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, 2022

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.)

1633 Broadway	
New York, New York	**10019**
(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 2, 2022
Class A common stock, par value $0.00001 per share	103,041,858
Class C common stock, par value $0.00001 per share	9,030,066
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, 2022

PART I

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, 2022	December 31, 2021
Assets		
Cash and cash equivalents	$ 810,649	$ 1,071,463
Cash restricted or segregated under regulations and other	39,121	49,490
Securities borrowed	1,369,616	1,349,322
Securities purchased under agreements to resell	122,766	119,453
Receivables from broker-dealers and clearing organizations	1,419,628	1,026,807
Trading assets, at fair value:		
Financial instruments owned	4,101,897	3,238,995
Financial instruments owned and pledged	1,078,824	1,017,960
Receivables from customers	226,933	146,476
Property, equipment and capitalized software (net of accumulated depreciation of $496,229 and $472,155 as of June 30, 2022 and December 31, 2021, respectively)	86,056	89,595
Operating lease right-of-use assets	208,476	225,328
Goodwill	1,148,926	1,148,926
Intangibles (net of accumulated amortization of $285,918 and $253,161 as of June 30, 2022 and December 31, 2021, respectively)	353,575	386,332
Deferred tax assets	141,922	158,518
Other assets ($80,143 and $84,378, at fair value, as of June 30, 2022 and December 31, 2021, respectively)	307,225	291,306
Total assets	$ 11,415,614	$ 10,319,971
Liabilities and equity		
Liabilities		
Short-term borrowings	$ 157,114	$ 61,510
Securities loaned	1,049,609	1,142,048
Securities sold under agreements to repurchase	501,193	514,325
Payables to broker-dealers and clearing organizations	704,897	571,526
Payables to customers	106,969	54,999
Trading liabilities, at fair value:		
Financial instruments sold, not yet purchased	4,471,229	3,510,779
Tax receivable agreement obligations	237,938	259,282
Deferred tax liabilities	73	65
Accounts payable, accrued expenses and other liabilities	396,128	457,942
Operating lease liabilities	257,673	278,745
Long-term borrowings	1,792,383	1,605,132
Total liabilities	9,675,206	8,456,353
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 — 132,915,640 and 131,497,645 shares, Outstanding — 103,917,477 and 113,170,782 shares at June 30, 2022 and December 31, 2021, 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, 2022 and December 31, 2021, respectively	—	—
Class C common stock (par value $0.00001), Authorized — 90,000,000 and 90,000,000 shares, Issued and Outstanding — 9,030,066 and 9,359,065 shares at June 30, 2022 and December 31, 2021, 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, 2022 and December 31, 2021, respectively	1	1
Treasury stock, at cost, 28,998,163 and 18,326,863 shares at June 30, 2022 and December 31, 2021, respectively	(828,772)	(494,075)
Additional paid-in capital	1,256,760	1,223,119
Retained earnings (accumulated deficit)	956,487	830,538
Accumulated other comprehensive income (loss)	13,826	(10,196)
Total Virtu Financial Inc. stockholders' equity	1,398,303	1,549,388
Noncontrolling interest	342,105	314,230

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

(in thousands, except share data)	June 30, 2022	December 31, 2021
Total equity	1,740,408	1,863,618
Total liabilities and equity	$ 11,415,614	$ 10,319,971

