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, 2020

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)

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

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 ☒

Class of Stock	Shares outstanding as of August 7, 2020
Class A common stock, par value $0.00001 per share	122,561,543
Class C common stock, par value $0.00001 per share	10,526,939
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, 2020

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, 2020	December 31, 2019
Assets		
Cash and cash equivalents	$ 670,770	$ 732,164
Cash restricted or segregated under regulations and other	77,245	41,116
Securities borrowed	1,435,777	1,928,763
Securities purchased under agreements to resell	244,242	143,032
Receivables from broker-dealers and clearing organizations	2,441,283	1,318,584
Trading assets, at fair value:		
Financial instruments owned	2,038,622	2,068,734
Financial instruments owned and pledged	602,971	696,956
Receivables from customers	275,506	103,531
Property, equipment and capitalized software (net of accumulated depreciation of $433,060 and $457,229 as of June 30, 2020 and December 31, 2019, respectively)	114,080	116,089
Operating lease right-of-use assets	294,531	314,526
Goodwill	1,148,926	1,148,926
Intangibles (net of accumulated amortization of $257,151 and $219,239 as of June 30, 2020 and December 31, 2019, respectively)	491,726	529,638
Deferred tax assets	195,844	214,671
Other assets ($53,642 and $48,966, at fair value, as of June 30, 2020 and December 31, 2019, respectively)	257,352	252,640
Total assets	$ 10,288,875	$ 9,609,370
Liabilities and equity		
Liabilities		
Short-term borrowings	$ 26,274	$ 73,486
Securities loaned	1,204,114	1,600,099
Securities sold under agreements to repurchase	312,568	340,742
Payables to broker-dealers and clearing organizations	1,200,212	826,750
Payables to customers	148,519	89,719
Trading liabilities, at fair value:		
Financial instruments sold, not yet purchased	2,753,847	2,497,958
Tax receivable agreement obligations	255,996	269,282
Accounts payable, accrued expenses and other liabilities	614,220	399,168
Operating lease liabilities	339,602	365,364
Long-term borrowings	1,732,516	1,917,866
Total liabilities	8,587,868	8,380,434
Commitments and Contingencies (Note 14)		
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 — 124,654,210 and 120,435,912 shares, Outstanding — 122,475,439 and 118,257,141 shares at June 30, 2020 and December 31, 2019, 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, 2020 and December 31, 2019, respectively	—	—
Class C common stock (par value $0.00001), Authorized — 90,000,000 and 90,000,000 shares, Issued and Outstanding — 10,526,939 and 12,887,178 shares at June 30, 2020 and December 31, 2019, 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 60,091,740 shares at June 30, 2020 and December 31, 2019, respectively	1	1
Treasury stock, at cost, 2,178,771 and 2,178,771 shares at June 30, 2020 and December 31, 2019, respectively	(55,005)	(55,005)
Additional paid-in capital	1,128,977	1,077,398
Retained earnings (accumulated deficit)	259,873	(90,374)
Accumulated other comprehensive income (loss)	(39,567)	(647)
Total Virtu Financial Inc. stockholders' equity	1,294,280	931,374
Noncontrolling interest	406,727	297,562

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

(in thousands, except share data)	June 30, 2020	December 31, 2019
Total equity	1,701,007	1,228,936
Total liabilities and equity	$ 10,288,875	$ 9,609,370

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except share and per share data)	**2020**	**2019**	**2020**	**2019**
Revenues:				
Trading income, net	$ 743,996	$ 205,923	$ 1,546,461	$ 463,463
Interest and dividends income	9,340	24,162	35,856	53,293
Commissions, net and technology services	147,736	145,120	318,481	220,267
Other, net	4,831	(104)	5,726	(1,490)
Total revenue	905,903	375,101	1,906,524	735,533
Operating Expenses:				
Brokerage, exchange, clearance fees and payments for order flow, net	203,503	99,487	377,321	187,101
Communication and data processing	55,662	54,423	110,689	96,237
Employee compensation and payroll taxes	120,934	83,702	291,292	191,540
Interest and dividends expense	28,841	36,824	70,281	82,193
Operations and administrative	21,737	31,453	48,867	50,970
Depreciation and amortization	16,713	14,810	34,073	31,260
Amortization of purchased intangibles and acquired capitalized software	18,954	20,606	37,912	31,528
Termination of office leases	7	65,207	283	65,208
Debt issue cost related to debt refinancing, prepayment and commitment fees	13,195	(1,319)	17,366	7,894
Transaction advisory fees and expenses	86	1,798	274	16,907
Financing interest expense on long-term borrowings	21,736	34,689	47,406	57,478
Total operating expenses	501,368	441,680	1,035,764	818,316
Income (loss) before income taxes and noncontrolling interest	404,535	(66,579)	870,760	(82,783)
Provision for (benefit from) income taxes	69,250	(11,094)	147,237	(13,679)
Net income (loss)	335,285	(55,485)	723,523	(69,104)
Noncontrolling interest	(136,143)	25,594	(303,312)	32,540
Net income (loss) available for common stockholders	$ 199,142	$ (29,891)	$ 420,211	$ (36,564)
Earnings (loss) per share				
Basic	$ 1.59	$ (0.27)	$ 3.39	$ (0.34)
Diluted	$ 1.58	$ (0.27)	$ 3.38	$ (0.34)
Weighted average common shares outstanding				
Basic	121,527,673	112,828,240	120,642,415	110,076,375
Diluted	122,238,905	112,828,240	121,013,689	110,076,375
Net income (loss)	$ 335,285	$ (55,485)	$ 723,523	$ (69,104)
Other comprehensive income (loss)				
Foreign exchange translation adjustment, net of taxes	6,444	884	(3,952)	(2,860)
Net change in unrealized cash flow hedges gain (loss), net of taxes	(9,137)	—	(64,739)	—
Comprehensive income (loss)	332,592	(54,601)	654,832	(71,964)
Less: Comprehensive income (loss) attributable to noncontrolling interest	(135,018)	25,258	(273,541)	33,812
Comprehensive income (loss) attributable to common stockholders	$ 197,574	$ (29,343)	$ 381,291	$ (38,152)

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

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Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Changes in Equity (Unaudited)
Three and Six Months Ended June 30, 2020 and 2019

(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, 2019	120,435,912	$ 1	12,887,178	$ —	60,091,740	$ 1	(2,178,771)	$ (55,005)	$ 1,077,398	$ (90,374)	$ (647)	$ 931,374	$ 297,562	$ 1,228,936
Share based compensation	1,854,961	—	—	—	—	—	—	—	21,357	—	—	21,357	—	21,357
Repurchase of Class C common stock	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Treasury stock purchases	(642,869)	—	—	—	—	—	—	—	—	(9,801)	—	(9,801)	—	(9,801)
Stock options exercised	213,129	—	—	—	—	—	—	—	3,206	—	—	3,206	—	3,206
Warrants issued	—	—	—	—	—	—	—	—	11,486	—	—	11,486	—	11,486
Net income (loss)	—	—	—	—	—	—	—	—	—	221,069	—	221,069	167,169	388,238
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	(5,884)	(5,884)	(4,512)	(10,396)
Net change in unrealized cash flow hedges gains (losses)	—	—	—	—	—	—	—	—	—	—	(31,468)	(31,468)	(24,134)	(55,602)
Distribution from Virtu Financial to non-controlling interest	—	—	—	—	—	—	—	—	—	—	—	—	(19,165)	(19,165)
Dividends	—	—	—	—	—	—	—	—	—	(29,602)	—	(29,602)	—	(29,602)
Issuance of common stock in connection with employee exchanges	724,327	—	—	—	—	—	—	—	—	—	—	—	—	—
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(724,327)	—	—	—	—	—	—	—	—	—	—	—
Balance at March 31, 2020	122,585,460	$ 1	12,162,851	$ —	60,091,740	$ 1	(2,178,771)	$ (55,005)	$ 1,113,447	$ 91,292	$ (37,999)	$ 1,111,737	$ 416,920	$ 1,528,657
Share based compensation	36,771	—	—	—	—	—	—	—	7,839	—	—	7,839	—	7,839
Treasury stock purchases	(8,727)	—	—	—	—	—	—	—	—	(360)	—	(360)	—	(360)
Stock option exercised	404,794	—	—	—	—	—	—	—	7,691	—	—	7,691	—	7,691
Net income (loss)	—	—	—	—	—	—	—	—	—	199,142	—	199,142	136,143	335,285
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	3,674	3,674	2,770	6,444
Net change in unrealized cash flow hedges gains (losses)	—	—	—	—	—	—	—	—	—	—	(5,242)	(5,242)	(3,895)	(9,137)
Distribution from Virtu Financial to non-controlling interest	—	—	—	—	—	—	—	—	—	—	—	—	(145,211)	(145,211)
Dividends	—	—	—	—	—	—	—	—	—	(30,201)	—	(30,201)	—	(30,201)
Issuance of common stock in connection with employee exchanges	1,635,912	—	—	—	—	—	—	—	—	—	—	—	—	—
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(1,635,912)	—	—	—	—	—	—	—	—	—	—	—
Balance at June 30, 2020	124,654,210	$ 1	10,526,939	$ —	60,091,740	$ 1	(2,178,771)	$ (55,005)	$ 1,128,977	$ 259,873	$ (39,567)	$ 1,294,280	$ 406,727	$ 1,701,007

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(in thousands, except share and interest data)	Class A Common Stock Shares	Class A Common Stock Amounts	Class C Common Stock Shares	Class C Common Stock Amounts	Class D Common Stock Shares	Class D Common Stock Amounts	Treasury Stock Shares	Treasury Stock Amounts	Additional Paid-in Capital Amounts	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total Virtu Financial Inc. Stockholders' Equity	Non-Controlling Interest	Total Equity
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

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)	**2020**	**2019**
Cash flows from operating activities		
Net income (loss)	$ 723,523	$ (69,104)
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	34,073	31,260
Amortization of purchased intangibles and acquired capitalized software	37,912	31,528
Debt issue cost related to debt refinancing and prepayment	5,486	7,894
Amortization of debt issuance costs and deferred financing fees	14,650	6,361
Termination of office leases	283	65,208
Share-based compensation	37,012	37,289
Deferred taxes	18,827	6,965
Other	(1,153)	(25,297)
Changes in operating assets and liabilities (1):		
Securities borrowed	492,986	211,539
Securities purchased under agreements to resell	(101,210)	(7,499)
Receivables from broker-dealers and clearing organizations	(1,122,699)	142,470
Trading assets, at fair value	124,097	(464,558)
Receivables from customers	(171,975)	(131,953)
Operating lease right-of-use assets	19,995	(258,426)
Other assets	10,175	(5,804)
Securities loaned	(395,985)	(369,351)
Securities sold under agreements to repurchase	(28,174)	13,942
Payables to broker-dealers and clearing organizations	308,723	(50,939)
Payables to customers	58,800	14,884
Trading liabilities, at fair value	255,889	241,012
Operating lease liabilities	(25,762)	283,087
Accounts payable, accrued expenses and other liabilities	203,804	(87,833)
Net cash provided by (used in) operating activities	499,277	(377,325)
Cash flows from investing activities		
Development of capitalized software	(11,895)	(16,628)
Acquisition of property and equipment	(20,082)	(9,175)
ITG Acquisition, net of cash acquired, described in Note 3	—	(835,581)
Investment in joint ventures	(4,716)	(3,000)
Net cash provided by (used in) investing activities	(36,693)	(864,384)
Cash flows from financing activities		
Distribution from Virtu Financial to non-controlling interest	(164,376)	(52,087)
Dividends	(59,803)	(54,904)
Repurchase of Class C common stock	—	(96)
Purchase of treasury stock	(10,161)	(10,898)
Stock options exercised	10,898	931
Short-term borrowings, net	(49,312)	116,245
Proceeds from long-term borrowings	—	1,492,500
Repayment of long term borrowings	(188,556)	(450,000)
Tax receivable agreement obligations	(13,286)	—
Debt issuance costs	(9,301)	(35,702)
Issuance of common stock in connection with secondary offering, net of offering costs	—	(375)
Net cash provided by (used in) financing activities	(483,897)	1,005,614
Effect of exchange rate changes on cash and cash equivalents	(3,952)	(2,391)
Net increase (decrease) in cash and cash equivalents	(25,265)	(238,486)
Cash, cash equivalents, and restricted or segregated cash, beginning of period	773,280	736,047
Cash, cash equivalents, and restricted or segregated cash, end of period	$ 748,015	$ 497,561

(in thousands)	Six Months Ended June 30, 2020	2019
Supplementary disclosure of cash flow information		
Cash paid for interest	$ 98,750	$ 90,726
Cash paid for taxes	36,451	1,746
Non-cash investing activities		
Share-based and accrued incentive compensation to developers relating to capitalized software	7,488	1,441
See Note 3 for a description of non-cash investing activities relating to the acquisition of KCG		
Non-cash financing activities		
Tax receivable agreement described in Note 5	—	(644)

(1) Net of ITG Acquisition for the three months ended March 31, 2019; see Note 3

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, 2020, VFI owned approximately 64.1% 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 liquidity to the global markets and innovative, transparent trading solutions to its clients. The Company provides deep liquidity in over 25,000 financial instruments, on over 235 venues, in 36 countries worldwide to help create more efficient markets. Leveraging its global market structure expertise and scaled, multi-asset infrastructure, the Company provides its clients with a robust product suite including offerings in execution, liquidity sourcing, analytics and broker-neutral, multi-dealer platforms in workflow technology. The Company's product offerings allow its clients to trade on hundreds of venues in over 50 countries and across multiple asset classes, including global equities, ETFs, foreign exchange, futures, fixed income and other commodities. The Company's integrated, multi-asset analytics platform provides a range of pre and post-trade services, data products and compliance tools that its clients rely upon to invest, trade and manage risk across global markets.

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. ITG's business contributes to the Company's Execution Services segment.

Virtu Financial's principal U.S. subsidiaries include Virtu Americas LLC ("VAL") and Virtu ITG LLC ("VITG"), which are U.S. broker-dealers, and Virtu Alternet Securities LLC ("VALT", collectively with VAL and VITG, the "broker-dealers"). As part of the Company's integration efforts, the Company has been in the process of consolidating its U.S. broker-dealers. The Company submitted applications to withdraw the SEC registrations for Virtu Financial BD LLC ("VFBD") and Virtu Financial Capital Markets LLC ("VFCM"), which were approved in March 2020, having previously consolidated their broker-dealer activities within VAL as of December 31, 2019. To further optimize its U.S. operations, the Company consolidated VITG and VALT operations into VAL as of June 1, 2020 and submitted applications to withdraw SEC registrations for VITG and VALT 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. and Virtu Financial Canada ULC, each 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 20 "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, 2019. 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 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.

Effective this quarter, the Company has changed the presentation of its Condensed Consolidated Statements of Comprehensive Income. As a result, the Company made the following reclassifications to prior period amounts to be consistent with current period presentation. For the three and six months ended June 30, 2019, respectively, the Company reclassified $23.6 million and $47.2 million of Payments for order flow to Brokerage, exchange, clearance fees and payments for order flow, net, previously reported as Brokerage, exchange and clearance fees, net. Brokerage, exchange and clearance fees, net and Payments for order flow both represent costs associated with transacting trades. For the three and six months ended June 30, 2019, respectively, the Company reclassified $3.4 million and $5.9 million of sublease income from Other, net to Operations and administrative to net with other occupancy costs within Operations and administrative.

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 six months ended June 30, 2019 comprise the Company's 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 the Company's results.

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, tax receivable agreements, leases, litigation accruals, 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.

The Company grants restricted stock awards ("RSAs") and 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 RSAs and participating 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 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 in Hong Kong, 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 broker 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 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, Financial instruments owned and pledged, 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 - Trading

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 trading 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.

Derivative Instruments - Hedging

The Company may use derivative instruments for risk management purposes, including cash flow hedges used to manage interest rate risk on long-term borrowings and net investment hedges used to manage foreign exchange risk. The Company has entered into floating-to-fixed interest rate swap agreements in order to manage interest rate risk associated with its long-term debt obligations. Additionally, 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 interest rate swap agreements and 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 interest rate swaps or forward contracts. For instruments that meet the criteria to be considered hedging instruments under ASC 815, any gains or losses, to the extent effective, are included in Accumulated other comprehensive income on the Condensed Consolidated Statements of Financial Condition and Other comprehensive income on the Condensed Consolidated Statements of Comprehensive Income. The ineffective portion, if any, is recorded in Other, net on the Condensed Consolidated Statements of Comprehensive Income.

The Company presents its hedging derivatives balances on a net-by-counterparty basis when the criteria for offsetting are met. Balances associated with hedging derivatives are recorded within Receivables from/Payables to broker-dealers and clearing organizations on the Condensed Consolidated Statements of Financial Condition. 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 and software to be sold, leased, or marketed. 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 the inception of the arrangement. Operating leases are included in Operating lease right-of use ("ROU") assets and Operating lease liabilities on the Condensed Consolidated Statements of Financial Condition. Operating lease 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 of the lease, 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. The Company nets its sublease income against corresponding lease expenses within Operations and Administrative expenses on the Condensed Consolidated Statement of Comprehensive Income.

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, 2019, 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. No impairment was identified.

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 were recorded at their fair values on the dates of acquisition. Exchange stock includes shares that entitle the Company to certain trading privileges.

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. 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. The Company recognizes the related revenue when the third-party research services are rendered and payments are made to the service provider.

The Company 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, Clearance Fees and Payments for Order Flow, Net

Brokerage, exchange, clearance fees and payments for order flow, net, comprise the costs of executing and clearing trades and are accrued on a trade date basis in the Condensed Consolidated Statements of Comprehensive Income. These costs are net of rebates, which 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. 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.

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

Comprehensive income consists of two components: net income and other comprehensive income (“OCI”). The Company’s OCI is comprised of foreign currency translation adjustments and mark-to-market gains and losses on the Company's derivative instruments designated as hedging instruments under ASC 815.

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 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, and subsidiaries domiciled in Canada, which utilize the Canadian dollar as the functional currency.

