First Lien Term Loan Facility, as discussed in Note 10 "Borrowings" of Part I Item 1 "Financial Statements" of this quarterly report on Form 10-Q.

Provision for (benefit from) income taxes

We incur corporate tax at the U.S. federal income tax rate on our taxable income, as adjusted for noncontrolling interest in Virtu Financial. Our income tax expense reflects such U.S. federal income tax as well as taxes payable by certain of our non-U.S. subsidiaries. Our provision for (benefit from) income taxes decreased $14.1 million, to $(11.1) million for the three months ended June 30, 2019, compared to $3.0 million for the three months ended June 30, 2018. The decrease was primarily due to a loss before income taxes and noncontrolling interest for the three months ended June 30, 2019.

Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018

Total Revenues

Our total revenues decreased $401.7 million, or 35.1%, to $741.4 million for the six months ended June 30, 2019, compared to $1.1 billion for the six months ended June 30, 2018. This decrease was primarily attributable to a decrease in Trading income, net, of $201.3 million and a decrease in Other, net, of $333.7 million primarily due to gain on the sale of BondPoint to ICE of $337.6 million recognized in January 2018. These decreases were partially offset by an increase in

Commissions, net and technology services of $119.9 million which was primarily attributable to the results of ITG from the ITG Closing Date through June 30, 2019.

The following table shows the total revenues by segment for the six months ended June 30, 2019 and 2018.

	Six Months Ended June 30,		
(in thousands, except for percentage)	**2019**	**2018**	**% Change**
Market Making			
Trading income, net	$ 460,689	$ 664,338	(30.7)%
Interest and dividends income	41,787	39,361	6.2%
Commissions, net and technology services	9,961	15,299	(34.9)%
Other, net	1,788	1,233	45.0%
Total revenues from Market Making	$ 514,225	$ 720,231	(28.6)%
Execution Services			
Trading income, net	$ 2,774	$ 417	565.2%
Interest and dividends income	11,506	490	NM
Commissions, net and technology services	210,306	85,110	147.1%
Other, net	956	338,536	(100)%
Total revenues from Execution Services	$ 225,542	$ 424,553	(46.9)%
Corporate			
Trading income, net	$ —	$ —	NM
Interest and dividends income	—	35	(100.0)%
Commissions, net and technology services	—	—	NM
Other, net	1,681	(1,640)	NM
Total revenues from Corporate	$ 1,681	$ (1,605)	NM
Consolidated			
Trading income, net	$ 463,463	$ 664,755	(30.3)%
Interest and dividends income	53,293	39,886	33.6%
Commissions, net and technology services	220,267	100,409	119.4%
Other, net	4,425	338,129	(98.7)%
Total revenues	$ 741,448	$ 1,143,179	(35.1)%

Trading income, net. Trading income, net was primarily earned by our Market Making segment. Trading income, net, decreased $201.3 million, or 30.3%, to $463.5 million for the six months ended June 30, 2019, compared to $664.8 million for the six months ended June 30, 2018. The decrease was primarily attributable to the lack of volatility and low trading volume across major asset categories during the six months ended June 30, 2019 compared to the prior period. Rather than analyzing trading income, net, in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income, together with interest and dividends income, interest and dividends expense and brokerage, exchange and clearance fees, net, each of which are described below.

Interest and dividends income. Interest and dividends income was primarily earned by our Market Making segment. Interest and dividends income increased $13.4 million, or 33.6%, to $53.3 million for the six months ended June 30, 2019, compared to $39.9 million for the six months ended June 30, 2018. This increase was primarily attributable to the higher interest income earned on cash collateral posted as part of securities loaned transactions. As indicated above, rather than analyzing interest and dividends income in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Commissions, net and technology services. Commissions, net and technology services revenues were primarily earned by our Execution Services segment. Commissions, net and technology services revenues increased $119.9 million, or 119.4%, to $220.3 million for the six months ended June 30, 2019, compared to $100.4 million for the six months ended June 30, 2018. The increase was primarily attributable to the ITG Acquisition, as ITG's entire business is included in our

Execution Services segment. The ITG Acquisition also brought recurring connectivity revenues generated from workflow technology and subscription revenues from analytics services to Commissions, net and technology services during the six months ended June 30, 2019.

Other, net. Other, net decreased $333.7 million, or 98.7%, to $4.4 million for the six months ended June 30, 2019, compared to $338.1 million for the six months ended June 30, 2018. The decrease was primarily due to the one-time transaction gain of $337.6 million on the sale of BondPoint to ICE in January 2018.

Adjusted Net Trading Income

Adjusted Net Trading Income decreased $75.4 million, or 13.9%, to $467.7 million for the six months ended June 30, 2019, compared to $543.2 million for the six months ended June 30, 2018. This decrease was primarily attributable to lower Trading income, net, driven by the lack of volatility and low trading volume across major asset categories during the six months ended June 30, 2019 compared to the prior period. The decrease in Trading income, net was partially offset by an increase in Commissions, net and technology services as a result of the ITG Acquisition. There were decreases in Trading income, net in Global Equities of $141.3 million, and in Global FICC, Options and Other of $38.1 million, from the Market Making segment. These decreases were partially offset by an increase of $103.2 million, or 194.7%, in the Execution Services segment. Adjusted Net Trading Income per day decreased $0.6 million, or 13.9%, to $3.7 million for the six months ended June 30, 2019, compared to $4.3 million for the six months ended June 30, 2018. The number of trading days was 125 for both the six months ended June 30, 2019, and 2018. Adjusted Net Trading Income is a non-GAAP measure. For a full description of Adjusted Net Trading Income and a reconciliation of Adjusted Net Trading Income to trading income, net, see “Non-GAAP Financial Measures and Other Items” in this “Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations”.