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

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

(in thousands, except share and per share data)	Three Months Ended June 30, 2022	Three Months Ended June 30, 2021	Six Months Ended June 30, 2022	Six Months Ended June 30, 2021
Revenues:				
Trading income, net	$ 395,928	$ 384,832	$ 918,235	$ 1,197,576
Interest and dividends income	30,792	9,545	51,804	16,541
Commissions, net and technology services	136,340	143,115	290,995	334,764
Other, net	41,678	11,473	44,966	12,656
Total revenue	604,738	548,965	1,306,000	1,561,537
Operating Expenses:				
Brokerage, exchange, clearance fees and payments for order flow, net	156,986	170,691	307,366	430,023
Communication and data processing	55,699	52,507	111,534	104,197
Employee compensation and payroll taxes	98,604	83,849	202,084	188,620
Interest and dividends expense	48,716	24,971	91,254	48,999
Operations and administrative	13,577	21,753	38,792	47,408
Depreciation and amortization	16,334	16,349	33,812	33,127
Amortization of purchased intangibles and acquired capitalized software	16,277	18,077	32,757	36,154
Termination of office leases	677	3,667	1,384	4,888
Debt issue cost related to debt refinancing, prepayment and commitment fees	1,437	1,989	27,121	3,744
Transaction advisory fees and expenses	558	(3)	980	(17)
Financing interest expense on long-term borrowings	22,089	20,113	43,422	39,605
Total operating expenses	430,954	413,963	890,506	936,748
Income before income taxes and noncontrolling interest	173,784	135,002	415,494	624,789
Provision for income taxes	24,888	26,095	66,674	106,650
Net income	148,896	108,907	348,820	518,139
Noncontrolling interest	(63,729)	(45,997)	(151,397)	(215,824)
Net income available for common stockholders	$ 85,167	$ 62,910	$ 197,423	$ 302,315
Earnings per share				
Basic	$ 0.78	$ 0.51	$ 1.78	$ 2.43
Diluted	$ 0.78	$ 0.50	$ 1.77	$ 2.41
Weighted average common shares outstanding				
Basic	104,960,826	119,681,845	107,133,079	120,865,624
Diluted	105,478,278	121,181,392	107,759,784	122,279,261
Net income	$ 148,896	$ 108,907	$ 348,820	$ 518,139
Other comprehensive income				
Foreign exchange translation adjustment, net of taxes	(19,810)	66	(24,978)	(3,610)
Net change in unrealized cash flow hedges gain (loss), net of taxes	14,062	(7,206)	61,935	14,700
Comprehensive income	143,148	101,767	385,777	529,229
Less: Comprehensive income attributable to noncontrolling interest	(60,173)	(42,929)	(164,332)	(220,545)
Comprehensive income attributable to common stockholders	$ 82,975	$ 58,838	$ 221,445	$ 308,684

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

Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Changes in Equity (Unaudited)
Three and Six months ended June 30, 2022, and 2021

(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	Noncontrolling Interest	Total Equity
	Shares	Amounts	Shares	Amounts	Shares	Amounts	Shares	Amounts	Amounts					
Balance at December 31, 2021	131,497,645	$ 1	9,359,065	$ —	60,091,740	$ 1	(18,326,863)	$ (494,075)	$ 1,223,119	$ 830,538	$ (10,196)	$ 1,549,388	$ 314,230	$ 1,863,618
Share based compensation	1,669,030	—	—	—	—	—	—	—	27,377	—	—	27,377	—	27,377
Repurchase of Class C common stock	—	—	(234,269)	—	—	—	—	—	(8,204)	—	—	(8,204)	—	(8,204)
Treasury stock purchases	(612,844)	—	—	—	—	—	(8,908,544)	(287,211)	—	(18,354)	—	(305,565)	—	(305,565)
Stock options exercised	246,879	—	—	—	—	—	—	—	4,691	—	—	4,691	—	4,691
Net income	—	—	—	—	—	—	—	—	—	112,257	—	112,257	87,668	199,925
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	(3,172)	(3,172)	(1,996)	(5,168)
Net change in unrealized cash flow hedges gains	—	—	—	—	—	—	—	—	—	—	29,387	29,387	18,486	47,873
Dividends ($0.24 per share of Class A common stock and participating Restricted Stock Unit and Restricted Stock Awards) and distributions from Virtu Financial to noncontrolling interest	—	—	—	—	—	—	—	—	—	(27,054)	—	(27,054)	(98,751)	(125,805)
Issuance of common stock in connection with employee exchanges	71,641	—	—	—	—	—	—	—	—	—	—	—	—	—
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(71,641)	—	—	—	—	—	—	—	—	—	—	—
Balance at March 31, 2022	132,872,351	$ 1	9,053,155	$ —	60,091,740	$ 1	(27,235,407)	$ (781,286)	$ 1,246,983	$ 897,387	$ 16,019	$ 1,379,105	$ 319,637	$ 1,698,742
Share based compensation	—	—	—	—	—	—	—	—	9,411	—	—	9,411	—	9,411
Repurchase of Class C common stock	—	—	(1,800)	—	—	—	—	—	(52)	—	—	(52)	—	(52)
Treasury stock purchases	—	—	—	—	—	—	(1,762,756)	(47,486)		—	—	(47,486)	—	(47,486)
Stock options exercised	22,000	—	—	—	—	—	—	—	418	—	—	418	—	418
Net income	—	—	—	—	—	—	—	—	—	85,167	—	85,167	63,729	148,896
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	(10,773)	(10,773)	(9,037)	(19,810)
Net change in unrealized cash flow hedges gains	—	—	—	—	—	—	—	—	—	—	8,580	8,580	5,482	14,062
Dividends ($0.24 per share of Class A and Class B common stock and participating Restricted Stock Unit and Restricted Stock Awards) and distributions from Virtu Financial to noncontrolling interest	—	—	—	—	—	—	—	—	—	(26,067)	—	(26,067)	(76,906)	(102,973)
Issuance of common stock in connection with employee exchanges	21,289	—	—	—	—	—	—	—	—	—	—	—	—	—
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(21,289)	—	—	—	—	—	—	—	—	—	—	—
Contributions from noncontrolling interests	—	—	—	—	—	—	—	—	—	—	—	—	39,200	39,200
Balance at June 30, 2022	132,915,640	$ 1	9,030,066	$ —	60,091,740	$ 1	(28,998,163)	$ (828,772)	$ 1,256,760	$ 956,487	$ 13,826	$ 1,398,303	$ 342,105	$ 1,740,408