The Company may use derivative instruments for risk management purposes, including cash flow hedges used to manage interest rate risk on long-term borrowings and net investment hedges used to manage foreign exchange risk. For instruments that meet the criteria to be considered hedging instruments under ASC 815, any gains or losses are included in Accumulated other comprehensive income on the Condensed Consolidated Statements of Financial Condition and Other comprehensive income on the Condensed Consolidated Statements of Comprehensive Income, to the extent they are effective.

Share-Based Compensation

Share-based awards issued for compensation in connection with or subsequent 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”) 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”), are in the form of stock options, Class A common stock, par value $0.00001 per share (the “Class A Common Stock”), RSAs 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 values of the Class A Common Stock and RSUs are determined based on the volume weighted average price for the three days preceding the grant. With respect to the RSUs, forfeitures are accounted for as they occur. The fair value of RSAs is determined based on the closing price as of the grant date. 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, or, in the case of RSAs subject to performance conditions, from the date that achievement of the performance target becomes probable through the remainder of 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.

The Company has interests in two joint ventures (“JV”) that 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. As of June 30, 2020, the Company held noncontrolling interests of 10% and 50%, respectively, in these JVs.

The Company 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, 2020, the Company held approximately a 10% noncontrolling interest in this JV.

The Company has an interest in a JV that is developing a member-owned equities exchange with the goal of increasing competition and transparency, while reducing fixed costs and simplifying execution of equity trading in the US. As of June 30, 2020, the Company held approximately a 14.6% noncontrolling interest in this JV.

The Company's four 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, 2020:

(in thousands)	Carrying Amount Asset	Carrying Amount Liability	Maximum Exposure to Loss	VIEs' assets
Equity investment	$ 32,316	$ —	$ 32,316	$ 186,013

The following table presents the Company’s nonconsolidated VIEs at December 31, 2019:

(in thousands)	Carrying Amount Asset	Carrying Amount Liability	Maximum Exposure to Loss	VIEs' assets
Equity investment	$ 28,579	$ —	$ 28,579	$ 119,051

Accounting Pronouncements, Recently Adopted

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 Company adopted this ASU on January 1, 2020. The updated disclosures are included in Note 10 “Financial Assets and Liabilities”.

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 Company adopted this ASU on January 1, 2020, and it did not 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.

The Company adopted this ASU on January 1, 2020 using the modified retrospective method of adoption. The ASU impacts 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. The adoption of this ASU did not have a material impact to the Company's financial condition, results of operations or cash flows.

Accounting Pronouncements, Not Yet Adopted as of June 30, 2020

Income Taxes - In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes.* The ASU removes certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period, and the recognition of deferred tax liabilities for outside basis differences. The ASU also amends other aspects of the guidance relating to the accounting for franchise taxes, enacted changes in tax laws or rates, the accounting for transactions that result in a step-up in the tax basis of goodwill, and other tax-related items. The ASU is effective for periods beginning after December 15, 2020, including interim periods within that fiscal year; early adoption is permitted. Most amendments within the ASU are required to be applied on a prospective basis, while certain amendments must be applied on a retrospective or modified retrospective basis. The Company is currently evaluating the impact of the new standard on its condensed consolidated financial statements and related disclosures.

Reference Rate Reform - In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*, which is designed to ease the potential burden in accounting for the transition away from LIBOR. The ASU applies to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued and replaced with alternative reference rates as a result of reference rate reform. The ASU provides optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The ASU is effective for all entities as of March 12, 2020 through December 31, 2022. The Company is evaluating the impact of the ASU, but does not expect it to have a material impact on its Condensed Consolidated Financial Statements and related disclosures.

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 (as amended from time to time, 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 provided (i) a senior secured first lien term loan in an aggregate principal amount of $1,500.0 million, drawn in its entirety on the ITG Closing Date, with approximately $404.5 million borrowed by VFH to repay all amounts outstanding under its existing term loan facility and the remaining approximately $1,095.0 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 closing of the ITG Acquisition, VFH assumed the obligations of the Acquisition Borrower in respect of the acquisition term loans. The Credit Agreement was subsequently amended as described further in Note 9 "Borrowings". 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 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 approximately $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 was allocated to the assets acquired and liabilities assumed using their fair values at the ITG Closing Date. The Company engaged third party specialists for the purchase price allocation.

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

(in thousands)	Amount	Amortization Years
Technology	$ 76,000	5
Customer relationships	437,600	10
Trade names	3,600	3
Intangible assets	517,200	
Goodwill	312,343	
Total	$ 829,543	

The Company estimated the fair value of the intangible assets, which involved the use of significant estimates and assumptions with respect to the timing and amounts of revenue growth rates, customer attrition rates, future tax rates, royalty rates, contributory asset charges, discount rate and the resulting cash flows. The total Goodwill of $312.3 million was 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 SEC 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 ITG Acquisition is being 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 $17.6 million and deferred tax liabilities of $71.1 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 13 "Income Taxes".

4. 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)	**2020**	**2019**	**2020**	**2019**
Income (loss) before income taxes and noncontrolling interest	$ 404,535	$ (66,579)	$ 870,760	$ (82,783)
Provision for (benefit from) income taxes	69,250	(11,094)	147,237	(13,679)
Net income (loss)	335,285	(55,485)	723,523	(69,104)
Noncontrolling interest	(136,143)	25,594	(303,312)	32,540
Net income (loss) available for common stockholders	$ 199,142	$ (29,891)	$ 420,211	$ (36,564)

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)	**2020**	**2019**	**2020**	**2019**
Basic earnings (loss) per share:				
Net income (loss) available for common stockholders	$ 199,142	$ (29,891)	$ 420,211	$ (36,564)
Less: Dividends and undistributed earnings allocated to participating securities	(5,506)	(466)	(10,793)	(907)
Net income (loss) available for common stockholders, net of dividends and undistributed earnings allocated to participating securities	193,636	(30,357)	409,418	(37,471)
Weighted average shares of common stock outstanding:				
Class A	121,527,673	112,828,240	120,642,415	110,076,375
Basic earnings (loss) per share	$ 1.59	$ (0.27)	$ 3.39	$ (0.34)

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except for share or per share data)	**2020**	**2019**	**2020**	**2019**
Diluted earnings (loss) per share:				
Net income (loss) available for common stockholders, net of dividends and undistributed earnings allocated to participating securities	$ 193,636	$ (30,357)	$ 409,418	$ (37,471)
Weighted average shares of common stock outstanding:				
Class A				
Issued and outstanding	121,527,673	112,828,240	120,642,415	110,076,375
Issuable pursuant to Amended and Restated 2015 Management Incentive Plan and Warrants issued in connection with the Founder Member Loan (1)	711,232	—	371,274	—
	122,238,905	112,828,240	121,013,689	110,076,375
Diluted earnings (loss) per share	$ 1.58	$ (0.27)	$ 3.38	$ (0.34)

(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 the Amended and Restated Investment Technology Group, Inc. 2007 Omnibus Equity Compensation Plan because the inclusion of these instruments would have been anti-dilutive.

5. 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 equity holders (“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”), (an “Exchange”), and payments made under the tax receivable agreements. An Exchange during the year will give rise to favorable tax attributes that may generate cash tax savings specific to the Exchange to be realized over a specific period of time (generally 15 years). At each Exchange, management estimates the Company’s cumulative TRA obligations to be reported on the Condensed Consolidated Statement of Financial Condition, which amounted to $256.0 million and $269.3 million as of June 30, 2020 and December 31, 2019, respectively. The tax attributes are computed as the difference between the Company's basis in the partnership interest (“outside basis”) as compared to the Company’s share of the adjusted tax basis of partnership property (“inside basis”) at the time of each Exchange. The computation of inside basis requires management to make judgments in estimating the components included in the inside basis as of the date of the Exchange (i.e., cash received by the Company on hypothetical sale of assets, allocation of gain/loss to the Company at the time of the Exchange taking into account complex partnership tax rules). In addition, management estimates the period of time that may generate cash tax savings of such tax attributes and the realizability of the tax attributes. 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, its second payment of $12.4 million in September 2018, and its third payment of $13.3 million in March 2020.

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”) in connection with 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 $3.3 million to $20.7 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 17 “Capital Structure”, the Company recorded an additional deferred tax asset of $78.7 million and a 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 employee exchanges and May 2019 Secondary Offering between the Company and TJMT Holdings LLC and the other selling stockholders, both as described in Note 17 “Capital Structure”, the Company recorded an additional deferred tax asset of $49.1 million and payment liability pursuant to the tax receivable agreements of $54.9 million, with the $5.8 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 further described in Note 13 “Income Taxes”, the aforementioned deferred tax asset and related payment liability were subsequently reduced, and 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, 2020 and December 31, 2019, the Company’s remaining deferred tax assets that relate to the matters described above were approximately $188.7 million and $197.6 million, respectively, and the Company’s liabilities over the next 15 years pursuant to the tax receivable agreements were approximately $256.0 million and $269.3 million, respectively. The amounts recorded as of June 30, 2020 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.

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.

6. 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, 2020 and December 31, 2019, the Company's total amount of goodwill recorded was $1,148.9 million. No goodwill impairment was recognized during the three and six months ended June 30, 2020 or 2019.

The following table presents the details of goodwill by segment as of June 30, 2020 and December 31, 2019:

(in thousands)	Market Making	Execution Services	Corporate	Total
Balance as of period-end	$ 755,292	$ 393,634	$ —	$ 1,148,926

As of June 30, 2020 and December 31, 2019, the Company's total amount of intangible assets recorded was $491.7 million and $529.6 million, respectively. Acquired intangible assets consisted of the following as of June 30, 2020 and December 31, 2019:

	As of June 30, 2020			
(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	(823)	127	9
ETF buyer relationships	950	(823)	127	9
Technology	136,000	(71,084)	64,916	1 to 6
Customer relationships	486,600	(70,377)	416,223	10 to 12
Trade name	3,600	(1,600)	2,000	3
Favorable occupancy leases	5,895	(2,444)	3,451	3 to 15
Exchange memberships	4,882	—	4,882	Indefinite
	$ 748,877	$ (257,151)	$ 491,726	

	As of December 31, 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	(770)	180	9
ETF buyer relationships	950	(770)	180	9
Technology	136,000	(58,203)	77,797	1 to 6
Customer relationships	486,600	(46,456)	440,144	10 to 12
Trade name	3,600	(1,000)	2,600	3
Favorable occupancy leases	5,895	(2,040)	3,855	3 to 15
Exchange memberships	4,882	—	4,882	Indefinite
	$ 748,877	$ (219,239)	$ 529,638	

Amortization expense relating to finite-lived intangible assets was approximately $19.0 million and $20.6 million for the three months ended June 30, 2020 and 2019, respectively, and $37.9 million and $31.5 million for the six months ended

June 30, 2020 and 2019, respectively. This is included in Amortization of purchased intangibles and acquired capitalized software in the accompanying Condensed Consolidated Statements of Comprehensive Income.

The Company expects to record amortization expense as follows over the remaining current year and five subsequent years:

(in thousands)		June 30, 2020
Remainder of 2020	$	36,341
2021		69,676
2022		64,852
2023		63,960
2024		50,845
2025		47,879

7. 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, 2020 and December 31, 2019:

(in thousands)		June 30, 2020		December 31, 2019
Assets				
Due from prime brokers	$	834,473	$	418,059
Deposits with clearing organizations		345,892		231,977
Net equity with futures commission merchants		198,114		267,748
Unsettled trades with clearing organization		701,596		214,618
Securities failed to deliver		348,105		178,324
Commissions and fees		13,103		7,858
Total receivables from broker-dealers and clearing organizations	$	2,441,283	$	1,318,584
Liabilities				
Due to prime brokers	$	464,049	$	511,524
Net equity with futures commission merchants		90,669		50,950
Unsettled trades with clearing organization		443,096		118,286
Securities failed to receive		200,567		144,494
Commissions and fees		1,831		1,496
Total payables to broker-dealers and clearing organizations	$	1,200,212	$	826,750

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 prime brokerage credit facilities (described in Note 9 “Borrowings”) of approximately $112.4 million and $134.3 million as of June 30, 2020 and December 31, 2019, 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.

8. 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, 2020 and December 31, 2019, substantially all of the securities received as collateral have been repledged. The fair value of the collateralized transactions at June 30, 2020 and December 31, 2019 are summarized as follows:

(in thousands)	June 30, 2020	December 31, 2019
Securities received as collateral:		
Securities borrowed	$ 1,402,709	$ 1,881,005
Securities purchased under agreements to resell	244,242	142,922
	$ 1,646,951	$ 2,023,927

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, 2020 and December 31, 2019 consisted of the following:

(in thousands)	June 30, 2020	December 31, 2019
Equities	$ 575,235	$ 654,366
Exchange traded notes	27,736	42,590
	$ 602,971	$ 696,956

9. Borrowings

Short-term Borrowings, net

The following summarizes the Company's short-term borrowing balances outstanding, net of related debt issuance costs, with each described in further detail below.

	June 30, 2020		
(in thousands)	Borrowing Outstanding	Deferred Debt Issuance Cost	Short-term Borrowings, net
Short-term bank loans	$ 26,274	$ —	$ 26,274

	December 31, 2019		
(in thousands)	Borrowing Outstanding	Deferred Debt Issuance Cost	Short-term Borrowings, net
Broker-dealer credit facilities	$ 30,000	$ (2,100)	$ 27,900
Short-term bank loans	45,586	—	45,586
	$ 75,586	$ (2,100)	$ 73,486

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 $300 million, which was subsequently increased to $400 million in April 2020, 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 which was subsequently amended and restated March 1, 2019 to increase the borrowing limit to $600 million and subsequently amended to adjust sublimits and certain other terms, including most recently on July 29, 2020. 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. Borrowing Base A Loans are available up to $600 million and bears interest at the adjusted LIBOR or base rate plus 1.25% per annum. Following the July 29, 2020 amendment, Borrowing Base B Loans are subject to a sublimit of $200 million and bear 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.

On March 10, 2020, a broker-dealer subsidiary of the Company entered into a short term loan arrangement with Jefferies Financial Group, Inc., as lender, for a $20 million demand loan (the "Demand Loan") repayable no later than ninety (90) days after the date of borrowing. The Demand Loan bore interest at a rate of 10% per annum, increased by 2.0% with respect to any principal amounts not paid when due and payable. The Demand Loan was repaid in full as of April 17, 2020.

On March 20, 2020, VAL, a broker-dealer subsidiary of the Company, entered into a Loan Agreement (the "Founder Member Loan Facility") with TJMT Holdings LLC (the "Founder Member"), as lender and administrative agent, providing for unsecured term loans from time to time (the "Founder Member Loans") in an aggregate original principal amount not to exceed $300 million. The Founder Member Loans may be borrowed in one or more borrowings on or after March 20, 2020 and prior to September 20, 2020, as further described below. VAL intends to use the proceeds of the Founder Member Loans solely to finance the purchase and settlement of securities and to fund margin deposits with the National Securities Clearing Corporation and Options Clearing Corporation. The Founder Member is an affiliate of Mr. Vincent Viola, the Company's founder and Chairman Emeritus. Upon the execution of and in consideration for the Lender's commitments under the Loan Agreement, the Company delivered to the Founder Member a warrant to purchase shares of the Company's Class A Common Stock. Terms of the warrant are set forth in further detail in Note 17 "Capital Structure". The interest rate for the Founder Member Loans, to the extent drawn and outstanding, will be 8.0% per annum, and the Founder Member Loans will be due on September 20, 2020. If an event of default occurs and is continuing, the Lender may increase the interest rate 2.0% above what would otherwise be applicable on overdue amounts, and declare all Founder Member Loans immediately due and payable. VAL may prepay the Founder Member Loans in whole or in part at any time without penalty. There was no outstanding balance on this loan as of June 30, 2020. The foregoing description of the Founder Member Loan Facility does not purport to be complete and is qualified in its entirety by reference to the complete text of the Founder Member Loan Facility, which is filed as an exhibit to the Company's 2020 quarterly report on Form 10-Q for the period ended March 31, 2020 filed with Securities and Exchange Commission on May 11, 2020.

The following summarizes the Company's broker-dealer credit facilities' carrying values, net of unamortized debt issuance costs, where applicable. These balances are included within Short-term borrowings on the Condensed Consolidated Statement of Financial Condition.

	At June 30, 2020				
(in thousands)	Interest Rate	Financing Available	Borrowing Outstanding	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Broker-dealer credit facilities:					
Uncommitted facility (1)	1.08%	$ 400,000	$ —	$ —	$ —
Committed facility (2)	1.41%	600,000	—	—	—
Founder Member Loan Facility (3)	8.00%	300,000	—	—	—
		$ 1,300,000	$ —	$ —	$ —

(1) $0.5 million of deferred debt issuance costs are included within Other assets on the Condensed Consolidated Statement of Financial Condition
(2) $0.9 million of deferred debt issuance costs are included within Other assets on the Condensed Consolidated Statement of Financial Condition
(3) $6.2 million of deferred debt issuance costs are included within Other assets on the Condensed Consolidated Statement of Financial Condition

	At December 31, 2019				
(in thousands)	Interest Rate	Financing Available	Borrowing Outstanding	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Broker-dealer credit facilities:					
Uncommitted facility	2.55%	$ 200,000	$ 30,000	$ (2,100)	$ 27,900
Committed facility	3.01%	600,000	—	—	—
		$ 800,000	$ 30,000	$ (2,100)	$ 27,900

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)	2020	2019	2020	2019
Broker-dealer credit facilities:				
Uncommitted facility	$ 131	$ 177	$ 763	$ 361
Committed facility	202	181	362	254
Demand Loan	94	—	211	—
Founder Member Loan Facility	$ —	$ —	$ —	$ —
	$ 427	$ 358	$ 1,336	$ 615

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, 2020, there was $26.3 million associated with international settlement activities outstanding under these facilities at a weighted average interest rate of approximately 3.1%. At December 31, 2019, there was $45.6 million associated with international settlement activities outstanding under these facilities at a weighted average interest rate of approximately 4.5%. These short-term bank loan balances are included within Short-term borrowings on the Condensed Consolidated Statement of Financial Condition.

First Lien Revolving Facility

The Company's Amended Credit Agreement (as defined below) provides for a $50.0 million senior secured first lien revolving facility. There were no outstanding borrowings under the facility as of June 30, 2020 or December 31, 2019. Interest expense in relation to the facility was $0.1 million for the three months ended June 30, 2020 and $0.4 million for the six months ended June 30, 2020.