Operating Expenses

Our operating expenses increased $199.2 million, or 31.9%, to $824.2 million for the six months ended June 30, 2019, compared to $625.0 million for the six months ended June 30, 2018. The increase in operating expenses was primarily due to the ITG Acquisition, which caused an overall increase in expenses in multiple expense categories as described in more detail below.

Brokerage, exchange and clearance fees, net. Brokerage exchange and clearance fees, net, decreased $21.2 million, or 13.2%, to $139.9 million for the six months ended June 30, 2019, compared to $161.1 million for the six months ended June 30, 2018. This decrease was primarily attributable to a decrease in volume we traded in Global Equities instruments and other asset categories, partially offset by increases due to the ITG Acquisition. As indicated above, rather than analyzing brokerage, exchange and clearance fees, net, in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Communication and data processing. Communication and data processing expense decreased $2.0 million, or 2.1%, to $96.2 million for the six months ended June 30, 2019, compared to $98.3 million for the six months ended June 30, 2018. This decrease was primarily due to reductions in connectivity connections as a result of an on-going effort to consolidate various communication and data processing subscriptions. The decrease was partially offset by the additional connectivity and market data service subscriptions acquired as part of the ITG Acquisition.

Employee compensation and payroll taxes. Employee compensation and payroll taxes increased $85.6 million, or 80.9%, to $191.5 million for the six months ended June 30, 2019, compared to $105.9 million for the six months ended June 30, 2018. The increase in compensation levels was primarily attributable to the increases in headcount subsequent to the ITG Acquisition. Incentive compensation is recorded at management’s discretion and is generally accrued in connection with the overall level of profitability. We have capitalized and therefore excluded employee compensation and benefits related to software development of $16.7 million, and $14.2 million for the six months ended June 30, 2019 and 2018, respectively.

Payments for order flow. Payments for order flow increased $15.1 million, or 47.0%, to $47.2 million for the six months ended June 30, 2019, compared to $32.1 million for the six months ended June 30, 2018, The increase was primarily attributable to the increase in volumes from our broker-dealer clients eligible for payments for order flow, including a new counterparty onboarded during 2019. Payments for order flow also fluctuate based on U.S. equity share and option volumes, our profitability and the mix of market orders, limit orders, and customer mix. As indicated above, rather than analyzing payments for order flow in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Interest and dividends expense. Interest and dividends expense increased $13.6 million, or 19.8%, to $82.2 million for the six months ended June 30, 2019, compared to $68.6 million for the six months ended June 30, 2018. This increase was primarily attributable to higher interest expense incurred on cash collateral received as part of securities lending transactions, as well as increased interest expense resulting from the ITG Acquisition. As indicated above, rather than analyzing interest and dividends expense in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Operations and administrative. Operations and administrative expense increased $20.5 million, or 56.2%, to $56.9 million for the six months ended June 30, 2019, compared to $36.4 million for the six months ended June 30, 2018. The increase was primarily attributable to the additional occupancy, professional and consulting expenses resulting from the ITG Acquisition, offset by on-going efforts to consolidate office premises and professional services.

Depreciation and amortization. Depreciation and amortization decreased $0.3 million, or 0.9%, to $31.3 million for the six months ended June 30, 2019, compared to $31.5 million for the six months ended June 30, 2018. This decrease was primarily attributable to lower depreciation due to write-offs of leasehold improvements and other fixed assets associated with abandoned office space during the second quarter of 2019, partially offset by depreciation and amortization of additional assets resulting from the ITG Acquisition.

Amortization of purchased intangibles and acquired capitalized software. Amortization of purchased intangibles and acquired capitalized software increased $17.9 million, or 130.6%, to $31.5 million for the six months ended June 30, 2019, compared to $13.7 million for the six months ended June 30, 2018. This increase was due to the amortization of intangible assets acquired in connection with the ITG Acquisition.

Termination of office leases. Termination of office leases increased $43.3 million, or 198.3%, to $65.2 million for the six months ended June 30, 2019, compared to $21.9 million six months ended June 30, 2018. The increase in termination of office leases is due to the impairment of operating lease right-of-use assets and leasehold improvements and fixed assets for certain abandoned office space as part of the effort to integrate and consolidate office space in connection with the ITG Acquisition.

Debt issue costs related to debt refinancing and prepayment. Expense from debt issue costs related to debt refinancing and prepayment decreased $0.5 million, or 5.8%, to $7.9 million for the six months ended June 30, 2019, compared to $8.4 million for the six months ended June 30, 2018. The amount for the six months ended June 30, 2019 mainly reflects costs incurred related to the termination of the Senior Secured Term Loan Facility (as defined below) in the first quarter of 2019, while the amount for the six months ended June 30, 2018 reflects the accelerated amortization of debt issuance costs due to prepayments of $384.8 million on long term borrowings in the six months ended June 30, 2018.

Transaction advisory fees and expenses. Transaction advisory fees and expenses increased $7.7 million, or 82.9%, to $16.9 million for the six months ended June 30, 2019, compared to $9.2 million for the six months ended June 30, 2018. The increase was primarily attributable to the ITG Acquisition, for which we incurred significantly higher transaction advisory fees than those incurred in connection with the sale of BondPoint in January 2018.