Virtu Financial, Inc. and Subsidiaries
Condensed Consolidated Statements of Changes in Equity (Unaudited)
Three and Six months ended June 30, 2022, and 2021

(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	Noncontrolling Interest	Total Equity
	Shares	Amounts	Shares	Amounts	Shares	Amounts	Shares	Amounts	Amounts					
Balance at December 31, 2020	125,627,277	$ 1	10,226,939	$ —	60,091,740	$ 1	(3,615,097)	$ (88,923)	$ 1,160,567	$ 422,381	$ (25,487)	$ 1,468,540	$ 386,498	$ 1,855,038
Share based compensation	1,896,407	—	—	—	—	—	—	—	27,450	—	—	27,450	—	27,450
Treasury stock purchases	(615,794)	—	—	—	—	—	(2,277,409)	(63,359)	—	(16,059)	—	(79,418)	—	(79,418)
Stock options exercised	154,372	—	—	—	—	—	—	—	2,933	—	—	2,933	—	2,933
Net income	—	—	—	—	—	—	—	—	—	239,405	—	239,405	169,827	409,232
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	(2,165)	(2,165)	(1,511)	(3,676)
Net change in unrealized cash flow hedges gains	—	—	—	—	—	—	—	—	—	—	12,607	12,607	9,299	21,906
Dividends ($0.24 per share of Class A common stock and participating Restricted Stock Units and Restricted Stock Awards) and distributions from Virtu Financial to noncontrolling interest	—	—	—	—	—	—	—	—	—	(30,147)	—	(30,147)	(159,239)	(189,386)
Issuance of common stock in connection with employee exchanges	91,757	—	—	—	—	—	—	—	—	—	—	—	—	—
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(91,757)	—	—	—	—	—	—	—	—	—	—	—
Balance at March 31, 2021	127,154,019	$ 1	10,135,182	$ —	60,091,740	$ 1	(5,892,506)	$ (152,282)	$ 1,190,950	$ 615,580	$ (15,045)	$ 1,639,205	$ 404,874	$ 2,044,079
Share based compensation	32,916	—	—	—	—	—	—	—	7,444	—	—	7,444	—	7,444
Repurchase of Class C common stock	—	—	(45,622)	—	—	—	—	—	(1,323)	—	—	(1,323)	—	(1,323)
Treasury stock purchases	(5,489)	—	—	—	—	—	(3,358,003)	(101,305)	—	(114)	—	(101,419)	—	(101,419)
Stock options exercised	253,625	—	—	—	—	—	—	—	4,819	—	—	4,819	—	4,819
Net income	—	—	—	—	—	—	—	—	—	62,910	—	62,910	45,997	108,907
Foreign exchange translation adjustment	—	—	—	—	—	—	—	—	—	—	43	43	23	66
Net change in unrealized cash flow hedges losses	—	—	—	—	—	—	—	—	—	—	(4,115)	(4,115)	(3,091)	(7,206)
Dividends ($0.24 per share of Class A and Class B common stock and participating Restricted Stock Units and Restricted Stock Award) and distributions from Virtu Financial to noncontrolling interest	—	—	—	—	—	—	—	—	—	(29,483)	—	(29,483)	(103,062)	(132,545)
Issuance of common stock in connection with employee exchanges	290,524	—	—	—	—	—	—	—	—	—	—	—	—	—
Repurchase of Virtu Financial Units and corresponding number of Class C common stock in connection with employee exchanges	—	—	(290,524)	—	—	—	—	—	—	—	—	—	—	—
Balance at June 30, 2021	127,725,595	$ 1	9,799,036	$ —	60,091,740	$ 1	(9,250,509)	$ (253,587)	$ 1,201,890	$ 648,893	$ (19,117)	$ 1,578,081	$ 344,741	$ 1,922,822