Prime Brokerage 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, 2020		
(in thousands)	**Weighted Average Interest Rate**	**Financing Available**	**Borrowing Outstanding**
Prime Brokerage Credit Facilities:			
Prime brokerage credit facilities (1)	2.78%	$ 616,000	$ 112,412
		$ 616,000	$ 112,412

	At December 31, 2019		
(in thousands)	**Weighted Average Interest Rate**	**Financing Available**	**Borrowing Outstanding**
Prime Brokerage Credit Facilities:			
Prime brokerage credit facilities (1)	4.22%	$ 586,000	$ 134,331
		$ 586,000	$ 134,331

(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 $1.3 million and $1.8 million for the three months ended June 30, 2020 and 2019, respectively, and $2.6 million and $3.7 million for the six months ended June 30, 2020 and 2019, respectively.

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, 2020				
(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	3.19%	$ 1,736,512	$ (5,501)	$ (30,660)	$ 1,700,351
SBI bonds	January 2023	5.00%	32,428	—	(263)	32,165
			$ 1,768,940	$ (5,501)	$ (30,923)	$ 1,732,516

(in thousands)	Maturity Date	Interest Rate	Outstanding Principal	Discount	Deferred Debt Issuance Cost	Outstanding Borrowings, net
			At December 31, 2019			
Long-term borrowings:						
First Lien Term Loan Facility	March 2026	5.20%	$ 1,925,000	$ (6,795)	$ (32,513)	$ 1,885,692
SBI bonds	January 2023	5.00%	32,225	—	(51)	32,174
			$ 1,957,225	$ (6,795)	$ (32,564)	$ 1,917,866

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 provided (i) a senior secured first lien term loan (together with the Incremental Term Loans, as defined below; 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.

On October 9, 2019 (the “Amendment No. 1 Closing Date”), VFH entered into Amendment No. 1 (“Amendment No. 1”), which amended the Credit Agreement dated as of March 1, 2019 by and among VFH, Virtu Financial, the lenders party thereto, and Jefferies Finance, LLC, as administrative agent and collateral agent, to, among other things, provide for $525.0 million in aggregate principal amount of incremental term loans (the “Incremental Term Loans”), and amend the related collateral agreement. On the Amendment No. 1 Closing Date, VFH borrowed the Incremental Term Loans and used the proceeds together with available cash to redeem all of the $500.0 million aggregate principal amount of the outstanding 6.750% Senior Secured Second Lien Notes (as defined below) due 2022 issued by VFH and Orchestra Co Issuer, Inc., a Delaware corporation and indirect subsidiary of the Company (together with VFH, the “Issuers”), and paid related fees and expenses. The terms, conditions and covenants applicable to the Incremental Term Loans are the same as the terms, conditions and covenants applicable to the existing term loans under the Credit Agreement, including a maturity date of March 1, 2026.

On March 2, 2020 (the “Amendment No. 2 Closing Date”), VFH entered into Amendment No. 2 (“Amendment No. 2”), which further amended the Credit Agreement (as amended by Amendment No. 1 and Amendment No. 2, the “Amended Credit Agreement”) to, among other things, reduce the interest rate spread over adjusted LIBOR or the alternate base rate by 0.50% per annum and eliminated any stepdown in the spread based on VFH's first lien leverage ratio. The term loan borrowings and revolver borrowings under the Amended Credit Agreement 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 0.50%, (c) an adjusted LIBOR rate for a Eurodollar borrowing with an interest period of one month plus 1.00% and (d) 1.00%, plus, in each case, 2.00%, or (ii) the greater of (x) an adjusted LIBOR rate for the interest period in effect and (y) 0%, plus, in each case, 3.00%. 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.

On January 29, 2020, the Company entered into a five-year $1,000 million floating-to-fixed interest rate swap agreement. The Company also previously entered into a five-year $525 million floating-to-fixed interest rate swap agreement.
As these two interest rate swaps meet the criteria to be considered qualifying cash flow hedges under ASC 815, they effectively fix interest payment obligations on $1,000 million and $525.0 million of principal under the First Lien Term Loan Facility at rates of 4.4% and 4.3% through January 2025 and September 2024, respectively, based on the interest rates set forth in the Amended Credit Agreement.

The First Lien Revolving Facility under the Amended Credit Agreement is subject to a springing net first lien leverage ratio test which may spring into effect as of the last day of a fiscal quarter if usage of the aggregate revolving commitments exceeds a specified level 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 Amended Credit Agreement are guaranteed by Virtu Financial and

VFH's material non-regulated domestic restricted subsidiaries and secured by substantially all of the assets of VFH and the guarantors, in each case, subject to certain exceptions.

Under the Amended Credit Agreement, term loans will mature on March 1, 2026. 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. During the year ended December 31, 2019, $100.0 million was repaid under the First Lien Term Loan Facility. In May of 2020, an additional $188.5 million was repaid under this facility. As of June 30, 2020, $1,737 million was outstanding under the First Lien Term Loan Facility.

The Amended Credit Agreement contains certain customary covenants and events of default, including relating to a change of control. If an event of default occurs and is continuing, the lenders under the Amended Credit Agreement will be entitled to take various actions, including the acceleration of amounts outstanding under the Amended Credit Agreement and all actions permitted to be taken by a secured creditor in respect of the collateral securing the obligations under the Amended 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 $1,150.00 million 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.

On July 20, 2017, VFH assumed all of the obligations of the Escrow Issuer under the Indenture and the Notes. 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.

As described above, the Credit Agreement was amended on October 9, 2019, on which date VFH borrowed an additional $525.0 million of incremental first lien term loans, the proceeds of which were used together with cash on hand to redeem the Notes in full. The Indenture was fully terminated following such redemption.

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 10 "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. In December 2019, the maturity date of the SBI Bonds was extended to January 2023. The principal balance was ¥3.5 billion ($32.4 million) as of June 30, 2020 and ¥3.5 billion ($32.2 million) as of December 31, 2019. The Company recorded a gain of $0.1 million and a loss of $0.9 million during the three months ended June 30, 2020 and 2019, respectively, and a loss of $0.2 million and a loss of $0.5 million during the six months ended June 30, 2020 and 2019, respectively.

As of June 30, 2020, aggregate future required minimum principal payments based on the terms of the long-term borrowings were as follows:

(in thousands)		June 30, 2020
2020	$	—
2021		—
2022		—
2023		32,428
2024		—
Thereafter		1,736,512
Total principal of long-term borrowings	$	1,768,940

10. 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, 2020 or 2019.

Fair value measurements for those items measured on a recurring basis are summarized below as of June 30, 2020:

(in thousands)	June 30, 2020 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	$ 549,568	$ 1,262,683	$ —	$ —	$ 1,812,251
U.S. and Non-U.S. government obligations	37,033	42,874	—	—	79,907
Corporate Bonds	—	84,233	—	—	84,233
Exchange traded notes	40,338	1,426	—	—	41,764
Currency forwards	—	201,365	—	(190,354)	11,011
Options	9,456	—	—	—	9,456
	636,395	1,592,581	—	(190,354)	2,038,622
Financial instruments owned, pledged as collateral:					
Equity securities	332,703	242,532	—	—	575,235
Exchange traded notes	3	27,733	—	—	27,736
	332,706	270,265	—	—	602,971
Other Assets					
Equity investment	—	—	51,599	—	51,599
Exchange stock	2,043	—	—	—	2,043
	2,043	—	51,599	—	53,642
Liabilities					
Financial instruments sold, not yet purchased, at fair value:					
Equity securities	1,228,425	1,157,738	—	—	2,386,163
U.S. and Non-U.S. government obligations	202,492	1,435	—	—	203,927
Corporate Bonds	—	145,194	—	—	145,194
Exchange traded notes	13	2,215	—	—	2,228
Currency forwards	—	190,909	—	(190,877)	32
Options	16,303	—	—	—	16,303
	$ 1,447,233	$ 1,497,491	$ —	$ (190,877)	$ 2,753,847

Fair value measurements for those items measured on a recurring basis are summarized below as of December 31, 2019:

	December 31, 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	$ 600,259	$ 1,080,518	$ —	$ —	$ 1,680,777
U.S. and Non-U.S. government obligations	106,690	20,847	—	—	127,537
Corporate Bonds	—	171,591	—	—	171,591
Exchange traded notes	243	48,894	—	—	49,137
Currency forwards	—	242,552	—	(211,398)	31,154
Options	8,538	—	—	—	8,538
	715,730	1,564,402	—	(211,398)	2,068,734
Financial instruments owned, pledged as collateral:					
Equity securities	362,439	291,927	—	—	654,366
U.S. and Non-U.S. government obligations	—	—	—	—	—
Exchange traded notes	12	42,578	—	—	42,590
	362,451	334,505	—	—	696,956
Other Assets					
Equity investment	—	—	46,245	—	46,245
Exchange stock	2,721	—	—	—	2,721
	2,721	—	46,245	—	48,966
Liabilities					
Financial instruments sold, not yet purchased, at fair value:					
Equity securities	1,022,814	1,163,888	—	—	2,186,702
U.S. and Non-U.S. government obligations	39,091	2,713	—	—	41,804
Corporate Bonds	—	244,700	—	—	244,700
Exchange traded notes	15	21,631	—	—	21,646
Currency forwards	—	196,554	—	(196,535)	19
Options	3,087	—	—	—	3,087
	$ 1,065,007	$ 1,629,486	$ —	$ (196,535)	$ 2,497,958

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 9 “Borrowings”) and used the proceeds to partially finance the transaction. The SBI Investment is included within Level 3 of the fair value hierarchy. As of June 30, 2020, the fair value of the SBI Investment was determined using a weighted average of valuations using 1) the discounted cash flow method, an income approach; 2) a market approach based on average enterprise value/EBITDA ratios of comparable companies; and to a lesser extent 3) a transaction approach based on transaction values of comparable companies. 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 enterprise value/EBITDA multiples would result in a significantly lower (higher) fair value measurement.

The table below presents information on the valuation techniques, significant unobservable inputs and their ranges for the SBI Investment:

	June 30, 2020				
(in thousands)	Fair Value	Valuation Technique	Significant Unobservable Input	Range	Weighted Average
Equity investment	$ 51,599	Discounted cash flow	Estimated revenue growth	(7.4)% - 20.0%	7.6 %
			Discount rate	14.4% - 14.4%	14.4 %
		Market	Future enterprise value/ EBIDTA ratio	11.9x - 55.7x	15.9x

Changes in the fair value of the SBI Investment are included within Other, net in the Condensed Consolidated Statements of Comprehensive Income.

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

	Three Months Ended June 30, 2020						
(in thousands)	Balance at March 31, 2020	Purchases	Total Realized and Unrealized Gains / (Losses)	Net Transfers into (out of) Level 3	Settlement	Balance at June 30, 2020	Change in Net Unrealized Gains / (Losses) on Investments still held at June 30, 2020
Assets							
Other assets:							
Equity investment	$ 46,668	$ —	$ 4,931	$ —	$ —	$ 51,599	$ 4,931
Total	$ 46,668	$ —	$ 4,931	$ —	$ —	$ 51,599	$ 4,931

	Three Months Ended June 30, 2019						
(in thousands)	Balance at March 31, 2019	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	$ 46,529	$ —	$ (178)	$ —	$ —	$ 46,351	$ (178)
Total	$ 46,529	$ —	$ (178)	$ —	$ —	$ 46,351	$ (178)

	Six Months Ended June 30, 2020						
(in thousands)	Balance at December 31, 2019	Purchases	Total Realized and Unrealized Gains / (Losses)	Net Transfers into (out of) Level 3	Settlement	Balance at June 30, 2020	Change in Net Unrealized Gains / (Losses) on Investments still held at June 30, 2020
Assets							
Other assets:							
Equity investment	$ 46,245	$ —	$ 5,354	$ —	$ —	$ 51,599	$ 5,354
Total	$ 46,245	$ —	$ 5,354	$ —	$ —	$ 51,599	$ 5,354

(in thousands)	Six Months Ended June 30, 2019 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

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, 2020:

(in thousands)	June 30, 2020 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	$ 670,770	$ 670,770	$ 670,770	$ —	$ —
Cash restricted or segregated under regulations and other	77,245	77,245	77,245	—	—
Securities borrowed	1,435,777	1,435,777	—	1,435,777	—
Securities purchased under agreements to resell	244,242	244,242	—	244,242	—
Receivables from broker-dealers and clearing organizations	2,441,283	2,441,283	495,079	1,946,204	—
Total Assets	4,869,317	4,869,317	1,243,094	3,626,223	—
Liabilities					
Short-term borrowings	26,274	26,274	—	26,274	—
Long-term borrowings	1,732,516	1,729,869	—	1,729,869	—
Securities loaned	1,204,114	1,204,114	—	1,204,114	—
Securities sold under agreements to repurchase	312,568	312,568	—	312,568	—
Payables to broker-dealers and clearing organizations	1,200,212	1,200,212	3,932	1,196,280	—
Total Liabilities	$ 4,475,684	$ 4,473,037	$ 3,932	$ 4,469,105	$ —

The table below summarizes financial assets and liabilities not carried at fair value on a recurring basis as of December 31, 2019:

	December 31, 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	$ 732,164	$ 732,164	$ 732,164	$ —	$ —
Cash restricted or segregated under regulations and other	41,116	41,116	41,116	—	—
Securities borrowed	1,928,763	1,928,763	—	1,928,763	—
Securities purchased under agreements to resell	143,032	143,032	—	143,032	—
Receivables from broker-dealers and clearing organizations	1,318,584	1,318,584	40,842	1,277,742	—
Total Assets	4,163,659	4,163,659	814,122	3,349,537	—
Liabilities					
Short-term borrowings	73,486	75,586	—	75,586	—
Long-term borrowings	1,917,866	1,966,850	—	1,966,850	—
Securities loaned	1,600,099	1,600,099	—	1,600,099	—
Securities sold under agreements to repurchase	340,742	340,742	—	340,742	—
Payables to broker dealer and clearing organizations	826,750	826,750	49,514	777,236	—
Total Liabilities	$ 4,758,943	$ 4,810,027	$ 49,514	$ 4,760,513	$ —

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, 2020 and December 31, 2019:

	June 30, 2020					
				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	Counterparty Netting/ Cash Collateral	Net Amount
Offsetting of Financial Assets:						
Securities borrowed	$ 1,435,777	$ —	$ 1,435,777	$ (1,402,709)	$ (5,369)	$ 27,699
Securities purchased under agreements to resell	244,242	—	244,242	(244,242)	—	—
Trading assets, at fair value:						
Currency forwards	201,365	(190,354)	11,011	—	—	11,011
Options	9,456	—	9,456	—	(9,455)	1
Total	$ 1,890,840	$ (190,354)	$ 1,700,486	$ (1,646,951)	$ (14,824)	$ 38,711

(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	Gross Amounts Not Offset in the Condensed Consolidated Statement of Financial Condition		Net Amount
				Financial Instruments	Counterparty Netting/ Cash Collateral	
Offsetting of Financial Liabilities:						
Securities loaned	$ 1,204,114	$ —	$ 1,204,114	$ (1,190,531)	$ (5,369)	$ 8,214
Securities sold under agreements to repurchase	312,568	—	312,568	(312,554)	—	14
Payable to broker-dealers and clearing organizations						
Interest rate swaps	68,843	—	68,843	—	(68,369)	474
Trading liabilities, at fair value:						
Currency forwards	190,909	(190,877)	32	—	—	32
Options	16,303	—	16,303	—	(9,455)	6,848
Total	$ 1,792,737	$ (190,877)	$ 1,601,860	$ (1,503,085)	$ (83,193)	$ 15,582

	December 31, 2019					
(in thousands)	Gross Amounts of Recognized Assets	Gross Amounts Offset in the Consolidated Statement of Financial Condition	Net Amounts of Assets Presented in the Consolidated Statement of Financial Condition	Gross Amounts Not Offset in the Consolidated Statement of Financial Condition		Net Amount
				Financial Instruments	Counterparty Netting/ Cash Collateral	
Offsetting of Financial Assets:						
Securities borrowed	$ 1,928,763	$ —	$ 1,928,763	$ (1,881,005)	$ (15,280)	$ 32,478
Securities purchased under agreements to resell	143,032	—	143,032	(142,922)	—	110
Trading assets, at fair value:						
Currency forwards	242,552	(211,398)	31,154	—	—	31,154
Options	8,538	—	8,538	(8,537)	—	1
Total	$ 2,322,885	$ (211,398)	$ 2,111,487	$ (2,032,464)	$ (15,280)	$ 63,743

(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		Net Amount
				Financial Instruments	Counterparty Netting/ Cash Collateral	
Offsetting of Financial Liabilities:						
Securities loaned	$ 1,600,099	$ —	$ 1,600,099	$ (1,552,146)	$ (15,281)	$ 32,672
Securities sold under agreements to repurchase	340,742	—	340,742	(340,718)	—	24
Trading liabilities, at fair value:						
Currency forwards	196,554	(196,535)	19	—	—	19
Options	3,087	—	3,087	(3,087)	—	—
Total	$ 2,140,482	$ (196,535)	$ 1,943,947	$ (1,895,951)	$ (15,281)	$ 32,715

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, 2020					
	Remaining Contractual Maturity					
(in thousands)	Overnight and Continuous	Less than 30 days	30 - 60 days	61 - 90 Days	Greater than 90 days	Total
Securities sold under agreements to repurchase:						
Equity securities	$ —	$ 50,000	$ 50,000	$ 150,000	$ 50,000	$ 300,000
U.S. and Non-U.S. government obligations	12,568					12,568
Total	12,568	50,000	50,000	150,000	50,000	312,568
Securities loaned:						
Equity securities	1,204,114	—	—	—	—	1,204,114
Total	$ 1,204,114	$ —	$ —	$ —	$ —	$ 1,204,114

	December 31, 2019					
	Remaining Contractual Maturity					
(in thousands)	Overnight and Continuous	Less than 30 days	30 - 60 days	61 - 90 Days	Greater than 90 days	Total
Securities sold under agreements to repurchase:						
Equity securities	$ —	$ 75,000	$ 50,000	$ 150,000	$ —	$ 275,000
U.S. and Non-U.S. government obligations	65,742	—	—	—	—	65,742
Total	65,742	75,000	50,000	150,000	—	340,742
Securities loaned:						
Equity securities	1,600,099	—	—	—	—	1,600,099
Total	$ 1,600,099	$ —	$ —	$ —	$ —	$ 1,600,099

11. Derivative Instruments

The fair value of the Company’s derivative instruments on a gross basis consisted of the following at June 30, 2020 and December 31, 2019:

(in thousands)		June 30, 2020		December 31, 2019	
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	$ 4,006	$ 2,170,159	$ (1,366)	$ 4,502,017
Commodity futures	Receivables from broker-dealers and clearing organizations	495,103	6,949,099	40,656	7,758,974
Currency futures	Receivables from broker-dealers and clearing organizations	(58)	907,339	(2,860)	1,116,246
Fixed income futures	Receivables from broker-dealers and clearing organizations	(34)	15,512	47	155,697
Options	Financial instruments owned	9,456	655,661	8,538	442,808
Currency forwards	Financial instruments owned	201,365	24,829,993	242,552	24,369,818
Interest rate swap	Other assets	—	—	8,976	525,000
Derivatives Liabilities	**Financial Statements Location**	**Fair Value**	**Notional**	**Fair Value**	**Notional**
Derivative instruments not designated as hedging instruments:					
Equities futures	Payables to broker-dealers and clearing organizations	$ (1,004)	$ 97,216	$ 751	$ 83,803

Commodity futures	Payables to broker-dealers and clearing organizations	(2,907)	45,279	(45,175)	3,604,979
Currency futures	Payables to broker-dealers and clearing organizations	4,192	1,735,199	(23,223)	6,594,991
Fixed income futures	Payables to broker-dealers and clearing organizations	—	88,070	94	190,938
Options	Financial instruments sold, not yet purchased	16,303	669,130	3,087	436,422
Currency forwards	Financial instruments sold, not yet purchased	190,909	24,824,765	196,554	24,346,818
Derivative instruments designated as hedging instruments:					
Interest rate swaps	Payables to broker-dealers and clearing organizations	68,843	1,525,000	—	—

Amounts included in receivables from and payables to broker-dealers and clearing organizations represent net variation margin on long and short futures contracts as well as amounts receivable or payable on interest rate swaps.