Charges related to share based compensation at IPO. There were no charges related to share-based compensation at IPO for the six months ended June 30, 2019, due to the fact that certain Virtu Class B Interests and East MIP Class B Interests became fully vested. Such charges were $24 thousand for the six months ended June 30, 2018.

Financing interest expense on long term borrowings. Financing interest expense on long-term borrowings increased $19.7 million, or 51.9%, to $57.5 million for the six months ended June 30, 2019, compared to $37.8 million for the six months ended June 30, 2018. This increase was primarily attributable to the increase in outstanding principal as a result of the First Lien Term Loan Facility, as discussed in Note 10 “Borrowings” of Part I Item 1 “Financial Statements” of this quarterly report on Form 10-Q.

Provision for (benefit from) income taxes

We incur corporate tax at the U.S. federal income tax rate on our taxable income, as adjusted for noncontrolling interest in Virtu Financial. Our income tax expense reflects such U.S. federal income tax as well as taxes payable by certain of our non-U.S. subsidiaries. Our provision for (benefit from) income taxes decreased $75.2 million to $(13.7) million for the six months ended June 30, 2019, compared to $61.5 million for the six months ended June 30, 2018. The decrease was primarily due to a loss before income taxes and noncontrolling interest for the six months ended June 30, 2019.

Liquidity and Capital Resources

General

As of June 30, 2019, we had $458.1 million in Cash and cash equivalents, and $39.5 million in Cash and securities segregated under regulations and other. These balances are maintained primarily to support operating activities for capital expenditures and for short-term access to liquidity, and for other general corporate purposes. As of June 30, 2019, we had borrowings under our short-term credit facilities of approximately $156.9 million, borrowing under broker dealer facilities of $92.0 million, short-term bank overdrafts of $59.5 million, and long-term debt outstanding in an aggregate principal amount of approximately $1,982.5 million. As of June 30, 2019, our regulatory capital requirements for domestic U.S. broker-dealer subsidiaries were $7.5 million, in aggregate.

The majority of our trading assets consist of exchange-listed marketable securities, which are marked-to-market daily, and collateralized receivables from broker-dealers and clearing organizations arising from proprietary securities transactions. Collateralized receivables consist primarily of securities borrowed, receivables from clearing houses for settlement of securities transactions and, to a lesser extent, securities purchased under agreements to resell. We actively manage our liquidity, and we maintain significant borrowing facilities through the securities lending markets and with banks and prime brokers. We have continually received the benefit of uncommitted margin financing from our prime brokers globally. These margin facilities are secured by securities in accounts held at the prime broker. For purposes of providing additional liquidity, we maintain an uncommitted credit facility and a revolving credit facility for three of our wholly-owned broker-dealer subsidiaries, as discussed in Note 10 “Borrowings” of Part I Item 1 “Financial Statements” of this quarterly report on Form 10-Q.

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

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

Tax Receivable Agreements

Generally, we are required under the tax receivable agreements entered into in connection with our IPO to make payments to certain direct or indirect equityholders of Virtu Financial that are generally equal to 85% of the applicable cash tax savings, if any, that we actually realize as a result of favorable tax attributes that will be available to us as a result of certain reorganization transactions consummated in connection with the IPO (the “Reorganization Transactions”), for exchanges of membership interests for Class A Common Stock or Class B Common Stock and payments made under the tax receivable agreements. We will retain the remaining 15% of any such cash tax savings. We expect that future payments to certain direct or indirect equityholders of Virtu Financial described in Note 6 “Tax Receivable Agreements” to the condensed consolidated financial statements included in Part I Item 1 “Financial Statements” of this quarterly report on Form 10-Q are expected to range from approximately $2.6 million to $19.9 million per year over the next 15 years. Such payments will occur only after we have filed our U.S. federal and state income tax returns and realized the cash tax savings from the favorable tax attributes. We made our first payment of $7.0 million in February 2017 and our second payment of $12.4 million in September 2018. Future payments under the tax receivable agreements in respect of subsequent exchanges would be in addition to these amounts. We currently expect to fund these payments from realized cash tax savings from the favorable tax attributes.

Under the tax receivable agreements, as a result of certain types of transactions and other factors, including a transaction resulting in a change of control, we may also be required to make payments to certain direct or indirect equityholders of Virtu Financial in amounts equal to the present value of future payments we are obligated to make under the tax receivable agreements. We would expect any acceleration of these payments to be funded from the realized favorable tax attributes. However, if the payments under the tax receivable agreements are accelerated, we may be required to raise additional debt or equity to fund such payments. To the extent that we are unable to make payments under the tax receivable agreements for any reason (including because our Credit Agreement or the indenture governing our Notes (as defined below) restricts the ability of our subsidiaries to make distributions to us) such payments will be deferred and will accrue interest until paid.

Regulatory Capital Requirements

Certain of our operating subsidiaries are subject to separate regulation and capital requirements in the United States and other jurisdictions. Virtu Financial BD LLC, Virtu Americas LLC, Virtu Financial Capital Markets LLC, Virtu ITG LLC, and Virtu Alternet Securities LLC, the latter two of which became our subsidiaries following the ITG Acquisition, are registered U.S. broker-dealers, and their primary regulators include the SEC, the Chicago Stock Exchange and the Financial Industry Regulatory Authority ("FINRA").