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)	**2022**	**2021**
Cash flows from operating activities		
Net income	$ 348,820	$ 518,139
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	33,812	33,127
Amortization of purchased intangibles and acquired capitalized software	32,757	36,154
Debt issue cost related to debt refinancing and prepayment	24,316	649
Amortization of debt issuance costs and deferred financing fees	4,184	3,547
Termination of office leases	1,384	4,888
Share-based compensation	32,709	25,330
Deferred taxes	16,604	12,714
Other	5,335	(9,013)
Changes in operating assets and liabilities:		
Securities borrowed	(20,294)	(110,281)
Securities purchased under agreements to resell	(3,313)	(31,689)
Receivables from broker-dealers and clearing organizations	(392,821)	74,941
Trading assets, at fair value	(923,766)	(526,615)
Receivables from customers	(80,457)	6,231
Operating lease right-of-use assets	16,852	27,472
Other assets	(71,206)	47,750
Securities loaned	(92,439)	194,485
Securities sold under agreements to repurchase	(13,132)	29,644
Payables to broker-dealers and clearing organizations	195,306	(85,160)
Payables to customers	51,970	9,033
Trading liabilities, at fair value	960,450	199,680
Operating lease liabilities	(21,072)	(29,005)
Accounts payable, accrued expenses and other liabilities	(48,377)	(76,580)
Net cash provided by operating activities	57,622	355,441
Cash flows from investing activities		
Development of capitalized software	(26,769)	(25,193)
Acquisition of property and equipment	(14,246)	(12,589)
Other investing activities	45,018	(4,956)
Net cash provided by (used in) investing activities	4,003	(42,738)
Cash flows from financing activities		
Dividends to stockholders and distributions from Virtu Financial to noncontrolling interest	(228,778)	(321,931)
Repurchase of Class C common stock	(8,256)	(1,323)
Purchase of treasury stock	(353,051)	(180,837)
Stock options exercised	5,109	7,752
Short-term borrowings, net	94,945	151,396
Proceeds from long-term borrowings	1,800,000	—
Repayment of long term borrowings	(1,599,774)	(36,737)
Tax receivable agreement obligations	(21,343)	(16,505)
Debt issuance costs	(35,882)	(2,658)
Contributions from noncontrolling interests	39,200	—
Net cash used in financing activities	(307,830)	(400,843)
Effect of exchange rate changes on cash and cash equivalents	(24,978)	(3,610)
Net decrease in cash and cash equivalents	(271,183)	(91,750)
Cash, cash equivalents, and restricted or segregated cash, beginning of period	1,120,953	1,007,005
Cash, cash equivalents, and restricted or segregated cash, end of period	$ 849,770	$ 915,255
Supplementary disclosure of cash flow information		

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

	Six Months Ended June 30,	
(in thousands)	**2022**	**2021**
Cash paid for interest	$ 104,765	$ 75,548
Cash paid for taxes	86,495	103,083
Non-cash investing activities		
Share-based and accrued incentive compensation to developers relating to capitalized software	8,234	8,680

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

Virtu Financial, Inc. and Subsidiaries
Notes to the 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, 2022, VFI owned approximately 61.0% of the membership interests of Virtu Financial. VFI is the sole managing member of Virtu Financial and operates and controls all of the businesses and affairs of Virtu Financial and its subsidiaries (the “Group”).