The following table summarizes the net gain (loss) from derivative instruments not designated as hedging instruments under ASC 815, which are recorded in total revenues, and from those designated as hedging instruments under ASC 815, which are recorded in other comprehensive income in the accompanying Condensed Consolidated Statements of Comprehensive Income for the three and six months ended June 30, 2020 and 2019.

		Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**Financial Statements Location**	**2020**	**2019**	**2020**	**2019**
Derivative instruments not designated as hedging instruments:					
Futures	Trading income, net	$ 35,603	$ 83,225	$ 23,702	$ 155,610
Currency forwards	Trading income, net	(9,229)	(20,869)	192,579	(45,042)
Options	Trading income, net	25,039	4,335	26,300	4,997
		$ 51,413	$ 66,691	$ 242,581	$ 115,565
Derivative instruments designated as hedging instruments:					
Interest rate swaps (1)	Other comprehensive income	$ (9,137)	$ —	$ (64,739)	$ —

(1) On January 29, 2020, the Company entered into a five-year $1,000 million floating-to-fixed interest rate swap agreement. The Company also previously entered into a five-year $525 million floating-to-fixed interest rate swap agreement. As of January 1, 2020, these two interest rate swaps met the criteria to be considered qualifying cash flow hedges under ASC 815, and as such, the mark-to-market gains (losses) on the instruments were recorded within Other comprehensive income on the Condensed Consolidated Statement of Comprehensive Income for the three and six months ended June 30, 2020.

12. 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.

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.

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, 2020 and 2019:

(in thousands)	Three Months Ended June 30, 2020			
	Market Making	**Execution Services**	**Corporate**	**Total**
Revenues from contracts with customers:				
Commissions, net	$ (634)	$ 111,337	$ —	$ 110,703
Workflow technology	—	26,589	—	26,589
Analytics	—	10,444	—	10,444
Total revenue from contracts with customers	(634)	148,370	—	147,736
Other sources of revenue	759,751	(294)	(1,290)	758,167
Total revenues	759,117	148,076	(1,290)	905,903
Timing of revenue recognition:				
Services transferred at a point in time	759,117	129,360	(1,290)	887,187
Services transferred over time	—	18,716	—	18,716
Total Revenues	$ 759,117	$ 148,076	$ (1,290)	$ 905,903

(in thousands)	Three Months Ended June 30, 2019			
	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	229,068	1,311	(398)	229,981
Total revenues	234,029	141,470	(398)	375,101
Timing of revenue recognition:				
Services transferred at a point in time	234,029	121,209	(398)	354,840
Services transferred over time	—	20,261	—	20,261
Total revenues	$ 234,029	$ 141,470	$ (398)	$ 375,101

(in thousands)	Six Months Ended June 30, 2020 Market Making	Execution Services	Corporate	Total
Revenues from contracts with customers:				
Commissions, net	$ 136	$ 242,363	$ —	$ 242,499
Workflow technology	—	55,332	—	55,332
Analytics	—	20,650	—	20,650
Total revenue from contracts with customers	136	318,345	—	318,481
Other sources of revenue	1,589,567	(404)	(1,120)	1,588,043
Total revenues	1,589,703	317,941	(1,120)	1,906,524
Timing of revenue recognition:				
Services transferred at a point in time	1,589,703	280,665	(1,120)	1,869,248
Services transferred over time	—	37,276	—	37,276
Total revenues	$ 1,589,703	$ 317,941	$ (1,120)	$ 1,906,524

(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	502,313	14,214	(1,261)	515,266
Total revenues	512,274	224,520	(1,261)	735,533
Timing of revenue recognition:				
Services transferred at a point in time	512,274	197,470	(1,261)	708,483
Services transferred over time	—	27,050	—	27,050
Total revenues	$ 512,274	$ 224,520	$ (1,261)	$ 735,533

Remaining Performance Obligations and Revenue Recognized from Past Performance Obligations

As of June 30, 2020, 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.

The Company recognized $0.7 million and $0.5 million of revenue related to performance obligations satisfied in previous period for the three and six months ended June 30, 2020 and 2019, respectively.

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 $59.3 million and $53.6 million as of June 30, 2020 and December 31, 2019, respectively. The Company did not identify any contract assets. There were no impairment losses on receivables as of June 30, 2020.

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 $8.1 million and $8.6 million as of June 30, 2020 and December 31, 2019, respectively. The Company recognized revenue of $7.6 million and $7.8 million for the three months ended June 30, 2020 and 2019, respectively, and $15.1 million and $14.9 million for the six months ended June 30, 2020 and 2019, respectively that had been initially recorded as deferred revenue.

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

13. Income Taxes

The Company is subject to U.S. federal, state and local income tax at the rate applicable to corporations less the rate attributable to the noncontrolling interest in Virtu Financial. These noncontrolling interests are subject to U.S. taxation as partnerships. Accordingly, for the three and six months ended June 30, 2020 and 2019, the income attributable to these noncontrolling interests was reported in the Condensed Consolidated Statements of Comprehensive Income, but the related U.S. income tax expense attributable to these noncontrolling interests was 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 $69.3 million, 17.1%, and $(11.1) million, 16.7% for the three months ended June 30, 2020 and 2019, respectively, and $147.2 million, 16.9%, and $(13.7) million, 16.5%, for the six months ended June 30, 2020 and 2019, 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, 2020 and December 31, 2019 were current income tax receivables of $18.9 million and $39.3 million, respectively. The balances at June 30, 2020 and December 31, 2019 primarily comprised income tax benefits due to the Company from federal, state, 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, 2020 and December 31, 2019 were current tax liabilities of $71.0 million and $11.5 million, respectively. The balances at June 30, 2020 and December 31, 2019 primarily comprised 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 5 "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. At June 30, 2020 and December 31, 2019, the Company had U.S. federal net operating loss carryforwards of $0.0 million and $91.3 million, respectively, and has recorded a deferred tax asset related to these federal net operating carryforwards of $0.0 million and $19.2 million, respectively. The Company did not record a valuation allowance against this deferred tax asset. At June 30, 2020, the Company recorded deferred income taxes related to state and local net operating losses of $3.7 million. These net operating losses will begin to expire in 2031. The Company did not record a valuation allowance against this deferred tax asset.

As a result of the ITG Acquisition, the Company had non-U.S. net operating losses at June 30, 2020 and December 31, 2019 of $76.0 million and $86.3 million, respectively, and recorded a related deferred tax asset of $15.5 million and $17.9 million, respectively. A valuation allowance of $15.1 million and $15.6 million was recorded against this deferred tax asset at June 30, 2020 and December 31, 2019, respectively, as it is more likely than not that a portion of this deferred tax asset will not be realized. As a result of the Acquisition of KCG, the Company had non-U.S. net operating losses at June 30, 2020 and December 31, 2019 of $239.0 million and $239.0 million, respectively, and 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, 2020 and December 31, 2019 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, 2020 and December 31, 2019 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, 2020, the Company’s tax years for 2013 through 2018 and 2010 through 2018 were 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 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 2018. The final outcome of these examinations is not yet determinable. However, the Company anticipates that adjustments related to these examinations, 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, respectively.

The Company had $9.0 million of unrecognized tax benefits as of June 30, 2020, 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, 2020.

14. 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 coverage for potential claims, including securities actions, against the Company and its respective directors and officers.

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 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 asserted 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 did not specify the amount of alleged damages, was filed in the consolidated action on June 21, 2019. Defendants moved to dismiss the consolidated amended complaint on August 2, 2019. In response, plaintiffs filed a consolidated second amended complaint on September 6, 2019, which also did not specify the amount of alleged damages. Defendants moved to dismiss the consolidated second amended complaint on September 27, 2019. The defendants’ motion to dismiss was granted on January 3, 2020, and plaintiffs subsequently filed a Notice of Appeal of the district court's ruling on the motion to dismiss on January 31, 2020 and an opening brief on May 14, 2020. The Company believes that the claims are without merit and is defending itself 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 further reduced to €3.0 million (approximately $3.4 million). The Company has fully reserved for the monetary penalty as of June 30, 2020 and anticipates paying the fine during the year ended December 31, 2020.

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 enters into contracts that contain a variety of representations and warranties and general indemnifications. The Company has also 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.

15. 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 right-of-use ("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.

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 15 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 12 years. The Company recognizes sublease income on a straight-line basis over the term of the sublease within Operations and administrative expense 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 in determining the present value of lease payments.

Lease assets and liabilities are summarized as follows:

(in thousands)	Financial Statement Location	June 30, 2020	December 31, 2019
Operating leases			
Operating lease right-of-use assets	Operating lease right-of-use assets	$ 294,531	$ 314,526
Operating lease liabilities	Operating lease liabilities	339,602	365,364
Finance leases			
Property and equipment, at cost	Property, equipment, and capitalized software, net	36,046	37,589
Accumulated depreciation	Property, equipment, and capitalized software, net	(24,903)	(24,579)
Finance lease liabilities	Accounts payable, accrued expenses, and other liabilities	11,405	13,371

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

	June 30, 2020	December 31, 2019
Weighted average remaining lease term		
Operating leases	7.20 years	7.50 years
Finance leases	1.64 years	1.45 years
Weighted average discount rate		
Operating leases	5.70 %	5.70 %
Finance leases	3.34 %	3.52 %

The components of lease expense were as follows:

(in thousands)	Three Months Ended June 30, 2020	Three Months Ended June 30, 2019	Six Months Ended June 30, 2020	Six Months Ended June 30, 2019
Operating lease cost:				
Fixed	$ 18,452	19,288	$ 36,812	$ 34,084
Variable	2,086	1,869	4,221	3,447
Impairment of ROU Asset	—	25,857	—	25,857
Total Operating lease cost	20,538	47,014	41,033	63,388
Finance lease cost:				
Amortization of right-of-use assets	2,983	3,082	6,170	6,052
Interest on lease liabilities	112	175	241	361
Total Finance lease cost	3,095	3,257	6,411	6,413
Sublease income	4,118	3,355	7,595	5,915

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. There was no impairment of ROU assets during the three and six months ended June 30, 2020.

Future minimum lease payments under operating and finance leases with non-cancelable lease terms, as of June 30, 2020, are as follows:

(in thousands)	Operating Leases	Finance Leases
2020	$ 38,156	$ 5,414
2021	73,381	4,833
2022	67,130	2,094
2023	64,240	127
2024	33,928	—
2025 and thereafter	141,357	—
Total lease payments	$ 418,192	$ 12,468
Less imputed interest	(78,590)	(1,063)
Total lease liability	$ 339,602	$ 11,405

Future minimum lease payments under operating and finance leases with non-cancelable lease terms, as of December 31, 2019, are as follows:

(in thousands)	Operating Leases	Finance Leases
2020	76,118	10,929
2021	73,062	3,305
2022	66,850	565
2023	63,676	—
2024	32,144	—
2025 and thereafter	141,371	—
Total lease payments	$ 453,221	$ 14,799
Less imputed interest	(87,857)	(1,428)
Total lease liability	$ 365,364	$ 13,371

16. Cash

The following table provides a reconciliation of cash and cash equivalents together with restricted or segregated 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, 2020	December 31, 2019
Cash and cash equivalents	$ 670,770	$ 732,164
Cash restricted or segregated under regulations and other	77,245	41,116
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ 748,015	$ 773,280

17. 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, 2020 and December 31, 2019, there were 5,559,713 and 7,919,952 Virtu Financial Units outstanding held by Employee Holdco (as defined below), respectively, and 2,360,239 and 609,984 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, 2020 and 2019, 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. On April 23, 2020, the Company’s board of directors adopted an amendment to the Company’s Amended and Restated 2015 Management Incentive Plan in order to increase the number of shares of the Company’s Class A Common Stock reserved for issuance, and in respect of which awards may be granted under the Amended and Restated 2015 Plan from 16,000,000 shares of Class A Common Stock to an aggregate of 21,000,000 shares of Class A Common Stock, and the amendment was approved by the Company’s shareholders at the Company's annual meeting of stockholders on June 5, 2020.

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 were filed as exhibits to the Company's 2019 Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 28, 2020.

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, 2020 and 2019, 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 2,360,239 and 609,984 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 64.1% interest in Virtu Financial at June 30, 2020.

Warrant Issuance

On March 20, 2020, in connection with and in consideration of the Founder Member's commitments under the Founder Member Loan Facility (as described in Note 9 "Borrowings"), the Company delivered to the Founder Member a warrant (the "Warrant") to purchase shares of the Company's Class A Common Stock. Pursuant to the Warrant, the Founder Member may purchase up to 3,000,000 shares of Class A Common Stock, which number of shares will be increased to 10,000,000 if, at any time during the term of the Founder Member Facility, Founder Member Loans equal to or greater than $100 million remain outstanding for a certain period of time specified in the Warrant. The exercise price per share of the Class A Common Stock issuable pursuant to the Warrant is $22.98, which in accordance with the terms of the Warrant, is equal to the average of the volume weighted average prices of the Class A Common Stock for the ten (10) trading days following May 7, 2020, the date on which the Company publicly announced its earnings results for the first quarter of 2020. The Warrant may be exercised on or after May 22, 2020, the eleventh (11th) trading day following the date on which the Company publicly announced its earnings results for the first quarter of 2020, up to and including January 15, 2022. The Warrant and Class A Common Stock issuable pursuant to the Warrant were offered, and will be issued and sold, in reliance on the exemption from the registration requirements of the Securities Act, set forth under Section 4(a)(2) of the Securities Act relating to sales by an issuer not involving any public offering. The foregoing description of the Warrant does not purport to be complete and is qualified in its entirety by reference to the complete text of the Warrant, which was filed as an exhibit to the Company's 2020 quarterly report on Form 10-Q for the period ended March 31, 2020 filed with the Securities and Exchange Commission on May 11, 2020.

The fair value of the Warrant was determined using a Black-Scholes-Merton model, and was recorded as a debt issuance cost within Other Assets on the Condensed Consolidated Statement of Financial Condition and as an increase to Additional paid-in capital on the Condensed Consolidated Statement of Changes in Equity. The balance will be amortized on a straight-line basis from March 20, 2020 through September 20, 2020, the date on which the Founder Member Loan Facility expires, and recorded as expense within Debt issue cost related to debt refinancing, prepayment and commitment fees in the Condensed Consolidated Statement of Comprehensive Income.

Accumulated Other Comprehensive Income (Loss)

The following table presents the changes in Other Comprehensive Income (Loss) for the three and six months ended June 30, 2020 and 2019:

	Three Months Ended June 30, 2020			
(in thousands)	**AOCI Beginning Balance**	**Amounts reclassified from AOCI to income**	**Amounts recorded in AOCI**	**AOCI Ending Balance**
Net change in unrealized cash flow hedges gains (losses) (1)	$ (31,468)	$ 3,581	$ (8,823)	$ (36,710)
Foreign exchange translation adjustment	(6,531)	—	3,674	(2,857)
Total	$ (37,999)	$ 3,581	$ (5,149)	$ (39,567)

(1) Amounts reclassified from AOCI to income are included within Financing interest expense on long-term borrowings on the Condensed Consolidated Statements of Comprehensive Income

	Six Months Ended June 30, 2020			
(in thousands)	**AOCI Beginning Balance**	**Amounts reclassified from AOCI to income**	**Amounts recorded in AOCI**	**AOCI Ending Balance**
Net change in unrealized cash flow hedges gains (losses)	$ —	$ 3,898	$ (40,608)	$ (36,710)
Foreign exchange translation adjustment	(647)	—	(2,210)	(2,857)
Total	$ (647)	$ 3,898	$ (42,818)	$ (39,567)

(1) Amounts reclassified from AOCI to income are included within Financing interest expense on long-term borrowings on the Condensed Consolidated Statements of Comprehensive Income

(in thousands)	Three Months Ended June 30, 2019 AOCI Beginning Balance	Amounts reclassified from AOCI to income	Amounts recorded in AOCI	AOCI Ending Balance
Foreign exchange translation adjustment	$ (2,218)	$ —	$ 548	$ (1,670)
Total	$ (2,218)	$ —	$ 548	$ (1,670)

(in thousands)	Six Months Ended June 30, 2019 AOCI Beginning Balance	Amounts reclassified from AOCI to income	Amounts recorded in AOCI	AOCI Ending Balance
Foreign exchange translation adjustment	$ (82)	$ —	$ (1,588)	$ (1,670)
Total	$ (82)	$ —	$ (1,588)	$ (1,670)

18. Share-based Compensation

Pursuant to the Amended and Restated 2015 Management Incentive Plan as described in Note 17 "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, 2020 and 2019:

	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, 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
At December 31, 2019	3,233,779	$ 18.74	5.24	3,233,779	$ 18.74
Granted	—	—	—	—	—
Exercised	(617,923)	17.64	—	(617,923)	17.64
Forfeited or expired	—	—	—	—	—
At June 30, 2020	2,615,856	$ 19.00	4.74	2,615,856	$ 19.00

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

The Company recognized $1.4 million for the six months ended June 30, 2019 of compensation expense in relation to the stock options issued and outstanding. The stock options to purchase shares of Class A Common Stock were fully vested in 2019, and as such there was no compensation expense recognized in relation to stock options for the three and six months ended June 30, 2020.