The SEC and FINRA impose rules that require notification when regulatory capital falls below certain pre-defined criteria. These rules also dictate the ratio of debt-to-equity in the regulatory capital composition of a broker-dealer and constrain the ability of a broker-dealer to expand its business under certain circumstances. If a firm fails to maintain the required regulatory capital, it may be subject to suspension or revocation of registration by the applicable regulatory agency, and suspension or expulsion by these regulators could ultimately lead to the firm's liquidation. Additionally, certain applicable rules impose requirements that may have the effect of prohibiting a broker-dealer from distributing or withdrawing capital and requiring prior notice to and/or approval from the SEC, the Chicago Stock Exchange and FINRA for certain capital withdrawals. Virtu Americas LLC is also subject to rules set forth by NYSE and is required to maintain a certain level of capital in connection with the operation of its designated market maker business.

Our Canadian subsidiaries, Virtu ITG Canada Corp, TriAct Canada Marketplace LP, and Virtu Financial Canada ULC, are subject to regulatory capital requirements and periodic requirements to report their regulatory capital and submit other regulatory reports set forth by the Investment Industry Regulatory Organization of Canada. Virtu Financial Ireland Limited and Virtu ITG Europe Limited are regulated by the Central Bank of Ireland as Investment Firms and in accordance with European Union law are required to maintain a minimum amount of regulatory capital based upon their positions, financial conditions, and other factors. In addition to periodic requirements to report their regulatory capital and submit other regulatory reports, Virtu Financial Ireland Limited and Virtu ITG Europe Limited are required to obtain consent prior to receiving capital contributions or making capital distributions from their regulatory capital. Failure to comply with their regulatory capital requirements could result in regulatory sanction or revocation of their regulatory license. KCG Europe Limited and Virtu ITG UK Limited are regulated by the Financial Conduct Authority in the United Kingdom and are subject to similar prudential capital requirements. Virtu ITG Australia Limited, Virtu ITG Hong Kong Limited, and Virtu ITG Singapore Pte Limited are also subject to local regulatory capital requirements and are regulated by the Australian Securities Exchange, the Securities and Futures Commission, and the Monetary Authority of Singapore, respectively.

See Note 20 "Regulatory Requirement" of Part I Item 1 "Financial Statements" of this quarterly report on Form 10-Q for a discussion of regulatory capital requirements of our regulated subsidiaries.

Short-Term Borrowings

We maintain various broker-dealer facilities and short-term credit facilities as part of our daily trading operations. See Note 10 "Borrowings" of Part I Item 1 "Financial Statements" of this quarterly report on Form 10-Q for details on our various credit facilities. As of June 30, 2019, the outstanding principal balance on our broker-dealer facilities was $92.0 million, and the outstanding aggregate short-term credit facilities with various prime brokers and other financial institutions from which the Company receives execution or clearing services was approximately $156.9 million, which was netted within Receivables from broker-dealers and clearing organizations on the condensed consolidated statement of financial condition of Part I Item 1 "Financial Statements" of this quarterly report on Form 10-Q.

Credit Agreement

In connection with the ITG Acquisition, Virtu Financial, VFH and the Acquisition Borrower entered into the Credit Agreement, with the lenders party thereto, Jefferies Finance LLC, as administrative agent and Jefferies Finance LLC and RBC Capital Markets, as joint lead arrangers and joint bookrunners.

The Credit Agreement provides (i) a senior secured first lien term loan in an aggregate principal amount of $1.5 billion, drawn in its entirety on the ITG Closing Date, with approximately $404.5 million borrowed by VFH to repay all amounts outstanding under the Company's Fourth Amended and Restated Credit Agreement and the remaining approximately $1,095 million borrowed by the Acquisition Borrower to finance the consideration and fees and expenses paid in connection with the ITG Acquisition, and (ii) a $50.0 million senior secured first lien revolving facility to VFH, with a $5.0 million letter of credit subfacility and a $5.0 million swingline subfacility. After the ITG Closing Date, VFH assumed the obligations of the Acquisition Borrower in respect of the acquisition term loans. During the three months ended June 30, 2019, $50.0 million was repaid under the First Lien Term Loan Facility. As of June 30, 2019, $1,450 million was outstanding under the First Lien Term Loan Facility.

The term loan borrowings and revolver borrowings under the Credit Agreement will bear interest at a per annum rate equal to, at our election, either (i) the greatest of (a) the prime rate in effect, (b) the greater of (i) the federal funds effective rate and (ii) the overnight bank funding rate, in each case plus 0.5%, (c) an adjusted LIBOR rate for a Eurodollar borrowing with an interest period of one month plus 1% and (d) 1.00%, plus, in each case, 2.50%, with a stepdown to 2.25% based on VFH's first lien leverage ratio, or (ii) the greater of (x) an adjusted LIBOR rate for the interest period in effect and (y) 0%, plus, in each case, 3.50%, with a stepdown to 3.25% based on VFH’s first lien leverage ratio. In addition, a commitment fee accrues at a rate of 0.50% per annum on the average daily unused amount of the First Lien Revolving Facility, with stepdowns to 0.375% and 0.25% per annum based on VFH’s first lien leverage ratio, and is payable quarterly in arrears.