The Company is a leading financial firm that leverages cutting edge technology to deliver 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, Exchange-Traded Funds ("ETFs"), foreign exchange, futures, fixed income, cryptocurrencies, 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.

The Company has completed two significant acquisitions over the past five years that have expanded and complemented Virtu Financial's original electronic trading and marking making business. On July 20, 2017, 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 (the “ITG Acquisition”). ITG's business contributes to the Company's Execution Services segment.

Virtu Financial’s principal United States ("U.S.") subsidiary is Virtu Americas LLC (“VAL”), which is a U.S. broker-dealer. 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 ("VFIL") and Virtu ITG Europe Limited ("VIEL"), each formed in Ireland; Virtu ITG UK Limited ("VIUK"), formed in the United Kingdom; 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, 2021. The condensed consolidated financial statements of the Company include its equity interests in Virtu Financial and its 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.

2. Summary of Significant Accounting Policies

For a detailed discussion of the Company's significant accounting policies, see Note 2 "Summary of Significant Accounting Policies" in our consolidated financial statements included in Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2021.

Accounting Pronouncements Recently Adopted

Convertible Instruments - In August 2020, the FASB issued ASU 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)*. The ASU simplifies accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts in an entity's own equity and updates selected earnings per share ("EPS") guidance. The Company adopted this ASU on January 1, 2022 and it did not have a material impact on its condensed consolidated financial statements.

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. In January 2021, the FASB issued ASU 2021-01, *Reference Rate Reform (Topic 848): Scope,* which expands the scope of Topic 848 to include derivative instruments that are affected by changes in the interest rates used for margining, discounting or contract price alignment as part of the market transition to new reference rates (the "discounting transition"). The Company adopted these ASUs on April 1, 2022, and this did not have a material impact on its condensed consolidated financial statements and related disclosures.

Financial Instruments - Credit Losses - In March 2022, the FASB issued ASU 2022-02, *Financial Instruments - Credit Losses (Topic 326)*. The ASU eliminates the accounting guidance for trouble debt restructurings by creditors in Subtopic 310-40, and enhances the disclosure requirements for modifications of loans to borrowers experiencing financial difficulty. Additionally, the ASU requires disclosure of gross writeoffs of receivables by year of origination for receivables within the scope of Subtopic 326-20, *Financial Instruments - Credit Losses - Measured at Amortized Cost*. This ASU is effective for periods beginning after December 15, 2022. The Company adopted this ASU on April 1, 2022 and it did not have a material impact on its condensed consolidated financial statements.

Accounting Pronouncements Not Yet Adopted as of June 30, 2022

Derivatives and Hedging - In March 2022, the FASB issued ASU 2022-01, *Derivatives and Hedging - Fair Value Hedging - Portfolio Layer Method (Topic 815)*. The ASU expands the scope of permissible hedging, and permits the use of different derivative structures as hedging instruments. The ASU also clarifies the certain terms for partial-term fair value hedges of interest rate risk. This ASU is effective for periods beginning after December 15, 2022. The Company is currently evaluating the impact of this ASU but does not expect it to have a material impact on its condensed consolidated financial statements.

Fair Value Measurement - In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions (Topic 326)*. The ASU clarifies the impact of contractual sale restrictions on the fair value of an equity security. Additionally, this ASU requires disclosure of the nature and remaining duration of the sale restriction. This ASU is effective for periods beginning after December 15, 2023. The Company is currently evaluating the impact of this ASU but does not expect it to have a material impact on its condensed consolidated financial statements.