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, Restricted Stock Units and Restricted Stock Awards

Pursuant to the Amended and Restated 2015 Management Incentive Plan as described in Note 17 "Capital Structure", subsequent to the IPO, shares of immediately vested Class A Common Stock, restricted stock units ("RSUs") and restricted stock awards ("RSAs") were granted, with RSUs and RSAs 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 the expense is recognized on a straight-line basis over the vesting period. The fair value of the RSAs was determined based on the closing price as of the date of grant and the expense is recognized from the date that achievement of the performance target becomes probable through the remainder of the vesting period. Performance targets are based on the Company's adjusted EBITDA for certain future periods. For the six months ended June 30, 2020 and 2019, respectively, there were 852,599 and 423,393 shares of immediately vested Class A Common Stock granted as part of year-end compensation. In addition, the Company accrued compensation expense of $25.8 million and $2.5 million for the six months ended June 30, 2020 and 2019, 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) and RSAs:

	Number of RSUs and RSAs	Weighted Average Fair Value
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
At December 31, 2019	2,993,489	$ 24.10
Granted (1)	3,039,940	16.76
Forfeited	(164,476)	18.59
Vested	(1,889,862)	20.57
At June 30, 2020	3,979,091	$ 20.39

(1) Excluded in the number of RSUs and RSAs is 400,000 participating RSAs where the grant date has not been achieved because the performance conditions have not been met.

The Company recognized $7.8 million and $16.4 million for the three months ended June 30, 2020 and 2019 and $16.8 million and $39.6 million for the six months ended June 30, 2020 and 2019, respectively, of compensation expense in relation to the RSUs. As of June 30, 2020 and December 31, 2019, total unrecognized share-based compensation expense related to unvested RSUs was $58.4 million and $43.4 million, respectively, and this amount is to be recognized over a weighted average period of 1.37 and 2.0 years, respectively. Awards in which the specific performance conditions have not been met are not included in unrecognized share-based compensation expense.

19. Regulatory Requirement

U.S. Subsidiaries

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 U.S. broker-dealers as detailed in the table below. Pursuant to NYSE rules, VAL was also required to maintain $1.0 million of capital in connection with the operation of its designated market maker ("DMM") business as of June 30, 2020. 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, 2020 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Virtu Americas LLC	$ 567,577	$ 5,290	$ 562,287
Virtu ITG LLC	22,904	1,000	21,904
Virtu Alternet Securities LLC	2,357	100	2,257

As of June 30, 2020, VAL had $44.5 million 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 $28.8 million of cash in reserve bank accounts for the benefit of proprietary accounts of brokers. Balances in special reserve bank accounts previously maintained by VITG were moved to VAL upon consolidation of the broker dealers. The balances are included within Cash restricted or segregated under regulations and other on the Condensed Consolidated Statement of Financial Condition.

The regulatory capital and regulatory capital requirements of the U.S. broker-dealer subsidiaries as of December 31, 2019 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Virtu Americas LLC	$ 257,452	$ 2,571	$ 254,881
Virtu Financial BD LLC	30,317	1,000	29,317
Virtu Financial Capital Markets LLC	3,710	1,000	2,710
Virtu ITG LLC	66,069	1,000	65,069
Virtu Alternet Securities LLC	1,931	100	1,831

As of December 31, 2019, VAL and VITG had $22.3 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 $4.5 million and $5.0 million, respectively, of cash in reserve bank accounts for the benefit of proprietary accounts of brokers.

Foreign Subsidiaries

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 the Company's foreign subsidiaries as of June 30, 2020 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Canada			
Virtu ITG Canada Corp	$ 15,014	$ 184	$ 14,830
TriAct Canada Marketplace LP	993	184	809
Virtu Financial Canada ULC	2,096	184	1,912
Ireland			
Virtu ITG Europe Limited (1)	51,183	26,921	24,262
Virtu Financial Ireland Limited (1)	81,630	44,937	36,693
United Kingdom			
Virtu ITG UK Limited	1,201	826	375
Asia Pacific			
Virtu ITG Australia Limited	25,488	13,069	12,419
Virtu ITG Hong Kong Limited	1,946	544	1,402
Virtu ITG Singapore Pte Limited	1,216	72	1,144

(1) Preliminary

As of June 30, 2020, Virtu ITG Europe Limited and Virtu ITG Canada Corp had $3.1 million and $0.4 million, respectively, of funds on deposit for trade clearing and settlement activity, and Virtu ITG Hong Kong Ltd had $30 thousand of segregated balances under a collateral account control agreement for the benefit of certain customers.

The regulatory net capital balances and regulatory capital requirements applicable to the Company's foreign subsidiaries as of December 31, 2019 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Canada			
Virtu ITG Canada Corp	$ 13,029	$ 193	$ 12,836
TriAct Canada Marketplace LP	2,538	193	2,345
Virtu Financial Canada ULC	2,459	193	2,266
Ireland			
Virtu ITG Europe Limited	54,129	32,484	21,645
Virtu Financial Ireland Limited	78,385	43,233	35,152
United Kingdom			
Virtu ITG UK Limited	1,378	991	387
Asia Pacific			
Virtu ITG Australia Limited	24,574	8,451	16,123
Virtu ITG Hong Kong Limited	3,805	539	3,266
Virtu ITG Singapore Pte Limited	1,179	72	1,107

As of December 31, 2019, Virtu ITG Europe Limited and Virtu ITG Canada Corp had $1.2 million and $0.4 million, respectively, of funds on deposit for trade clearing and settlement activity, and Virtu ITG Hong Kong Ltd had $30 thousand of segregated balances under a collateral account control agreement for the benefit of certain customers.

20. 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, 2020 and 2019:

(in thousands)	Three Months Ended June 30, 2020	Three Months Ended June 30, 2019	Six Months Ended June 30, 2020	Six Months Ended June 30, 2019
Revenues:				
United States	$ 767,707	$ 270,719	$ 1,560,733	$ 559,495
Ireland	64,554	48,890	172,464	84,565
Singapore	46,818	29,707	113,862	56,545
Canada	15,107	15,088	32,064	20,300
Australia	10,200	10,591	22,078	13,893
United Kingdom	504	(817)	2,980	(533)
Others	1,013	923	2,343	1,268
Total revenues	$ 905,903	$ 375,101	$ 1,906,524	$ 735,533

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.

The Execution Services segment comprises client-based trading and trading venues, offering execution services in global equities, options, futures and fixed income on behalf of institutions, banks and broker-dealers. 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. Client-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 conditional orders in POSIT Alert and client orders 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, 2020 and 2019 are summarized in the following table:

(in thousands)	Market Making	Execution Services	Corporate	Consolidated Total
2020				
Total revenue	$ 759,117	$ 148,076	$ (1,290)	$ 905,903
Income before income taxes and noncontrolling interest	397,596	16,454	(9,515)	404,535
2019				
Total revenue	234,029	141,470	(398)	375,101
Income (loss) before income taxes and noncontrolling interest	21,962	(21,697)	(66,844)	(66,579)

The Company's Pre-tax earnings by segment for the six months ended June 30, 2020 and 2019 are summarized in the following table:

(in thousands)	Market Making	Execution Services	Corporate	Consolidated Total
2020				
Total revenue	$ 1,589,703	$ 317,941	$ (1,120)	$ 1,906,524
Income before income taxes and noncontrolling interest	849,142	35,850	(14,232)	870,760
2019				
Total revenue	512,274	224,520	(1,261)	735,533
Income (loss) before income taxes and noncontrolling interest	69,501	(66,102)	(86,182)	(82,783)

21. Related Party Transactions

The Company incurs expenses and maintains balances with its affiliates in the ordinary course of business. As of June 30, 2020, and December 31, 2019 the Company had net receivables from its affiliates of $1.6 million and $1.3 million, respectively.

The Company has held a minority interest in SBI since 2016 (see Note 10 “Financial Assets and Liabilities”). The Company pays exchange fees to SBI for the trading activities conducted on its proprietary trading system. The Company paid $6.0 million and $2.7 million for the three months ended June 30, 2020 and 2019, respectively, and $9.7 million and $6.1 million for the six months ended June 30, 2020 and 2019, 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 $4.7 million and $5.2 million for the three months ended June 30, 2020 and 2019, respectively, and $9.4 million and $10.4 million to the JVs for the six months ended June 30, 2020 and 2019, 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 $0.3 million and $0.5 million for the three months ended June 30, 2020 and 2019, respectively, and $0.8 million and $0.8 million for the six months ended June 30, 2020 and 2019, respectively, to Level 3 for these services.

The Company makes commission-sharing arrangement ("CSA") payments to affiliates of DBS Group Holdings ("DBS"). Temasek and its affiliates have a significant ownership interest in DBS. The Company made payments of $0.2 million for the three and six months ended June 30, 2020.

As described in Note 9 “Borrowings” and Note 17 “Capital Structure”, on March 20, 2020 a subsidiary of the Company entered into an agreement with the Founder Member to establish the Founder Member Facility and, upon the execution of the Founder Member Facility and in consideration of the Founder Member’s commitments thereunder, the Company delivered to the Founder Member the Warrant. The transactions were unanimously approved by the Company’s disinterested Directors.

22. 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 July 29, 2020, the Company amended the terms of its Committed Broker Dealer Facility to increase the sublimit applicable to Borrowing Base B borrowings up to $200 million.

On August 4, 2020, the Company completed the disposition of the MatchNOW business pursuant to a previously announced agreement with Cboe Global Markets, Inc., resulting in a gain of approximately $56.6 million, with potential additional benefit of up to approximately $23.0 million, conditioned on future performance of MatchNOW.

On August 7, 2020, 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 participating Restricted Stock Unit and Restricted Stock Award that will be paid on September 15, 2020 to holders of record as of September 1, 2020.

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

The following management's discussion and analysis covers the three and six months ended June 30, 2020 and *2019 and should be read in conjunction with the condensed consolidated financial statements of Virtu Financial, Inc. (the "Company") for the period ended June 30, 2020, which are included in Part I, Item I of this Quarterly Report on Form 10-Q, and the audited consolidated financial statements and accompanying notes and MD&A for the year ended December 31, 2019, which are included in Items 8 and 7, respectively, of the Company's Annual Report on Form 10-K for the year ended December 31, 2019. 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 our Annual Report on Form 10-K for the year ended December 31, 2019, as filed with the Securities and Exchange Commission ("SEC") on February 28, 2020 (the "2019 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:

- the continuing impacts of COVID-19 and the governmental and other responses thereto, including but not limited to the deployment of our business continuity plan pursuant to which a significant number of our employees currently work remotely and our return to office plan, each of which may increase operational risk, as well as increases in market, counterparty and other forms of operational risk;
- 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), political conditions (such as military actions and terrorist activities), and other global events such as fires, natural disasters, pandemics or extreme weather;
- 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, 2020 and 2019 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 for the periods following the ITG Closing Date reflect ITG's and our balances, and reflect the impact of purchase accounting adjustments, including revised amortization and depreciation expense for acquired assets. 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 our results without the results of ITG.

Recent Developments

The ongoing COVID-19 global and national health emergency has caused significant disruption in the international and United States economies and financial markets. On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a pandemic. The spread of COVID-19 has caused, among other matters, illness, death, quarantines, cancellation of events and travel, business and school shutdowns, reduction in business activity and financial transactions, labor shortages, supply chain interruptions and overall economic and financial market volatility and instability. The United States now has the world's most reported COVID-19 cases, and all 50 states and the District of Columbia have reported cases of infected individuals. Similar impacts have been experienced in every country in which we do business. The Company has been impacted in various ways by the COVID-19 outbreak, including experiencing elevated levels of trading volumes and market volatility in the markets in which we operate, which contributed positively to our results, and increases in short term funding requirements with clearing houses and counterparties as a consequence of these elevated trading volumes and market volatility. The Company also implemented its business continuity plan, including remote work arrangements for the majority of our employees during this pandemic.

We will continue to monitor the impact of COVID-19, but at the date of this report it is too early to determine the full impact this virus may have on the global financial markets and the overall economy, as well as our business. Should this emerging macro-economic risk continue for an extended period, there could be an adverse material financial impact to the Company's businesses and investments, including a material reduction in the Company's results of operations. For more information on the potential impacts of the COVID-19 outbreak on our business, see Part II Item 1A "Risk Factors" of this Quarterly Report on Form 10-Q.

Overview

We are a leading financial services firm that leverages cutting edge technology to deliver liquidity to the global markets and innovative, transparent trading solutions to our clients. Leveraging our global market structure expertise and scaled, multi-asset technology infrastructure, we provide our clients with a robust product suite including offerings in execution, liquidity sourcing, analytics and broker-neutral, multi-dealer platforms in workflow technology. Our product offerings allow our clients to trade on hundreds of venues across over 50 countries and in multiple asset classes, including global equities, ETFs, foreign exchange, futures, fixed income and other commodities. Our integrated, multi-asset analytics platform provides a range of pre and post-trade services, data products and compliance tools that our clients rely upon to invest, trade and manage risk across global markets. We believe that our broad diversification, in combination with our proprietary technology platform and low-cost structure gives us the scale necessary to grow our business around the globe as we service clients and facilitate risk transfer between global capital markets participants by providing 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 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 enhancing the overall health and efficiency of the global capital markets by ensuring that market participants have an efficient means to invest, transfer risk and analyze the quality of executions. We believe that 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 designed to be transparent, because we believe transparency makes markets more efficient and helps investors make better, more informed decisions. We use the latest technology to create and 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. 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 that offered a suite of trading and financial technology products to help leading brokers and asset managers improve returns for investors around the world. ITG empowered traders and investors 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. As a market maker and liquidity provider, we stand ready, at any time, to buy or sell a broad range of securities, and we generate profits 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 latest technology to create and deliver liquidity to the 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 increases.

Execution Services

We offer client 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 when transacting as an agent for our clients. Client-based, execution-only trading within this segment is done 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 conditional orders in POSIT Alert and in our ATSs, 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 and our integrated, broker-neutral trading tools delivered across the globe, including order and execution management systems 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 the ITG Acquisition, a cash transaction valued at $30.30 per ITG share, or a total of approximately $1.0 billion. 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 provided (i) the First Lien Term Loan Facility (as defined below) 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 its existing term loan facility and the remaining approximately $1,095.0 million borrowed by the Acquisition Borrower to finance the consideration and fees and expenses to be paid in connection with the ITG Acquisition, and (ii) the First Lien Revolving Facility (as defined below), 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.

As described below, the Credit Agreement was amended on October 9, 2019, on which date VFH borrowed and additional $525.0 million of incremental first lien term loans, the proceeds of which were used together with cash on hand to redeem the Notes (as defined below). The Indenture (as defined below) was fully terminated following such redemption. The Credit Agreement was further amended on March 2, 2020 to, among other things, reduce the interest rate spread over LIBOR or the applicable benchmark by 0.50%.

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 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. On April 23, 2020, the Company’s board of directors adopted an amendment to the Company’s Amended and Restated 2015 Management Incentive Plan in order to increase the number of shares of the Company’s Class A Common Stock reserved for issuance, and in respect of which awards may be granted under the Amended and Restated 2015 Plan from 16,000,000 shares of Class A Common Stock to an aggregate of 21,000,000 shares of Class A Common Stock and the amendment was approved by the Company’s shareholders at the Company's annual meeting of shareholders on June 5, 2020.