The First Lien Revolving Facility under the Credit Agreement is subject to a springing net first lien leverage ratio which may spring into effect as of the last day of a fiscal quarter based on the usage of the aggregate revolving commitments as of such date. VFH is also subject to contingent principal prepayments based on excess cash flow and certain other triggering events. Borrowings under the Credit Agreement are guaranteed by Virtu Financial and VFH’s material non-regulated restricted subsidiaries and secured by substantially all of the assets of VFH and the guarantors, in each case, subject to certain exceptions.

Under the Credit Agreement, term loans will mature on March 1, 2026; provided that unless at least $400.0 million of VFH's existing 6.750% second lien notes due 2022 have been repaid or refinanced (the “repayment requirement”) prior to the date that is 91 days prior to the maturity of the second lien notes (the “term springing maturity date”), the term loans will mature on the term springing maturity date. The term loans amortize in annual installments equal to 1.0% of the original aggregate principal amount of the term loans. The revolving commitments will terminate on March 1, 2022; provided that unless the repayment requirement is satisfied on or prior to the date that is 182 days prior to the maturity of the second lien notes (the “revolving springing maturity date”), the revolving commitments will terminate on the revolving springing maturity date.

The 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 Credit Agreement will be entitled to take various actions, including the acceleration of amounts outstanding under the Credit Agreement and all actions permitted to be taken by a secured creditor in respect of the collateral securing the obligations under the Credit Agreement.

To finance the Acquisition of KCG, on June 30, 2017, Virtu Financial and VFH previously entered into 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 “Senior Secured Term Loan Facility”). As described above, the Senior Secured Term Loan Facility was fully terminated following its repayment in full with the proceeds of the First Lien Term Loan Facility.

We were in compliance with all applicable covenants under the Credit Agreement as of June 30, 2019.

Senior Secured Second Lien Notes

On June 16, 2017, Orchestra Borrower LLC (the “Escrow Issuer”), a wholly-owned subsidiary of Virtu Financial, and Orchestra Co-Issuer, Inc. (the “Co-Issuer”) completed the offering of $500 million aggregate principal amount of 6.750% Senior Secured Second Lien Notes due 2022 (the “Notes”). The Notes were issued under an Indenture, dated as of June 16, 2017 (the “Indenture”), among the Escrow Issuer, the Co-Issuer and U.S. Bank National Association, as the trustee and collateral agent. The Notes mature on June 15, 2022. Interest on the Notes accrues at 6.750% per annum, payable every six months through maturity on each June 15th and December 15th, beginning on December 15, 2017.

On July 20, 2017, VFH assumed all of the obligations of the Escrow Issuer under the Indenture and the Notes. The Notes are guaranteed by Virtu Financial and each of Virtu Financial’s wholly-owned domestic restricted subsidiaries that guarantee the Credit Agreement. We refer to VFH and the Co-Issuer together as, the “Issuers.”

The Notes and the related guarantees are secured by second-priority perfected liens on substantially all of the Issuers’ and guarantors’ existing and future assets, subject to certain exceptions, including all material personal property, a pledge of the capital stock of the Issuers, the guarantors (other than Virtu Financial) and the direct subsidiaries of the Issuers and the guarantors and 100% of the non-voting capital stock and up to 65.0% of the voting capital stock of any now-owned or later-acquired foreign subsidiaries that are directly owned by the Issuers or any of the guarantors, which assets also secure obligations under the Credit Agreement on a first-priority basis.

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

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

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

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

We were in compliance with all applicable covenants under the indenture governing our Notes as of June 30, 2019.

Cash Flows

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

The table below summarizes our primary sources and uses of cash for the six months ended June 30, 2019 and 2018.

	Six Months Ended June 30,	
Net cash provided by (used in):	**2019**	**2018**
Operating activities	$ (377,325)	$ 310,297
Investing activities	(864,384)	373,708
Financing activities	1,005,614	(553,778)
Effect of exchange rate changes on cash and cash equivalents	(2,391)	(3,047)
Net increase (decrease) in cash and cash equivalents	$ (238,486)	$ 127,180

Operating Activities

Net cash used in operating activities was $377.3 million for the six months ended June 30, 2019, compared to net cash provided by operating activities of $310.3 million for the six months ended June 30, 2018. The decrease of $687.6 million in net cash used by operating activities was primarily attributable to lower trading income for the six months ended June 30, 2019 compared to the prior year period.

Investing Activities

Net cash used in investing activities was $864.4 million for the six months ended June 30, 2019, compared to net cash provided by investing activities of $373.7 million for the six months ended June 30, 2018. The decrease in cash provided by investment activities was primarily attributable to the $835.6 million cash used for the ITG Acquisition on the ITG Closing Date, as well the $400.2 million proceeds received from the sale of BondPoint in January 2018. See Note 3 “ITG Acquisition” and Note 4 “Sale of BondPoint” of Part I Item 1 “Financial Statements” of this quarterly report on Form 10-Q.

Financing Activities

Net cash provided by financing activities was $1,005.6 million for the six months ended June 30, 2019, while net cash used in financing activities was $553.8 million for the six months ended June 30, 2018. The increase in cash provided of $1,559.4 million compared to the prior year period was primarily attributable to $1,500.0 million of proceeds from long term borrowings, offset by $400.0 million of repayments on the Senior Secured Term Loan Facility and $50.0 million of prepayments on the First Lien Term Loan Facility. In addition, cash provided by short-term borrowings increased approximately $101.2 million, primarily attributable to the increase in short-term bank loans in the form of overdrafts.