3. Earnings per Share

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

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Income before income taxes and noncontrolling interest	$ 173,784	$ 135,002	$ 415,494	$ 624,789
Provision for income taxes	24,888	26,095	66,674	106,650
Net income	148,896	108,907	348,820	518,139
Noncontrolling interest	(63,729)	(45,997)	(151,397)	(215,824)
Net income available for common stockholders	$ 85,167	$ 62,910	$ 197,423	$ 302,315

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)	**2022**	**2021**	**2022**	**2021**
Basic earnings per share:				
Net income available for common stockholders	$ 85,167	$ 62,910	$ 197,423	$ 302,315
Less: Dividends and undistributed earnings allocated to participating securities	(3,305)	(1,801)	(7,164)	(8,113)
Net income available for common stockholders, net of dividends and undistributed earnings allocated to participating securities	81,862	61,109	190,259	294,202
Weighted average shares of common stock outstanding:				
Class A	104,960,826	119,681,845	107,133,079	120,865,624
Basic earnings per share	$ 0.78	$ 0.51	$ 1.78	$ 2.43

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except for share or per share data)	**2022**	**2021**	**2022**	**2021**
Diluted earnings per share:				
Net income available for common stockholders, net of dividends and undistributed earnings allocated to participating securities	$ 81,862	$ 61,109	$ 190,259	$ 294,202
Weighted average shares of common stock outstanding:				
Class A				
Issued and outstanding	104,960,826	119,681,845	107,133,079	120,865,624
Issuable pursuant to Amended and Restated 2015 Management Incentive Plan, Amended and Restated Investment Technology Group, Inc. 2007 Omnibus Equity Compensation Plan, and Warrants issued in connection with the Founder Member Loan	517,452	1,499,547	626,705	1,413,637
	105,478,278	121,181,392	107,759,784	122,279,261
Diluted earnings per share	$ 0.78	$ 0.50	$ 1.77	$ 2.41

4. Tax Receivable Agreements

For a detailed discussion of the Company's tax receivable agreements, see Note 6 "Tax Receivable Agreements" in our consolidated financial statements included in Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2021.

For the purposes of 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.

The Company made its first payment of $7.0 million in February 2017, its second payment of $12.4 million in September 2018, its third payment of $13.3 million in March 2020, its fourth payment of $16.5 million in April 2021, and its fifth payment of $21.3 million in March 2022. Tax receivable payments are expected to range from approximately $0.4 million to $22.0 million per year over the next 15 years.

At June 30, 2022 and December 31, 2021, the Company's remaining deferred tax assets that relate to the matters described above were approximately $170.5 million and $180.4 million, respectively, and the Company's liabilities over the next 15 years pursuant to the tax receivable agreements were approximately $237.9 million and $259.3 million, respectively. The amounts recorded as of June 30, 2022 and December 31, 2021 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.

5. Goodwill and Intangible Assets

The Company has two operating segments: (i) Market Making; and (ii) Execution Services; and one non-operating segment: Corporate. As of June 30, 2022 and December 31, 2021, 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, 2022 and 2021.

The following table presents the details of goodwill by segment as of June 30, 2022 and December 31, 2021:

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

As of June 30, 2022 and December 31, 2021, the Company's total amount of intangible assets recorded was $353.6 million and $386.3 million, respectively. Acquired intangible assets consisted of the following as of June 30, 2022 and December 31, 2021:

	As of June 30, 2022			
(in thousands)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Useful Lives (Years)
Customer relationships	$ 486,600	$ (166,063)	$ 320,537	10 to 12
Technology	136,000	(110,332)	25,668	1 to 6
Favorable occupancy leases	5,895	(4,023)	1,872	3 to 15
Exchange memberships	3,998	—	3,998	Indefinite
Trade name	3,600	(3,600)	—	3
ETF issuer relationships	950	(950)	—	9
ETF buyer relationships	950	(950)	—	9
Other	$ 1,500	$ —	$ 1,500	Indefinite
	$ 639,493	$ (285,918)	$ 353,575	