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, 2020, options to purchase 1,628,750 shares in the aggregate were forfeited and 4,983,394 options were exercised. The fair value of the stock option grants was determined through the application of the Black-Scholes-Merton model and was 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 except as follows: (i) cash and cash equivalents reflected on our Condensed Consolidated Statement of Financial Condition as of June 30, 2020 in the amount of $104.0 million; (ii) deferred tax assets reflected on our Condensed Consolidated Statement of Financial Condition as of June 30, 2020 in the amount of $169.7 million and tax receivable agreement obligation in the amount of $256.0 million, in each case as described in greater detail in Note 5 "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 as of June 30, 2020; and (iv) provision for corporate income tax in the amount of $55.2 million and $120.6 million reflected on our Condensed Consolidated Statements of Comprehensive Income for the three and six months ended June 30, 2020, 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, 2020 and 2019:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
Market Making	**2020**	**2019**	**2020**	**2019**
Total revenue	$ 759,117	$ 234,029	$ 1,589,703	$ 512,274
Total operating expenses	361,521	212,067	740,561	442,773
Income before income taxes and noncontrolling interest	397,596	21,962	849,142	69,501
Execution Services				
Total revenue	148,076	141,470	317,941	224,520
Total operating expenses	131,622	163,167	282,091	290,622
Income (loss) before income taxes and noncontrolling interest	16,454	(21,697)	35,850	(66,102)
Corporate				
Total revenue	(1,290)	(398)	(1,120)	(1,261)
Total operating expenses	8,225	66,446	13,112	84,921
Income (loss) before income taxes and noncontrolling interest	(9,515)	(66,844)	(14,232)	(86,182)
Consolidated				
Total revenue	905,903	375,101	1,906,524	735,533
Total operating expenses	501,368	441,680	1,035,764	818,316
Income (loss) before income taxes and noncontrolling interest	$ 404,535	$ (66,579)	$ 870,760	$ (82,783)

The following table shows our results of operations for the three and six months ended June 30, 2020 and 2019:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2020**	**2019**	**2020**	**2019**
Revenues:				
Trading income, net	$ 743,996	$ 205,923	$ 1,546,461	$ 463,463
Interest and dividends income	9,340	24,162	35,856	53,293
Commissions, net and technology services	147,736	145,120	318,481	220,267
Other, net	4,831	(104)	5,726	(1,490)
Total revenue	905,903	375,101	1,906,524	735,533
Operating Expenses:				
Brokerage, exchange, clearance fees and payments for order flow, net	203,503	99,487	377,321	187,101
Communication and data processing	55,662	54,423	110,689	96,237
Employee compensation and payroll taxes	120,934	83,702	291,292	191,540
Interest and dividends expense	28,841	36,824	70,281	82,193
Operations and administrative	21,737	31,453	48,867	50,970
Depreciation and amortization	16,713	14,810	34,073	31,260
Amortization of purchased intangibles and acquired capitalized software	18,954	20,606	37,912	31,528
Termination of office leases	7	65,207	283	65,208
Debt issue cost related to debt refinancing, prepayment and commitment fees	13,195	(1,319)	17,366	7,894
Transaction advisory fees and expenses	86	1,798	274	16,907
Financing interest expense on long-term borrowings	21,736	34,689	47,406	57,478
Total operating expenses	501,368	441,680	1,035,764	818,316
Income (loss) before income taxes and noncontrolling interest	404,535	(66,579)	870,760	(82,783)
Provision for (benefit from) income taxes	69,250	(11,094)	147,237	(13,679)
Net income (loss)	$ 335,285	$ (55,485)	$ 723,523	$ (69,104)

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 revenues are generated through market making activities, which are recorded as Trading income, net and Interest and dividends income. Commissions and fees are derived from commissions charged for trade executions in client execution services. We earn commissions and commission equivalents, 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 our control.

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 are 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, and bid/ask spreads 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, while hedging risks. Trading income, net, accounted for 81% and 63% of our total revenues for the six months ended June 30, 2020 and 2019, 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. Client commission fees are charged for client trades executed by us on behalf of third party broker-dealers 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 being executed. In addition, we offer workflow technology and analytics services to select third parties. Revenues are derived from fees generated by matching sell-side and buy-side clients orders, and from 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.

We have a noncontrolling investment (the “SBI Investment”) in 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, clearance fees and payments for order flow, net. Brokerage, exchange, clearance fees and payments for order flow 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, clearance fees and payments for order flow 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 our trading activity. Execution fees are paid primarily to exchanges and venues where we trade. Clearance fees are paid to clearing houses and clearing agents. 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. Rebates based on volume discounts, credits or payments received from exchanges or other marketplaces are netted against brokerage, exchange, clearance fees and payments for order flow.

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 restricted stock units and restricted stock awards granted in connection with and subsequent to the IPO pursuant to the Amended and Restated 2015 Management Incentive Plan and Class A Common Stock underlying certain awards assumed 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 3 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 Acquisition of KCG and 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, prepayment and commitment fees. 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. Premium paid in connection with retiring outstanding bonds, and commitment fees paid for lines of credit are also included in this category.

Transaction advisory fees and expenses. Transaction advisory fees and expenses primarily reflect professional fees incurred by us in connection with the ITG Acquisition in 2019.

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 13 “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, clearance fees and payments for order flow, net, 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, prepayment, and commitment fees, 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, transaction advisory fees and expenses, termination of office leases, charges related to share based compensation and other expenses, which includes reserves for legal matters, COVID-19 one-time costs and donations and Other, net.
- "Normalized Adjusted Net Income", "Normalized Adjusted Net Income before income taxes", "Normalized provision for income taxes", and "Normalized Adjusted EPS", which we calculate by adjusting Net Income to exclude certain items including IPO-related adjustments and other non-cash items, assuming that all vested and unvested Virtu Financial Units have been exchanged for Class A Common Stock, and applying an effective tax rate, which was approximately 24%.
- 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 (collectively, the "Company's Non-GAAP Measures") 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, the Company's Non-GAAP 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 the Company's Non-GAAP Measures provides 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. The Company's Non-GAAP Measures 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 the Company's Non-GAAP Measures may not be directly comparable to those of other companies. Although we use the Company's 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.

The Company's Non-GAAP Measures 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 the Company's Non-GAAP Measures should not be construed as an indication that our future results will be unaffected by unusual or nonrecurring items. The Company's Non-GAAP 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, the Company's Non-GAAP Measures 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 the Company's Non-GAAP Measures 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 of the Company's Non-GAAP Measures to the most directly comparable U.S. GAAP measure.

The following table reconciles 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, 2020 and 2019.

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2020**	**2019**	**2020**	**2019**
Reconciliation of Trading income, net to Adjusted Net Trading Income				
Trading income, net	$ 743,996	$ 205,923	$ 1,546,461	$ 463,463
Interest and dividends income	9,340	24,162	35,856	53,293
Commissions, net and technology services	147,736	145,120	318,481	220,267
Brokerage, exchange, clearance fees and payments for order flow, net	(203,503)	(99,487)	(377,321)	(187,101)
Interest and dividends expense	(28,841)	(36,824)	(70,281)	(82,193)
Adjusted Net Trading Income	$ 668,728	$ 238,894	$ 1,453,196	$ 467,729
Reconciliation of Net Income to EBITDA and Adjusted EBITDA				
Net income (loss)	$ 335,285	$ (55,485)	$ 723,523	$ (69,104)
Financing interest expense on long-term borrowings	21,736	34,689	47,406	57,478
Debt issue cost related to debt refinancing, prepayment, and commitment fees	13,195	(1,319)	17,366	7,894
Depreciation and amortization	16,713	14,810	34,073	31,260
Amortization of purchased intangibles and acquired capitalized software	18,954	20,606	37,912	31,528
Provision for (benefit from) income taxes	69,250	(11,094)	147,237	(13,679)
EBITDA	$ 475,133	$ 2,207	$ 1,007,517	$ 45,377
Severance	(38)	7,873	4,161	61,224
Transaction advisory fees and expenses	86	1,798	274	16,907
Termination of office leases	7	65,208	283	65,208
Other	(5,935)	104	980	1,491
Share based compensation	16,505	11,983	42,249	21,796
Charges related to share based compensation at IPO, Amended and Restated 2015 Management Incentive Plan	—	(9)	—	1,385
Adjusted EBITDA	$ 485,758	$ 89,164	$ 1,055,464	$ 213,388
Selected Operating Margins				
Net Income Margin (1)	50.1 %	(23.2) %	49.8 %	(14.8) %
EBITDA Margin (2)	71.1 %	0.9 %	69.3 %	9.7 %
Adjusted EBITDA Margin (3)	72.6 %	37.3 %	72.6 %	45.6 %

(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 table reconciles 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 and six months ended June 30, 2020 and 2019:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except share and per share data)	**2020**	**2019**	**2020**	**2019**
Reconciliation of Net Income to Normalized Adjusted Net Income				
Net income (loss)	$ 335,285	$ (55,485)	$ 723,523	$ (69,104)
Provision for (benefit from) income taxes	69,250	(11,094)	147,237	(13,679)
Income (loss) before income taxes	404,535	(66,579)	870,760	(82,783)
Amortization of purchased intangibles and acquired capitalized software	18,954	20,606	37,912	31,528
Debt issue cost related to debt refinancing, prepayment, and commitment fees	13,195	(1,319)	17,366	7,894
Severance	(38)	7,873	4,161	61,224
Transaction advisory fees and expenses	86	1,798	274	16,907
Termination of office leases	7	65,208	283	65,208
Other	(5,935)	104	980	1,491
Share based compensation	16,505	11,983	42,249	21,796
Charges related to share based compensation at IPO, 2015 Management Incentive Plan	—	(9)	—	1,385
Normalized Adjusted Net Income before income taxes	447,309	39,665	973,985	124,650
Normalized provision for income taxes (1)	107,354	9,520	233,757	29,916
Normalized Adjusted Net Income	$ 339,955	$ 30,145	$ 740,228	$ 94,734
Weighted Average Adjusted shares outstanding (2)	197,050,236	194,217,318	196,049,119	192,959,477
Normalized Adjusted EPS	$ 1.73	$ 0.16	$ 3.78	$ 0.49

(1) Reflects U.S. federal, state, and local income tax rate applicable to corporations of approximately 24% for 2020 and 24% for 2019.
(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, restricted stock units and restricted stock awards 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, 2020 and 2019 as well as warrants issued in connection with the Founder Member Loan during the three and six months ended June 30, 2020.

The following tables reconcile Trading income, net to Adjusted Net Trading Income by segment for the three and six months ended June 30, 2020 and 2019:

	Three Months Ended June 30, 2020			
(in thousands)	Market Making	Execution Services	Corporate	Total
Trading income, net	$ 744,685	$ (689)	$ —	$ 743,996
Commissions, net and technology services	(634)	148,370	—	147,736
Interest and dividends income	9,020	320	—	9,340
Brokerage, exchange, clearance fees and payments for order flow, net	(172,872)	(30,631)	—	(203,503)
Interest and dividends expense	(28,085)	(756)	—	(28,841)
Adjusted Net Trading Income	$ 552,114	$ 116,614	$ —	$ 668,728

	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, clearance fees and payments for order flow, net	(63,630)	(35,857)	—	(99,487)
Interest and dividends expense	(36,395)	(429)	—	(36,824)
Adjusted Net Trading Income	$ 133,788	$ 105,106	$ —	$ 238,894

	Six Months Ended June 30, 2020			
(in thousands)	Market Making	Execution Services	Corporate	Total
Trading income, net	$ 1,547,347	$ (886)	$ —	$ 1,546,461
Commissions, net and technology services	136	318,345	—	318,481
Interest and dividends income	35,453	403	—	35,856
Brokerage, exchange, clearance fees and payments for order flow, net	(309,476)	(67,845)	—	(377,321)
Interest and dividends expense	(69,071)	(1,210)	—	(70,281)
Adjusted Net Trading Income	$ 1,204,389	$ 248,807	$ —	$ 1,453,196

	Six Months Ended June 30, 2019			
(in thousands)	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, clearance fees and payments for order flow, net	(130,197)	(56,904)	—	(187,101)
Interest and dividends expense	(70,655)	(11,538)	—	(82,193)
Adjusted Net Trading Income	$ 311,585	$ 156,144	$ —	$ 467,729

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, 2020 and 2019:

	Three Months Ended June 30, 2020			
(in thousands)	Global Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$ 660,390	$ 84,295	$ —	$ 744,685
Commissions, net and technology services	(634)	—	—	(634)
Brokerage, exchange, clearance fees and payments for order flow, net	(168,683)	(4,189)	—	(172,872)
Interest and dividends, net	(17,055)	(2,010)	—	(19,065)
Adjusted Net Trading Income	$ 474,018	$ 78,096	$ —	$ 552,114

	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, clearance fees and payments for order flow, net	(50,070)	(10,024)	(3,536)	(63,630)
Interest and dividends, net	(10,395)	(2,754)	38	(13,111)
Adjusted Net Trading Income	$ 107,540	$ 28,348	$ (2,100)	$ 133,788

	Six Months Ended June 30, 2020			
(in thousands)	Global Equities	Global FICC, Options and Other	Unallocated	Total Market Making
Trading income, net	$ 1,368,715	$ 178,632	$ —	$ 1,547,347
Commissions, net and technology services	136	—	—	136
Brokerage, exchange, clearance fees and payments for order flow, net	(292,922)	(16,554)	—	(309,476)
Interest and dividends, net	(30,149)	(3,469)	—	(33,618)
Adjusted Net Trading Income	$ 1,045,780	$ 158,609	$ —	$ 1,204,389

	Six Months Ended June 30, 2019			
(in thousands)	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, clearance fees and payments for order flow, net	(111,591)	(20,712)	2,106	(130,197)
Interest and dividends, net	(22,927)	(5,743)	(198)	(28,868)
Adjusted Net Trading Income	$ 247,148	$ 64,433	$ 4	$ 311,585

The following table shows our Adjusted Net Trading Income, 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, 2020 and 2019:

	Three Months Ended June 30,		
Adjusted Net Trading Income by Category:	**2020**	**2019**	**% Change**
Market Making:			
Global Equities	$ 474,018	$ 107,540	340.8%
Global FICC, Options and Other	78,096	28,348	175.5%
Unallocated(1)	—	(2,100)	NM
Total Market Making	552,114	133,788	312.7%
Execution Services	116,614	105,106	10.9%
Corporate	—	—	NM
Adjusted Net Trading Income	$ 668,728	$ 238,894	179.9%

	Three Months Ended June 30,		
Average Daily Adjusted Net Trading Income by Category:	**2020**	**2019**	**% Change**
Market Making:			
Global Equities	$ 7,524	$ 1,707	340.8%
Global FICC, Options and Other	1,240	450	175.5%
Unallocated(1)	—	(33)	NM
Total Market Making	8,764	2,124	312.6%
Execution Services	1,851	1,668	11.0%
Corporate	—	—	NM
Average Daily Adjusted Net Trading Income	$ 10,615	$ 3,792	179.9%

Adjusted Net Trading Income by Category:	Six Months Ended June 30, 2020	2019	% Change
Market Making:			
Global Equities	$ 1,045,780	$ 247,148	323.1%
Global FICC, Options and Other	158,609	64,433	146.2%
Unallocated(1)	—	4	NM
Total Market Making	1,204,389	311,585	286.5%
Execution Services	248,807	156,144	59.3%
Corporate	—	—	NM
Adjusted Net Trading Income	$ 1,453,196	$ 467,729	210.7%

Average Daily Adjusted Net Trading Income by Category:	Six Months Ended June 30, 2020	2019	% Change
Market Making:			
Global Equities	$ 8,366	$ 1,977	323.2%
Global FICC, Options and Other	1,269	515	146.4%
Unallocated(1)	—	—	NM
Total Market Making	9,635	2,492	286.6%
Execution Services	1,990	1,249	59.4%
Corporate	—	—	NM
Average Daily Adjusted Net Trading Income	$ 11,626	$ 3,740	210.8%

(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, 2020 Compared to Three Months Ended June 30, 2019

Total Revenues

Our total revenues increased $530.8 million, or 141.5%, to $905.9 million for the three months ended June 30, 2020, compared to $375.1 million for the three months ended June 30, 2019. The increase was primarily driven by an increase of $538.1 million in Trading income, net, which was driven by higher market volatility and trading volumes from the continued impacts of the COVID-19 pandemic during the three months ended June 30, 2020 compared to the prior year.

The following table shows total revenues by segment for the three months ended June 30, 2020 and 2019.

(in thousands, except for percentage)	Three Months Ended June 30, 2020	2019	% Change
Market Making			
Trading income, net	$ 744,685	$ 205,568	262.3%
Interest and dividends income	9,020	23,284	(61.3)%
Commissions, net and technology services	(634)	4,961	NM
Other, net	6,046	216	2,699.1%
Total revenues from Market Making	759,117	234,029	224.4%
Execution Services			
Trading income, net	(689)	355	NM
Interest and dividends income	320	878	(63.6)%
Commissions, net and technology services	148,370	140,159	5.9%
Other, net	75	78	(3.8)%
Total revenues from Execution Services	148,076	141,470	4.7%
Corporate			
Trading income, net	—	—	NM
Interest and dividends income	—	—	NM
Commissions, net and technology services	—	—	NM
Other, net	(1,290)	(398)	224.1
Total revenues from Corporate	(1,290)	(398)	224.1
Consolidated			
Trading income, net	743,996	205,923	261.3%
Interest and dividends income	9,340	24,162	(61.3)%
Commissions, net and technology services	147,736	145,120	1.8%
Other, net	4,831	(104)	NM
Total revenues	$ 905,903	$ 375,101	141.5%

Trading income, net. Trading income, net was primarily earned by our Market Making segment. Trading income, net increased $538.1 million, or 261.3%, to $744.0 million for the three months ended June 30, 2020, compared to $205.9 million for the three months ended June 30, 2019. The increase was primarily driven by the higher market volatility and trading volumes across global markets and major asset categories during the three months ended June 30, 2020 compared to the same period in 2019. Average daily realized volatility of the S&P 500 Index increased 178.7% compared to the prior year, while average daily U.S. equity consolidated volumes increased 78.1%. Rather than analyzing trading income, net, in isolation, we evaluate it in the broader context of our Adjusted Net Trading Income, together with Interest and dividends income, Interest and dividends expense, Commissions, net and technology services and Brokerage, exchange, clearance fees and payments for order flow, net, each of which is described below.

Interest and dividends income. Interest and dividends income was primarily earned by our Market Making segment. Interest and dividends income decreased $14.8 million, or 61.3%, to $9.3 million for the three months ended June 30, 2020, compared to $24.2 million for the three months ended June 30, 2019. This decrease was primarily attributable to the lower interest income earned on cash collateral posted as part of securities lending transactions driven by lower interest rates compared to the same period in 2019. As indicated above, rather than analyzing interest and dividends income in isolation, we 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 $2.6 million, or 1.8%, to $147.7 million for the three months ended June 30, 2020, compared to $145.1 million for the three months ended June 30, 2019. The increase was primarily driven by the higher market volatility and trading volumes compared to the same period in 2019.

Other, net. Other, net was $4.8 million for the three months ended June 30, 2020, compared to a loss of $(0.1) million for the three months ended June 30, 2019. The increase was primarily due to a $5.1 million gain recognized on the minority investment in SBI Japannext (see Note 10 "Financial Assets and Liabilities" of Part I Item 1 "Financial Statements" of this Quarterly Report on Form 10-Q for details on the SBI Investment).