Share Repurchase Program

On February 8, 2018, the Company's board of directors authorized a share repurchase program of up to $50.0 million in Class A Common Stock and Virtu Financial Units, which was expanded to $100.0 million on July 27, 2018. The stock and common units repurchase program expires on September 30, 2019. Since the inception of the program, the Company repurchased approximately 2.6 million shares of Class A Common Stock and Virtu Financial Units for approximately $65.9 million. At June 30, 2019, the Company has approximately $34.1 million remaining capacity for future purchases of shares of Class A Common Stock and Virtu Financial Units under the program.

Secondary Offerings

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

In connection with the May 2018 Secondary Offering, the Company, TJMT Holdings LLC, North Island Holdings I, LP (the "North Island Stockholder"), Havelock Fund Investments Pte. Ltd. ("Havelock") and Aranda Investments Pte. Ltd ("Aranda") entered into that certain Amendment No. 1 to the Amended and Restated Registration Rights Agreement dated April 20, 2017, by and among the Company, TJMT Holdings LLC, the North Island Stockholder, Havelock, Aranda and certain direct or indirect equityholders of the Company (the "Amended and Restated Registration Rights Agreement") to add Mr. Vincent Viola and Mr. Michael Viola, directors of the Company, and to confirm that certain other persons (including the Company's CEO) remain parties to the Amended and Restated Registration Rights Agreement.

In May 2019, the Company completed a public offering (the "May 2019 Secondary Offering") of 9,000,000 shares of Class A Common Stock at a purchase price per share paid by the underwriters of $22.00, the net proceeds of which were used to purchase an equivalent number of Virtu Financial Units and corresponding shares of Class D Common Stock from TJMT Holdings LLC pursuant to that certain Member Purchase Agreement, entered into on May 14, 2019 by and between the Company and TJMT Holdings LLC.

Off-Balance Sheet Arrangements

As of June 30, 2019, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of Regulation S-K, that have or are reasonably likely to have current or future effects on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

Inflation

We believe inflation has not had a material effect on our financial condition as of June 30, 2019, and December 31, 2018, or on our results of operations and cash flows for the three and six months ended June 30, 2019 and 2018.

Critical Accounting Policies and Estimates

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

Valuation of Financial Instruments

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

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

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

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

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

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

Revenue Recognition

Trading Income, Net

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

Interest and Dividends Income/Interest and Dividends Expense

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

Commissions, net and Technology Services

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

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

Workflow technology revenues consist of order and trade execution management and order routing services we provide through our front-end workflow solutions and network capabilities.

We provide trade order routing from our execution management system ("EMS") to our execution services offerings, with each trade order routed through the EMS representing a separate performance obligation that is satisfied at a point in time. A portion of the commissions earned on the trade is then allocated to Workflow Technology based on the stand-alone selling price paid by third-party brokers for order routing. The remaining commission is allocated to commissions, net using a residual allocation approach. Commissions earned are fixed and revenue is recognized on the trade date.

We participate in commission share arrangements, where trade orders are routed to third-party brokers from our EMS and our order management system ("OMS"). Commission share revenues from third-party brokers are generally fixed and revenue is recognized at a point in time on the trade date.

We also provide OMS and related software products and connectivity services to customers and recognize license fee revenues and monthly connectivity fees. License fee revenues, generated for the use of our OMS and other software products, are fixed and recognized at the point in time at which the customer is able to use and benefit from the license. Connectivity revenue is variable in nature, based on the number of live connections, and is recognized over time on a monthly basis using a time-based measure of progress.

Analytics revenues are earned from providing customers with analytics products and services, including trading and portfolio analytics tools. We provide analytics products and services to customers and recognize subscription fees, which are fixed for the contract term, based on when the products and services are delivered. Analytics services can be delivered either over time (when customers are provided with distinct ongoing access to analytics data) or at a point in time (when reports are only delivered to the customer on a periodic basis). Over time performance obligations are recognized using a time-based measure of progress on a monthly basis, since the analytics products and services are continually provided to the client. Point in time performance obligations are recognized when the analytics reports are delivered to the client.

Analytics products and services can also be paid for through variable bundled arrangements with trade execution services. Customers agree to pay for analytics products and services with commissions generated from trade execution services, and commissions are allocated to the analytics performance obligation(s) using:

(i) the commission value for each customer for the products and services it receives, which is priced using the value for similar stand-alone subscription arrangements; and

(ii) a calculated ratio of the commission value for the products and services relative to the total amount of commissions generated from the customer.

For these bundled commission arrangements, the allocated commissions to each analytics performance obligation are then recognized as revenue when the analytics product is delivered, either over time or at a point in time. These allocated commissions may be deferred if the allocated amount exceeds the amount recognizable based on delivery.

Share-Based Compensation

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

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

Share-based awards issued for compensation in connection with or subsequent to the Reorganization Transactions and the IPO pursuant to our Amended and Restated 2015 Management Incentive Plan, and pursuant to the Amended and Restated ITG 2007 Equity Plan, were in the form of stock options, Class A Common Stock and restricted stock units. The fair value of the stock option grants is determined through the application of the Black-Scholes-Merton model. The fair value of the Class A Common Stock and restricted stock units is determined based on the volume weighted average price for the three days preceding the grant, and with respect to the restricted stock units, a projected annual forfeiture rate. The fair value of share-based awards granted to employees is expensed based on the vesting conditions and is recognized on a straight-line basis over the vesting period. We record as treasury stock shares repurchased from employees for the purpose of settling tax liabilities incurred upon the issuance of common stock, the vesting of restricted stock units or the exercise of stock options.