(in thousands)	As of December 31, 2021 Gross Carrying Amount		Accumulated Amortization		Net Carrying Amount		Useful Lives (Years)		
Customer relationships	$	486,600	$	(142,142)	$	344,458	10	to	12
Technology		136,000		(102,088)		33,912	1	to	6
Favorable occupancy leases		5,895		(3,631)		2,264	3	to	15
Exchange memberships		3,998		—		3,998		Indefinite	
Trade name		3,600		(3,400)		200		3	
ETF issuer relationships		950		(950)		—		9	
ETF buyer relationships		950		(950)		—		9	
Other	$	1,500	$	—	$	1,500		Indefinite	
	$	639,493	$	(253,161)	$	386,332			

Amortization expense relating to finite-lived intangible assets was approximately $16.3 million and $18.1 million for the three months ended June 30, 2022 and 2021, respectively, and $32.8 million and $36.2 million for the six months ended June 30, 2022 and 2021, 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 next five subsequent years:

(in thousands)		
Remainder of 2022	$	32,094
2023		63,960
2024		50,845
2025		47,879
2026		47,879
2027		47,879

6. 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, 2022 and December 31, 2021:

(in thousands)	June 30, 2022	December 31, 2021
Assets		
Due from prime brokers	$ 797,705	$ 287,991
Deposits with clearing organizations	186,805	161,928
Net equity with futures commission merchants	138,040	98,302
Unsettled trades with clearing organizations	11,695	164,195
Securities failed to deliver	257,934	290,207
Commissions and fees	27,449	24,184
Total receivables from broker-dealers and clearing organizations	$ 1,419,628	$ 1,026,807
Liabilities		
Due to prime brokers	$ 415,750	$ 497,972
Net equity with futures commission merchants (1)	(19,893)	(57,226)
Unsettled trades with clearing organizations	125,553	828
Securities failed to receive	180,806	128,392
Commissions and fees	2,681	1,560
Total payables to broker-dealers and clearing organizations	$ 704,897	$ 571,526

(1) 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.

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 8 "Borrowings") of approximately $218.4 million and $177.1 million as of June 30, 2022 and December 31, 2021, 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.

7. 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, 2022 and December 31, 2021, substantially all of the securities received as collateral have been repledged.

The fair value of the collateralized transactions at June 30, 2022 and December 31, 2021 are summarized as follows:

(in thousands)	June 30, 2022	December 31, 2021
Securities received as collateral:		
Securities borrowed	$ 1,314,536	$ 1,299,270
Securities purchased under agreements to resell	122,766	119,453
	$ 1,437,302	$ 1,418,723

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, 2022 and December 31, 2021 consisted of the following:

(in thousands)	June 30, 2022	December 31, 2021
Equities	$ 1,061,602	$ 1,012,569
Exchange traded notes	17,222	5,391
	$ 1,078,824	$ 1,017,960

8. 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, 2022		
(in thousands)	**Borrowing Outstanding**	**Deferred Debt Issuance Cost**	**Short-term Borrowings, net**
Broker-dealer credit facilities	$ 158,000	$ (886)	$ 157,114
	$ 158,000	$ (886)	$ 157,114

	December 31, 2021		
(in thousands)	**Borrowing Outstanding**	**Deferred Debt Issuance Cost**	**Short-term Borrowings, net**
Broker-dealer credit facilities	$ 58,000	$ (1,546)	$ 56,454
Short-term bank loans	5,056	—	5,056
	$ 63,056	$ (1,546)	$ 61,510

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 $400 million, and is collateralized by VAL's trading and deposit account maintained at the financial institution. The second credit facility (the “Committed Facility”) with the same financial institution has a borrowing limit of $650 million. 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 $650 million and bear interest at the adjusted SOFR or base rate plus 1.25% per annum. Borrowing Base B Loans are subject to a sublimit of $200 million and bear interest at the adjusted SOFR 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 May 25, 2022, Virtu Financial Singapore Pte. Ltd. entered into a revolving credit facility with a financial institution (the "Overdraft Facility") to provide a source of short-term financing. The facility has an aggregate borrowing limit of $10 million, and bears interest at the adjusted SOFR or base rate plus 3.5% per annum. There were no outstanding borrowings under the Overdraft Facility as of June 30, 2022.