Adjusted Net Trading Income

Adjusted Net Trading Income increased $429.8 million, or 179.9%, to $668.7 million for the three months ended June 30, 2020, compared to $238.9 million for the three months ended June 30, 2019. This increase was primarily attributable to higher Trading income, net in the Market Making segment driven by higher market volatility and trading volumes across major asset categories during the three months ended June 30, 2019 compared to the same period in 2019. In the Market Making segment, Global Equities increased by $366.5 million, or 340.8%, and Global FICC, Options and Other increased by $49.7 million, or 175.5%, for the three months ended June 30, 2020. Adjusted Net Trading Income per day increased $6.8 million, or 179.9%, to $10.6 million for the three months ended June 30, 2020, compared to $3.8 million for the three months ended June 30, 2019. There were 63 trading days for both the three months ended June 30, 2020 and 2019. 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 $59.7 million, or 13.5%, to $501.4 million for the three months ended June 30, 2020, compared to $441.7 million for the three months ended June 30, 2019. The increase in operating expenses is primarily due to an increase in brokerage, exchange, clearance fees and payments for order flow, net driven by higher market volatility and trading volumes partially offset by decreases in interest and dividends expense and other operating expenses described in more detail below.

Brokerage, exchange, clearance fees and payments for order flow, net. Brokerage exchange, clearance fees and payments for order flow, net, increased $104.0 million, or 104.6%, to $203.5 million for the three months ended June 30, 2020, compared to $99.5 million for the three months ended June 30, 2019. This increase was primarily attributable to the increase in volume we traded in Global Equities instruments and other asset categories. Within that, payments for order flow increased $77.4 million, or 327.6%, to $101.1 million for the three months ended June 30, 2020, compared to $23.6 million for the three months ended June 30, 2019. The increase was driven by the increases in volumes from our broker-dealer clients eligible for payments for order flow, driven by high participation of retail investors in the market during the past quarter. We evaluate this category representing direct costs associated with transacting business, in the broader context of our Adjusted Net Trading Income.

Communication and data processing. Communication and data processing expense increased $1.2 million, or 2.3%, to $55.7 million for the three months ended June 30, 2020, compared to $54.4 million for the three months ended June 30, 2019. This increase was primarily due to additional telecommunication and networking services from activating our back-up facilities and enabling the majority of our employees to work from home. 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 $37.2 million, or 44.5%, to $120.9 million for the three months ended June 30, 2020, compared to $83.7 million for the three months ended June 30, 2019. The increase in compensation levels was primarily attributable to increased incentive compensation, which is recorded at management’s discretion and is generally accrued in connection with the overall level of profitability. The increase reflected strong results for the quarter. We have capitalized and therefore excluded employee compensation and benefits related to software development of $11.7 million and $9.9 million for the three months ended June 30, 2020, and 2019, respectively.

Interest and dividends expense. Interest and dividends expense decreased $8.0 million, or 21.7%, to $28.8 million for the three months ended June 30, 2020, compared to $36.8 million for the three months ended June 30, 2019. This decrease was primarily attributable to lower interest expense incurred on cash collateral received as part of securities lending transactions. As indicated above, rather than analyzing interest and dividends expense in isolation, we evaluate it in the broader context of our Adjusted Net Trading Income.

Operations and administrative. Operations and administrative expense decreased $9.7 million, or 30.9%, to $21.7 million for the three months ended June 30, 2020, compared to $31.5 million for the three months ended June 30, 2019. This decrease was primarily attributable to decreases in travel and entertainment due to the on-going effects of the COVID-19 pandemic as well as the on-going efforts to consolidate office premises and professional services after the ITG Acquisition.

Depreciation and amortization. Depreciation and amortization increased $1.9 million, or 12.8%, to $16.7 million for the three months ended June 30, 2020, compared to $14.8 million for the three months ended June 30, 2019. This increase was primarily attributable to an increase in capital expenditures on telecommunication, networking and other assets.

Amortization of purchased intangibles and acquired capitalized software. Amortization of purchased intangibles and acquired capitalized software decreased $1.7 million, or 8.0%, to $19.0 million for the three months ended June 30, 2020, compared to $20.6 million for the three months ended June 30, 2019. This decrease was due to certain technology intangible assets acquired in connection with the KCG Acquisition being fully amortized.

Termination of office leases. There was no expense incurred related to termination of office leases for the three months ended June 30, 2020, compared to $65.2 million for the three months ended June 30, 2019. The decrease in termination of office leases was due to the impairment of operating lease right-of-use assets and leasehold improvements and fixed assets incurred in 2019 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. There was a $188.5 million prepayment made during the three months ended June 30, 2020; as such, debt issue costs incurred related to debt refinancing or prepayment were $13.2 million for the three months ended June 30, 2020. Debt issue costs related to debt refinancing and prepayment were $(1.3) million for the three months ended June 30, 2019.

Transaction advisory fees and expenses. Transaction advisory fees and expenses decreased $(1.7) million, or 95.2% to $0.1 million for the three months ended June 30, 2020, compared to $1.8 million during the three months ended June 30, 2019. The decrease was due to professional fees incurred in 2019 as a result of the ITG Acquisition.

Financing interest expense on long-term borrowings. Financing interest expense on long-term borrowings decreased $13.0 million, or 37.3%, to $21.7 million for the three months ended June 30, 2020, compared to $34.7 million for the three months ended June 30, 2019. This decrease was primarily attributable to the decrease in outstanding principal as a result of the prepayment on the First Lien Term Loan Facility.

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 was $69.3 million for the three months ended June 30, 2020, compared to $(11.1) million for the three months ended June 30, 2019. The change was primarily due to the income before income taxes and noncontrolling interest for the three months ended June 30, 2020, compared to a loss before income taxes and noncontrolling interest for the three months ended June 30, 2019.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Total Revenues

Our total revenues increased $1,171.0 million, or 159.2%, to $1,906.5 million for the six months ended June 30, 2020, compared to $735.5 million for the six months ended June 30, 2019. This increase was primarily attributable to an increase in Trading income, net, of $1,083.0 million, which was driven by higher market volatility and trading volumes during the first half of 2020 compared to 2019, from the impacts of COVID-19 and the governmental and other responses thereto. In addition, 2020 included the results of ITG for the full first quarter of 2020 compared to the results of ITG from the ITG Closing Date through June 30, 2019 in the prior year.

Though our total revenues increased during the period, Commissions, net and technology services within the Execution Services segment did not have the same relative increase in part because we selectively limited our client trading business during certain periods throughout the past six months due to the extraordinary volume and volatility during the period and the operational challenges caused directly or indirectly by COVID-19, including working remotely and increases in short term liquidity requirements.

The following table shows the total revenues by segment for the six months ended June 30, 2020 and 2019.

(in thousands, except for percentage)	Six Months Ended June 30, 2020	2019	% Change
Market Making			
Trading income, net	$ 1,547,347	$ 460,689	235.9%
Interest and dividends income	35,453	41,787	(15.2)%
Commissions, net and technology services	136	9,961	(98.6)%
Other, net	6,767	(163)	NM
Total revenues from Market Making	1,589,703	512,274	210.3%
Execution Services			
Trading income, net	(886)	2,774	NM
Interest and dividends income	403	11,506	(96.5)%
Commissions, net and technology services	318,345	210,306	51.4%
Other, net	79	(66)	NM
Total revenues from Execution Services	317,941	224,520	41.6%
Corporate			
Trading income, net	—	—	NM
Interest and dividends income	—	—	NM
Commissions, net and technology services	—	—	NM
Other, net	(1,120)	(1,261)	(11.2)%
Total revenues from Corporate	(1,120)	(1,261)	(11.2)%
Consolidated			
Trading income, net	1,546,461	463,463	233.7%
Interest and dividends income	35,856	53,293	(32.7)%
Commissions, net and technology services	318,481	220,267	44.6%
Other, net	5,726	(1,490)	NM
Total revenues	$ 1,906,524	$ 735,533	159.2%

Trading income, net. Trading income, net was primarily earned by our Market Making segment. Trading income, net, increased $1,083.0 million, or 233.7%, to $1,546.5 million for the six months ended June 30, 2020, compared to $463.5 million for the six months ended June 30, 2019. The increase was primarily driven by the higher market volatility and trading volumes across global markets and major asset categories during the six months ended June 30, 2020 compared to the same period in the prior year. Average daily realized volatility of the S&P 500 Index increased 253.2% compared to the prior year, while average daily U.S. equity consolidated volumes increased 61.3%. Rather than analyzing trading income, net, in isolation, we evaluate it in the broader context of our Adjusted Net Trading Income, together with Interest and dividends income, Interest and dividends expense, Commissions, net and technology services and Brokerage, exchange, clearance fees and payments for order flow, 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 decreased $17.4 million, or 32.7%, to $35.9 million for the six months ended June 30, 2020, compared to $53.3 million for the six months ended June 30, 2019. This decrease was primarily attributable to lower interest income earned on cash collateral posted as part of securities loaned transactions driven by lower interest rates compared to the prior period. As indicated above, rather than analyzing interest and dividends income in isolation, we 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 $98.2 million, or 44.6%, to $318.5 million for the six months ended June 30, 2020, compared to $220.3 million for the six months ended June 30, 2019. The increase was primarily attributable to the higher market volatility and trading volumes across major asset categories during the six months ended June 30, 2020 compared to the prior period, as well as the results of ITG for the full first quarter of 2020 compared to the results of ITG from the ITG Closing Date through March 31, 2019 in the prior period. The ITG Acquisition brought recurring connectivity revenues generated from workflow technology and subscription revenues from analytics services to Commissions, net and technology services.

Other, net. Other, net increased $7.2 million, or 484.3%, to $5.7 million for the six months ended June 30, 2020, compared to $(1.5) million for the six months ended June 30, 2019. The increase was primarily due to a $5.1 million gain recognized on the minority investment in SBI Japannext (see Note 10 "Financial Assets and Liabilities" of Part I Item 1 "Financial Statements" of this Quarterly Report on Form 10-Q for details on the SBI Investment).

Adjusted Net Trading Income

Adjusted Net Trading Income increased $985.5 million, or 210.7%, to $1,453.2 million for the six months ended June 30, 2020, compared to $467.7 million for the six months ended June 30, 2019. This increase was primarily attributable to higher Trading income, net, driven by higher market volatility and trading volumes across major asset categories during the six months ended June 30, 2020 compared to the prior period. [Average daily realized volatility of the S&P 500 Index and average daily CVIX realized volatility increased 314.8% and 237.0%, respectively, compared to the prior period, while average daily U.S. equity consolidated volumes increased 50.5%.] There was also an increase in Commissions, net and technology services as a result of higher market volatility and trading volumes across major asset categories, and the ITG Acquisition. There were increases in Trading income, net in Global Equities of $798.6 million, and in Global FICC, Options and Other of $94.2 million, from the Market Making segment. There was also an increase of $92.7 million, or 59.3%, in the Execution Services segment. Adjusted Net Trading Income per day increased $7.9 million, or 210.8%, to $11.6 million for the six months ended June 30, 2020, compared to $3.7 million for the six months ended June 30, 2019. The number of trading days was 125 for both the six months ended June 30, 2020 and 2019, 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 $217.4 million, or 26.6%, to $1,035.8 million for the six months ended June 30, 2020, compared to $818.3 million for the six months ended June 30, 2019. The increase in operating expenses was primarily due to higher trading related expenses as a result of the increases in volumes traded during the six months ended June 30, 2020 compared to the prior period. Additionally, the results of ITG for the full first quarter of 2020 compared to the one-month results of ITG from the ITG Closing Date through March 31, 2019 in the prior period caused an overall increase in expenses in multiple expense categories as described in more detail below.

Brokerage, exchange, clearance fees and payments for order flow, net. Brokerage, exchange, clearance fees and payments for order flow, net, increased $190.2 million, or 101.7%, to $377.3 million for the six months ended June 30, 2020, compared to $187.1 million for the six months ended June 30, 2019. This increase was primarily attributable to an increase in volume we traded in Global Equities instruments and other asset categories. Within that, payments for order flow increased $116.1 million, or 246.1%, to $163.3 million for the six months ended June 30, 2020, compared to $47.2 million for the six months ended June 30, 2019. The increase was primarily attributable to the increase in volumes from our broker-dealer clients eligible for payments for order flow, driven by high participation of retail investors in the market during the past six months compared to the prior year. We evaluate this category, representing direct costs associated with transacting our business in the broader context of our Adjusted Net Trading Income.

Communication and data processing. Communication and data processing expense increased $14.5 million, or 15.0%, to $110.7 million for the six months ended June 30, 2020, compared to $96.2 million for the six months ended June 30, 2019. This increase was primarily due to the additional connectivity and market data service subscriptions acquired as part of the ITG Acquisition and for additional telecommunication and networking services from activating our back-up facilities and enabling the majority of our employees to work from home. 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 $99.8 million, or 52.1%, to $291.3 million for the six months ended June 30, 2020, compared to $191.5 million for the six months ended June 30, 2019. The increase in compensation levels was primarily attributable to increased incentive compensation, which is recorded at management’s discretion and is generally accrued in connection with the overall level of profitability. Furthermore, we incurred additional compensation expense as a result of one-time cash bonuses awarded to certain employees to mitigate the effects of the COVID-19 pandemic. We have capitalized and therefore excluded employee compensation and benefits related to software development of $19.5 million and $16.7 million for the six months ended June 30, 2020 and 2019, respectively.

Interest and dividends expense. Interest and dividends expense decreased $11.9 million, or 14.5%, to $70.3 million for the six months ended June 30, 2020, compared to $82.2 million for the six months ended June 30, 2019. This decrease was primarily attributable to lower interest expense incurred on cash collateral received as part of securities lending transactions. As indicated above, rather than analyzing interest and dividends expense in isolation, we generally evaluate it in the broader context of our Adjusted Net Trading Income.

Operations and administrative. Operations and administrative expense decreased $2.1 million, or 4.1%, to $48.9 million for the six months ended June 30, 2020, compared to $51.0 million for the six months ended June 30, 2019. The decrease was primarily attributable to decreases in travel and entertainment due to the on-going effects of the COVID-19 pandemic as well the on-going efforts to consolidate office premises and professional services after the ITG Acquisition.

Depreciation and amortization. Depreciation and amortization increased $2.8 million, or 9.0%, to $34.1 million for the six months ended June 30, 2020, compared to $31.3 million for the six months ended June 30, 2019. This increase was primarily attributable to an increase in capital expenditures on telecommunication, networking and other assets.

Amortization of purchased intangibles and acquired capitalized software. Amortization of purchased intangibles and acquired capitalized software increased $6.4 million, or 20.2%, to $37.9 million for the six months ended June 30, 2020, compared to $31.5 million for the six months ended June 30, 2019. 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 was $0.3 million for the six months ended June 30, 2020, compared to $65.2 million for the six months ended June 30, 2019. The decrease in termination of office leases was due to the impairment of operating lease right-of-use asset and leasehold improvements and fixed assets incurred in 2019 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, prepayment and commitment fees. Expense from debt issue costs related to debt refinancing, prepayment and commitment fees increased $9.5 million, or 120.0%, to $17.4 million for the six months ended June 30, 2020, compared to $7.9 million for the six months ended June 30, 2019. This was primarily driven by a $188.5 million prepayment made during the six months ended June 30, 2020. The higher amount for the six months ended June 30, 2019 mainly reflects costs incurred related to the termination of the Existing Term Loan Facility (as defined below) in the first quarter of 2019.

Transaction advisory fees and expenses. Transaction advisory fees and expenses decreased $16.6 million, or 98.4%, to $0.3 million for the six months ended June 30, 2020, compared to $16.9 million for the six months ended June 30, 2019. The decrease was primarily attributable to the ITG Acquisition, for which we incurred significant transaction advisory fees during the first half of 2019. The decrease was partially offset by increases related to the Founder Member Loan Facility, and certain other borrowing arrangements, which we undertook to increase our available short term liquidity in response to the extraordinary volume and volatility environment during the quarter, driven largely by COVID-19 and responses.

Financing interest expense on long term borrowings. Financing interest expense on long-term borrowings decreased $10.1 million, or 17.5%, to $47.4 million for the six months ended June 30, 2020, compared to $57.5 million for the six months ended June 30, 2019. This decrease was primarily attributable to the decrease in outstanding principal as a result of the First Lien Term Loan Facility and the Incremental Term Loans as discussed in Note 9 "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 income taxes was $147.2 million for the six months ended June 30, 2020, compared to a benefit from income taxes of $(13.7) million for the six months ended June 30, 2019. The change was primarily due to the income before income taxes and noncontrolling interest for the six months ended June 30, 2020, compared to a loss before taxes during the prior year period.

Liquidity and Capital Resources

General

As of June 30, 2020, we had $670.8 million in Cash and cash equivalents. This balance is 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, 2020, we had borrowings under our prime brokerage credit facilities of approximately $112.4 million, no borrowing outstanding under our broker dealer facilities, short-term bank overdrafts of $26.3 million, and long-term debt outstanding in an aggregate principal amount of approximately $1,768.9 million. As of June 30, 2020, our regulatory capital requirements for domestic U.S. broker-dealer subsidiaries were $6.4 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 brokers. For purposes of providing additional liquidity, we maintain a committed credit facility and an uncommitted credit facility for our wholly-owned broker-dealer subsidiaries, as discussed in Note 9 “Borrowings” of Part I Item 1 “Financial Statements” of this Quarterly Report on Form 10-Q.

As a result of the substantially elevated volume and volatility environment during the quarter attributable largely to the COVID-19 pandemic and governmental and other responses thereto, our trading activities both in our market making segment and in our execution services segment increased materially relative to the equivalent period in the prior year. This increase in our activity and our customers’ activity together with the extraordinary volatility during certain periods within the quarter has driven our short-term liquidity needs significantly higher as compared to prior periods, though these levels declined meaningfully during the quarter relative to their peaks in the first quarter of 2020. In order to manage these increased daily funding obligations, we have taken steps to increase available short-term liquidity and to reduce our short term funding requirements. Increases to our available short-term liquidity included entering into the Founder Member Loan Facility (as defined below), the Demand Loan (as defined below, which was fully repaid during the quarter) and certain changes to the Committed Broker Dealer Facility, each of which are described in further detail below as well as in Note 9 “Borrowings” of Part I Item 1 “Financial Statements” of this Quarterly Report on Form 10-Q. Steps taken to reduce our short-term funding requirements have included arranging for select clients trades to be cleared by another large financial institution, reducing limits on daily client trading activity on a client-by-client basis and selectively reducing our market making activities in certain asset classes or products.

Based on our current level of operations and following the steps taken as detailed above, 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 plan to 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 do not believe that the impacts of COVID-19 or the governmental and other responses thereto to date have adversely impacted our long term financial condition or long term capital requirements.