Income Taxes

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

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

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

Goodwill and Intangible Assets

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

When assessing impairment, an entity may perform an initial qualitative assessment, under which it assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. In evaluating whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, an entity shall assess relevant events and circumstances, including the following:

- general economic conditions;
- limitations on accessing capital;
- fluctuations in foreign exchange rates or other developments in equity and credit markets;
- industry and market considerations such as a deterioration in the environment in which an entity operates, an increased competitive environment, a decline in market-dependent multiples or metrics (considered in both absolute terms and relative to peers), a change in the market for an entity's products or services, or a regulatory or political development,
- cost factors such as increases in raw materials, labor, or other costs that have a negative effect on earnings and cash flows;
- overall financial performance such as negative or declining cash flows or a decline in actual or planned revenue or earnings compared with actual and projected results of relevant prior periods;
- other relevant entity-specific events such as changes in management, key personnel, strategy, or customers, contemplation of bankruptcy, or litigation.

If, after assessing the totality of such events or circumstances, an entity determines that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then no further goodwill impairment testing is necessary.

If further testing is necessary, the fair value of the reporting unit is compared to its carrying value; if the fair value of the reporting unit is less than its carrying value, a goodwill impairment loss is recorded, equal to the excess of the reporting unit's carrying amount over its fair value (not to exceed the total goodwill allocated to that reporting unit).

We assess goodwill for impairment on an annual basis as of July 1st and on an interim basis when certain events or circumstances exist. In the impairment assessment as of July 1, 2018, we performed a qualitative assessment as described above for each reporting unit. No impairment of goodwill was identified.

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

Recent Accounting Pronouncements

For a discussion of recently issued accounting developments and their impact or potential impact on our condensed consolidated financial statements, see Note 2 "Summary of Significant Accounting Policies" of Part I Item 1 "Financial Statements" of this quarterly report on Form 10-Q.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk

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

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

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

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

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

In the normal course of business, we maintain inventories of exchange-listed and other equity securities, and to a lesser extent, fixed income securities and listed equity options. The fair value of these financial instruments at June 30, 2019 and December 31, 2018 was $3.1 billion and $2.6 billion, respectively, in long positions and $2.7 billion and $2.5 billion, respectively, in short positions. We also enter into futures contracts, which are recorded on our condensed consolidated statements of financial condition within Receivable from brokers, dealers and clearing organizations or Payable to brokers, dealers and clearing organizations as applicable.

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

The purchase and sale of futures contracts requires margin deposits with a Futures Commission Merchant ("FCM"). The Commodity Exchange Act requires an FCM to segregate all customer transactions and assets from the FCM's proprietary activities. A customer's cash and other equity deposited with an FCM are considered commingled with all other customer funds subject to the FCM's segregation requirements. In the event of an FCM's insolvency, recovery may be limited to the Company's pro rata share of segregated customer funds available. It is possible that the recovery amount could be less than the total cash and other equity deposited.

Interest Rate Risk, Derivative Instruments

In the normal course of business, we utilize derivative financial instruments in connection with our proprietary trading activities. We do not designate our derivative financial instruments as hedging instruments under ASC 815 Derivatives and Hedging, other than derivatives used to reduce the impact of fluctuations in foreign exchange rates on our net investment in certain non-U.S. operations as discussed in Note 12 “Derivative Instruments” of Part I Item 1 “Financial Statements” of this quarterly report on Form 10-Q. Instead, we carry our derivative instruments at fair value with gains and losses included in trading income, net, in the accompanying condensed consolidated statements of comprehensive income. Fair value of derivatives that are freely tradable and listed on a national exchange is determined at their last sale price as of the last business day of the period. Since gains and losses are included in earnings, we have elected not to separately disclose gains and losses on derivative instruments, but instead to disclose gains and losses within trading revenue for both derivative and non-derivative instruments.

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

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

Foreign Currency Risk

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

Approximately 27.6% and 15.5% of our revenues for the three months ended June 30, 2019 and 2018, respectively, and approximately 23.7% and 10.7% for the six months ended June 30, 2019 and 2018, respectively, were denominated in non-U.S. Dollar currencies. We estimate that a hypothetical 10% adverse change in the above-mentioned foreign exchange rates would have resulted in decreases in revenues of $10.4 million and $5.1 million for the three months ended June 30, 2019 and 2018, respectively, and $17.6 million and $12.3 million for the six months ended June 30, 2019 and 2018, respectively.

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

Financial Instruments with Off Balance Sheet Risk

We enter into various transactions involving derivatives and other off-balance sheet financial instruments. These financial instruments include futures, forward contracts, and exchange-traded options. These derivative financial instruments are used to conduct trading activities and manage market risks and are, therefore, subject to varying degrees of market and credit risk. Derivative transactions are entered into for trading purposes or to economically hedge other positions or transactions.

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

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, management has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) as of June 30, 2019. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of June 30, 2019, our disclosure controls and procedures were effective to ensure information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the periods specified in the SEC’s rules and forms and is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

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

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

Changes to Internal Control over Financial Reporting

No change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) occurred during the three months ended June 30, 2019 that has or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

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

ITEM 1A. RISK FACTORS

There have been no material changes to the Risk Factors described in Part I Item 1A. “Risk Factors” in our 2018 Form 10-K.