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 equity holders of Virtu Financial that are generally equal to 85% of the applicable cash tax savings, if any, that we realize as a result of favorable tax attributes that are available to us as a result of the Reorganization Transactions, for exchanges of membership interests for Class A Common Stock or Class B Common Stock and payments made under the tax receivable agreements. We will retain the remaining 15% of any such cash tax savings. We expect that future payments to certain direct or indirect equity holders of Virtu Financial described in Note 5 “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 $3.3 million to $20.7 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, our second payment of $12.4 million in September 2018, and our third payment of $13.3 million in March 2020. 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 equity holders 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 Amended Credit Agreement 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 Americas LLC, Virtu ITG LLC, and Virtu Alternet Securities LLC are registered U.S. broker-dealers, and their primary regulators include the SEC and 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 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. Virtu ITG UK Limited is regulated by the Financial Conduct Authority in the United Kingdom and is 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 19 “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.

Broker Dealer Credit Facilities, Short-Term Bank Loans, and Prime Brokerage Credit Facilities

We maintain various broker-dealer facilities and short-term credit facilities as part of our daily trading operations. See Note 9 “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, 2020, there was no outstanding principal balance on our broker-dealer facilities 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 $112.4 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.

On March 10, 2020, a broker-dealer subsidiary of the Company entered into a short term loan arrangement with Jefferies Financial Group, Inc., as lender, for a $20 million demand loan (the "Demand Loan") repayable no later than ninety (90) days after the date of borrowing. The Demand Loan bears interest at a rate of 10% per annum, increased by 2.0% with respect to any principal amounts not paid when due and owing. If an event of default occurs and is continuing, the lender may declare all loans immediately due and payable. The Demand Loan was repaid in full as of April 17, 2020.

On March 20, 2020, a broker-dealer subsidiary of the Company entered into a Loan Agreement (the “Founder Member Loan Facility”) with TJMT Holdings LLC (the “Founder Member”), as lender and administrative agent, providing for unsecured term loans from time to time (the “Founder Member Loans”) in an aggregate original principal amount not to exceed $300 million. The Founder Member Loans may be borrowed in one or more borrowings on or after March 20, 2020 and prior to September 20, 2020, as further described below. The Borrower intends use the proceeds of the Founder Member Loans solely to finance the purchase and settlement of securities and to fund margin deposits with the National Securities Clearing Corporation and Options Clearing Corporation. The Founder Member is an affiliate of Mr. Vincent Viola, the Company’s founder and Chairman Emeritus. Upon the execution of and in consideration for the Lender’s commitments under the Loan Agreement, the Company delivered to the Founder Member a warrant to purchase shares of the Company’s Class A Common Stock, as described below. The interest rate for the Founder Member Loans, to the extent drawn and outstanding, will be 8.0% per annum, and the Founder Member Loans will be due on September 20, 2020. If an event of default occurs and is continuing, the Lender may increase the interest rate 2.0% above what would otherwise be applicable on overdue amounts, and declare all Founder Member Loans immediately due and payable. The Borrower may prepay the Founder Member Loans in whole or in part at any time without penalty.

On March 20, 2020, in connection with and in consideration of the Founder Member’s commitments under the Founder Member Loan Facility, the Company delivered to the Founder Member a warrant (the “Warrant”) to purchase shares of the Company’s Class A Common Stock. Pursuant to the Warrant, the Founder Member may purchase up to 3,000,000 shares of Class A Common Stock, which number of shares will be increased to 10,000,000 if, at any time during the term of the Founder Member Facility, Founder Member Loans equal to or greater than $100 million remain outstanding for a certain period of time specified in the Warrant. The exercise price per share of the Class A Common Stock issuable pursuant to the Warrant is $22.98, which in accordance with the terms of the Warrant, is the average of the volume weighted average prices of the Class A Common Stock for the ten (10) trading days following May 7, 2020, the date on which the Company publicly announced its earnings results for the first quarter of 2020. The Warrant may be exercised on or after May 22, 2020, the eleventh (11th) trading day following the date on which the Company publicly announced its earnings results for the first quarter of 2020, up to and including January 15, 2022. The Warrant and Class A Common Stock issuable pursuant to the Warrant were offered, and will be issued and sold, in reliance on the exemption from the registration requirements of the Securities Act, set forth under Section 4(a)(2) of the Securities Act relating to sales by an issuer not involving any public offering.

The foregoing descriptions of the Founder Member Loan Facility and the Warrant do not purport to be complete and are qualified in its entirety by reference to the complete text of the Founder Member Loan Facility and the Warrant, which are filed as exhibits to the Company's quarterly report on Form 10-Q for the period ending March 31, 2020, filed with the Securities and Exchange Commission on May 11, 2020.

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 provided (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.

On October 9, 2019 (the "Amendment No. 1 Closing Date"), VFH entered into Amendment No. 1 ("Amendment No. 1"), which amended the Credit Agreement dated as of March 1, 2019, by and among VFH, Virtu Financial, the lenders party thereto, and Jefferies Finance, LLC, as administrative agent and collateral agent, to, among other things, provide for $525.0 million in aggregate principal amount of incremental term loans (the "Incremental Term Loans"), and amend the related collateral agreement. On the Amendment No. 1 Closing Date, VFH borrowed the Incremental Term Loans and used the proceeds together with available cash to redeem all of the $500.0 million aggregate principal amount of the outstanding 6.750% Senior Secured Second Lien Notes (as defined below) due 2022 issued by VFH and Orchestra Co Issuer, Inc., a Delaware corporation and indirect subsidiary of the Company (together with VFH, the "Issuers"), and pay related fees and expenses. The terms, conditions and covenants applicable to the Incremental Term Loans are the same as the terms, conditions and covenants applicable to the existing term loans under the Credit Agreement, including a maturity date of March 1, 2026.

On March 2, 2020 (the "Amendment No. 2 Closing Date"), VFH entered into Amendment No. 2 ("Amendment No. 2"), which further amended the Credit Agreement (as amended by Amendment No. 1 and Amendment No. 2, the "Amended Credit Agreement") to, among other things, reduce the interest rate spread over adjusted LIBOR or the alternate base rate by 0.50% per annum and eliminated any stepdown in the spread based on VFH's first lien leverage ratio. The term loan borrowings and revolver borrowings under the Amended Credit Agreement 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 0.50%, (c) an adjusted LIBOR rate for a Eurodollar borrowing with an interest period of one month plus 1.00% and (d) 1.00%, plus, in each case, 2.00%, or (ii) the greater of (x) an adjusted LIBOR rate for the interest period in effect and (y) 0%, plus, in each case, 3.00%. 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.

On January 29, 2020, the Company entered into a five-year $1,000 million floating-to-fixed interest rate swap agreement. The Company also previously entered into a five-year $525 million floating-to-fixed interest rate swap agreement.
As these two interest rate swaps meet the criteria to be considered qualifying cash flow hedges under ASC 815, they effectively fix interest payment obligations on $1,000 million and $525.0 million of principal under the First Lien Term Loan Facility at rates of 4.4% and 4.3% through January 2025 and September 2024, respectively, based on the interest rates set forth in the Amended Credit Agreement.

The First Lien Revolving Facility under the Amended 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 if usage of the aggregate revolving commitments exceeds a specified level 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 domestic restricted subsidiaries and secured by substantially all of the assets of VFH and the guarantors, in each case, subject to certain exceptions.

Under the Amended Credit Agreement, term loans will mature on March 1, 2026. 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.

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

We were in compliance with all applicable covenants under the Amended Credit Agreement as of June 30, 2020.

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, 2020 and 2019.

	Six Months Ended June 30,	
Net cash provided by (used in):	**2020**	**2019**
Operating activities	$ 499,277	$ (377,325)
Investing activities	(36,693)	(864,384)
Financing activities	(483,897)	1,005,614
Effect of exchange rate changes on cash and cash equivalents	(3,952)	(2,391)
Net increase (decrease) in cash and cash equivalents	$ (25,265)	$ (238,486)

Operating Activities

Net cash provided by operating activities was $499.3 million for the six months ended June 30, 2020, compared to net cash used in operating activities of $377.3 million for the six months ended June 30, 2019. The increase in net cash provided by operating activities was primarily attributable to increases in trading income, net for the six months ended June 30, 2020 compared to the prior period.

Investing Activities

Net cash used in investing activities was $36.7 million for the six months ended June 30, 2020, compared to net cash used in investing activities of $864.4 million for the six months ended June 30, 2019. The decrease in cash used in investing activities for the six months ended June 30, 2020 was primarily attributable to the $835.6 million cash used for the ITG Acquisition on the ITG Closing Date during the same period of 2019. See Note 3 "ITG Acquisition" of Part I Item 1 "Financial Statements" of this Quarterly Report on Form 10-Q.

Financing Activities

Net cash used in financing activities was $483.9 million for the six months ended June 30, 2020, while net cash provided by financing activities was $1,005.6 million for the six months ended June 30, 2019. The cash used in financing activities for the six months ended June 30, 2020 was primarily attributable to a $188.6 million prepayment on our long-term borrowings and by distributions made to noncontrolling interests of $164.4 million. The cash provided by financing activities of $1,005.6 million during the same period of 2019 reflect net proceeds from long-term borrowings associated with our entering into the Credit Agreement on the ITG Closing Date, as described above.

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 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 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, 2020, 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, 2020, and December 31, 2019, or on our results of operations and cash flows for the three and six months ended June 30, 2020 and 2019.

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 10 “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 to the service provider.

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.

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 assumed pursuant to the Amended and Restated ITG 2007 Equity Plan, were in the form of stock options, Class A Common Stock, restricted stock awards ("RSAs") 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. With respect to the RSUs, we account for forfeitures as they occur. The fair value of RSAs is determined based on the closing price as of the date of grant. 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, or, in the case of RSAs subject to performance conditions, from the date that achievement becomes probable through the remainder of 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, 2019, 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.

Our customer market making activities involve the taking of 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. Market risk was elevated during the period, largely as a result of the COVID-19 pandemic and the governmental and other responses thereto.

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, 2020 and December 31, 2019 was $2.6 billion and $2.8 billion, respectively, in long positions and $2.8 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 carry our trading 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.

We also use derivative instruments for risk management purposes, including cash flow hedges used to manage interest rate risk on long-term borrowings and net investment hedges used to manage foreign exchange risk. We have entered into floating-to-fixed interest rate swap agreements in order to manage interest rate risk associated with our long-term debt obligations. Additionally, we may seek to reduce the impact of fluctuations in foreign exchange rates on our net investment in certain non-U.S. operations through the use of foreign currency forward contracts. For interest rate swap agreements and foreign currency forward contracts designated as hedges, we assess our 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 interest rate swaps or forward contracts. For instruments that meet the criteria to be considered hedging instruments under ASC 815, any gains or losses, to the extent effective, are included in Accumulated other comprehensive income on the Condensed Consolidated Statements of Financial Condition and Other comprehensive income on the Condensed Consolidated Statements of Comprehensive Income. The ineffective portion, if any, is recorded in Other, net on the Condensed Consolidated Statements of Comprehensive Income.

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 15.3% and 27.8% of our revenues for the three months ended June 30, 2020 and 2019, respectively, and approximately 18.1% and 23.9% of our total revenues for the six months ended June 30, 2020 and 2019, respectively, were denominated in non-U.S. Dollar currencies. We estimate that a hypothetical 10% adverse change in the value of the U.S. dollar relative to our foreign denominated earnings would have resulted in decreases in revenues of $13.8 million and $10.4 million for the three months ended June 30, 2020 and 2019, respectively, and $34.6 million and $17.6 million for the six months ended June 30, 2020 and 2019, 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 Condensed Consolidated Statements of Changes in Equity. Our primary currency translation exposures historically relate to net investments in subsidiaries having functional currencies denominated in the Euro, Pound Sterling, and Canadian dollar.

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, swaps, 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 Condensed Consolidated 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, 2020. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of June 30, 2020, 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, 2020 that has or is reasonably likely to materially affect, our internal control over financial reporting.

PART II

ITEM 1. LEGAL PROCEEDINGS

The information required by this item is set forth in the “Legal Proceedings” section in Note 14 “Commitments, Contingencies and Guarantees” to the Company’s condensed consolidated financial statements included in Part I Item 1 “Financial Statements”, 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 2019 Form 10-K, except for the following:

The effects of the outbreak of the novel coronavirus (COVID-19) have negatively affected the global economy, the United States economy and the global financial markets, and may disrupt our operations and our clients' operations, which could have an adverse effect on our business, financial condition and results of operations.

The ongoing COVID-19 global and national health emergency has caused significant disruption in the international and United States economies and financial markets. On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a pandemic. The spread of COVID-19 has caused, among other matters, illness, death, quarantines, cancellation of events and travel, business and school shutdowns, reduction in business activity and financial transactions, labor shortages, supply chain interruptions and overall economic and financial market instability. The United States now has the world’s most reported COVID-19 cases, and all 50 states and the District of Columbia have reported cases of infected individuals. Similar impacts have been experienced in every country in which we do business. The full impact this virus may have on the global financial markets and the overall economy is not currently known. Impacts to our business could be widespread and global, and material impacts may be possible, including the following:

- Employees, including our senior executives, contracting COVID-19;
- Reductions in our operating effectiveness or efficiency as a significant number of our employees currently work from home and potential disruptions or adverse impacts as and when we implement a return to work policy for certain employees;
- Unprecedented volatility in global financial markets, which may increase the risk or potential magnitude of operational errors;
- Increases in liquidity needs, including but not limited to margin funding requirements with clearinghouses or prime brokers, for our business and challenges obtaining sufficient liquidity sources to meet such needs or requirements;
- Adverse impacts on our clients, counterparties, vendors and other business partners on whom we rely for order flow, funding, and critical technological or operational services and the potential increase in risk of counterparty default or insolvency event;
- Closures of our offices or the offices of our clients; and
- Travel restrictions limiting our ability to collaborate internally and engage with current and potential clients and counterparties externally.

We are taking precautions to protect the safety and well-being of our employees, customers and business partners. However, we cannot be certain that the steps we have taken or will take will be deemed to be adequate or appropriate, nor can we predict the level of disruption which will occur to our employee's ability to perform their functions.

The further spread of the COVID-19 outbreak may materially disrupt financial activity generally and in the areas in which we operate. This could result in a decline in demand for our products and services, which would negatively impact our liquidity position and our results. Any one or more of these developments could have a material adverse effect on our and our consolidated subsidiaries' business, operations, consolidated financial condition, and consolidated results of operations.

Significant market volatility relating to the outbreak of the novel coronavirus (COVID-19) has significantly increased and could in the future significantly increase our liquidity needs, which could impact our business, financial condition and results of operations if we face challenges in obtaining liquidity.

The COVID-19 pandemic and governmental and other responses thereto has caused and may continue to cause substantially elevated volume and volatility, which has and may continue to result in material increases in our trading activities both in our market making segment and in our execution services segment. This increase in our activity and our customers' activity together with the extraordinary volatility has resulted in, and may continue to result in, significantly increased margin
requirements with the National Securities Clearing Corporation ("NSCC"), the Options Clearing Corporation ("OCC"), as well as certain prime brokers, clearing brokers, and other counterparties. In order to manage these increased daily funding obligations, we have taken and may continue to have to take measures to increase available short-term liquidity and to reduce our short term funding requirements, which may require us to depend on additional sources of liquidity and upon the availability of third parties for services such as trade clearing, and has required and may continue to require us to limit certain of our activities in certain asset classes or products. If such sources of short-term liquidity or third-party services are not available, or if we encounter challenges obtaining such short-term liquidity or third-party services on terms favorable to us or at all, then our business, financial condition and results of operations may be adversely impacted.

In response to the effects of the outbreak of the novel coronavirus (COVID-19) and in accordance with applicable governmental orders and the guidelines of the Center for Disease Control (CDC), we have implemented our business continuity plan (BCP), which may disrupt or negatively impact our business.

As of June 30, 2020, under our BCP a significant majority of our global work force was working remotely, which may increase various risks to our business. These include the risks associated with a computer systems and software failure, cyber risks, capacity constraints, malfunctions and delays. Risks associated with trading operations, financial reporting, internal controls and other key functions and responsibilities may also be elevated, as employees rely on critical technologies to communicate and collaborate and perform core functions remotely. The risk of further disruption or adverse impact may also be heightened as and when governmental orders are lifted or relaxed and we begin to reintegrate our personnel and business into our office locations pursuant to our return to office policy.

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.

Total share repurchases for the three months ended June 30, 2020 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
April 1, 2020 - April 30, 2020				
Class A Common Stock / Virtu Financial Units repurchases	1,668	21.93	N/A	N/A
May 1, 2020 - May 31, 2020				
Class A Common Stock / Virtu Financial Units repurchases	4,119	23.57	N/A	N/A
June 1, 2020 - June 30, 2020				
Class A Common Stock / Virtu Financial Units repurchases	2,940	22.96	N/A	N/A
Total Common Stock / Virtu Financial Unit repurchases	8,727	$ 23.05	—	$—

(1) Comprises the repurchase of 8,727 shares from employees in order to satisfy statutory tax withholding requirements upon the net settlement of equity awards for the three months ended June 30, 2020.

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†	Employment Agreement, dated as of April 30, 2020, by and between Virtu Financial Operating LLC and Joseph Molluso (incorporated herein by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q (File No. 001- 37352) filed on May 11, 2020).
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
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Filed herewith.
† Management contract or compensatory plan or arrangement.

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 7, 2020	By:	/s/ Douglas A. Cifu
			Douglas A. Cifu
			Chief Executive Officer
DATE:	August 7, 2020	By:	/s/ Alex Ioffe
			Alex Ioffe
			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, 2020 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 7, 2020

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, Alex Ioffe, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ending June 30, 2020 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 7, 2020

By: /s/ Alex Ioffe

Alex Ioffe
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 on Form 10-Q of Virtu Financial, Inc. (the “Company”) for the period ended June 30, 2020 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 7, 2020

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 on Form 10-Q of Virtu Financial, Inc. (the “Company”) for the period ended June 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Alex Ioffe, 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/ Alex Ioffe

Alex Ioffe
Chief Financial Officer

Date: August 7, 2020