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

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

On February 8, 2018, the Company’s board of directors authorized a new share repurchase program of up to $50.0 million in Class A Common Stock and Virtu Financial Units by March 31, 2019. On July 27, 2018, the Company's board of directors authorized the expansion of the Company's share repurchase program, increasing the total authorized amount by $50.0 million to $100.0 million and extending the duration of the program through September 30, 2019. Since the inception of the program in February 2018, the Company has repurchased approximately 2.6 million shares of Class A Common Stock and Virtu Financial Units for approximately $65.9 million. The Company now has approximately $34.1 million remaining capacity for future purchases of shares of Class A Common Stock and Virtu Financial Units under the program. Pursuant to the program,
the Company may repurchase shares from time to time in open market transactions, privately negotiated transactions or by other means. Repurchases may also be made under Rule 10b5-1 plans. The timing and amount of repurchase transactions will be determined by the Company’s management based on its evaluation of market conditions, share price, legal requirements and other factors. The program may be suspended, modified or discontinued at any time without prior notice. There are no assurances that any further repurchases will actually occur. The Company had no repurchases of its Class A Common Stock under the Company's share repurchase program during the six months ended June 30, 2019. Total share repurchases for the six months ended June 30, 2019 were as follows:

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
January 1, 2019 - January 31, 2019				
Class A Common Stock / Virtu Financial Units repurchases	208,610	26.43	—	$ 34,138,832
February 1, 2019 - February 28, 2019				
Class A Common Stock / Virtu Financial Units repurchases	4,653	25.15	—	34,138,832
March 1, 2019 - March 31, 2019				
Class A Common Stock / Virtu Financial Units repurchases	111,932	24.72	—	34,138,832
April 1, 2019 - April 30, 2019				
Class A Common Stock / Virtu Financial Units repurchases	21,413	24.58	—	34,138,832
Class C Common Stock/ Virtu Financial Units repurchases	3,584	26.66	—	
May 1, 2019 - May 31, 2019				
Class A Common Stock / Virtu Financial Units repurchases	27,814	23	—	34,138,832
June 1, 2019 - June 30, 2019				
Class A Common Stock / Virtu Financial Units repurchases	41,625	22.02	—	34,138,832
Total Common Stock / Virtu Financial Unit repurchases	419,631	$ 24.03	—	$ 34,138,832

(1) Includes the repurchase of 416,047 shares from employees in order to satisfy statutory tax withholding requirements upon the net settlement of equity awards for the six months ended June 30, 2019.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

None.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

Exhibit Number	Description
10.1	Underwriting Agreement, dated May 14, 2019, by and among Virtu Financial, Inc., Virtu Financial LLC and the Underwriters (incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K (File No. 001-37352), filed on May 17, 2019.
10.2	Purchase Agreement, dated May 14, 2019, by and among Virtu Financial, Inc. and TJMT Holdings LLC (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-37352), filed on May 17, 2019.
10.3	Lock-up Agreement, dated May 14, 2019, entered into by Vincent Viola (incorporated herein by reference to Exhibit 99.15 to the Report on Schedule 13D of Vincent Viola (File No. 005-89306), filed on May 21, 2019).
10.4	Lock-up Agreement, dated May 14, 2019, entered into by Michael T. Viola (incorporated herein by reference to Exhibit 99.15 to the Report on Schedule 13D of Vincent Viola (File No. 005-89306), filed on May 21, 2019).
10.5	Lock-up Agreement, dated May 14, 2019, entered into by TJMT Holdings LLC (incorporated herein by reference to Exhibit 99.15 to the Report on Schedule 13D of Vincent Viola (File No. 005-89306), filed on May 21, 2019).
31.1*	Certification of Chief Executive Officer required by Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer required by Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase
101.LAB*	XBRL Taxonomy Extension Label Linkbase
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase
101.DEF*	XBRL Taxonomy Extension Definition Document

* Filed herewith.

SIGNATURES

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

Virtu Financial, Inc.

DATE:	August 9, 2019	By:	/s/ Douglas A. Cifu
			Douglas A. Cifu
			Chief Executive Officer
DATE:	August 9, 2019	By:	/s/ Joseph Molluso
			Joseph Molluso
			Chief Financial Officer

EXHIBIT 31.1

CEO CERTIFICATION
PURSUANT TO SECTION 302 OF THE
SARBANES — OXLEY ACT OF 2002

I, Douglas A. Cifu, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the period ending June 30, 2019 of Virtu Financial, Inc. (the "registrant") as filed with the Securities and Exchange Commission on the date hereof;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2019 By: /s/ Douglas A. Cifu

Douglas A. Cifu
Chief Executive Officer

EXHIBIT 31.2

CFO CERTIFICATION
PURSUANT TO SECTION 302 OF THE
SARBANES — OXLEY ACT OF 2002

I, Joseph Molluso, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the period ending June 30, 2019 of Virtu Financial, Inc. (the "registrant") as filed with the Securities and Exchange Commission on the date hereof;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2019 By: /s/ Joseph Molluso

Joseph Molluso
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Virtu Financial, Inc. (the "Company") on Form 10-Q for the period ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Douglas A. Cifu, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, in my capacity as an officer of the Company that, to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Douglas A. Cifu

Douglas A. Cifu
Chief Executive Officer

Date: August 9, 2019

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Virtu Financial, Inc. (the "Company") on Form 10-Q for the period ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Joseph Molluso, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, in my capacity as an officer of the Company that, to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Joseph Molluso

Joseph Molluso
Chief Financial Officer

Date: August 9, 2019