On March 20, 2020, VAL 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 were available to be borrowed in one or more borrowings on or after March 20, 2020 and prior to September 20, 2020 (the "Founder Member Loan Term"). The Founder Member Loan Facility Term expired as of September 20, 2020 without VAL having borrowed any Founder Member Loans at any time. 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 (as defined in the Founder Member Loan Facility) commitments under the Founder Member Loan Facility, 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 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 Statements of Financial Condition.

			At June 30, 2022		
(in thousands)	Interest Rate	Financing Available	Borrowing Outstanding	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Broker-dealer credit facilities:					
Uncommitted facility	2.80%	$ 400,000	$ 158,000	$ (886)	$ 157,114
Committed facility	4.50%	650,000	—	—	—
Overdraft facility	5.00%	10,000	—	—	—
		$ 1,060,000	$ 158,000	$ (886)	$ 157,114

			At December 31, 2021		
(in thousands)	Interest Rate	Financing Available	Borrowing Outstanding	Deferred Debt Issuance Cost	Outstanding Borrowings, net
Broker-dealer credit facilities:					
Uncommitted facility	1.25%	$ 400,000	$ 58,000	$ (1,546)	$ 56,454
Committed facility	3.78%	600,000	—	—	—
		$ 1,000,000	$ 58,000	$ (1,546)	$ 56,454

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)	2022	2021	2022	2021
Broker-dealer credit facilities:				
Uncommitted facility	$ 789	$ 625	$ 1,293	$ 1,250
Committed facility	23	—	38	57
	$ 812	$ 625	$ 1,331	$ 1,307

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, 2022, there was no balance associated with international settlement activities outstanding under these facilities. At December 31, 2021, there was $5.1 million associated with international settlement activities outstanding under these facilities at a weighted average interest rate of approximately 4.2%. These short-term bank loan balances are included within Short-term borrowings on the Condensed Consolidated Statements of Financial Condition.

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, 2022				
(in thousands)	**Weighted Average Interest Rate**	**Financing Available**		**Borrowing Outstanding**	
Prime Brokerage Credit Facilities:					
Prime brokerage credit facilities (1)	4.71%	$	616,000	$	218,398
		$	616,000	$	218,398

	At December 31, 2021				
(in thousands)	**Weighted Average Interest Rate**	**Financing Available**		**Borrowing Outstanding**	
Prime Brokerage Credit Facilities:					
Prime brokerage credit facilities (1)	2.91%	$	616,000	$	177,080
		$	616,000	$	177,080

(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 $1.7 million and $1.1 million for the three months ended June 30, 2022 and 2021, and $3.3 million and $2.1 million for the six months ended June 30, 2022 and 2021, 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, 2022								
(in thousands)	**Maturity Date**	**Interest Rate**	**Outstanding Principal**		**Discount**		**Deferred Debt Issuance Cost**		**Outstanding Borrowings, net**	
Long-term borrowings:										
First Lien Term Loan Facility	January 2029	4.43%	$	1,800,000	$	(4,204)	$	(29,190)	$	1,766,606
SBI bonds	January 2023	5.00%		25,788		—		(11)		25,777
			$	1,825,788	$	(4,204)	$	(29,201)	$	1,792,383

		At December 31, 2021								
(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	3.10%	$	1,599,774	$	(3,723)	$	(21,620)	$	1,574,431
SBI bonds	January 2023	5.00%		30,722		—		(21)		30,701
			$	1,630,496	$	(3,723)	$	(21,641)	$	1,605,132

Credit Agreements

In connection with the ITG Acquisition, Virtu Financial, VFH, and Impala Borrower LLC (the "Acquisition Borrower") entered into a 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 "Acquisition Credit Agreement").

The Acquisition Credit Agreement provided (i) a senior secured first lien term loan (together with the Acquisition Incremental Term Loans, as defined below; the “Acquisition First Lien Term Loan Facility”) in an aggregate principal amount of $1,500 million, drawn in its entirety on the ITG Closing Date, of which amount approximately $404.5 million was borrowed by VFH to repay all amounts outstanding under a previous term loan facility and the remaining approximately $1,095 million was borrowed by Impala Borrower LLC (the "Acquisition Borrower"), to finance the consideration and fees and expenses paid in connection with the ITG Acquisition, and (ii) a $50.0 million senior secured first lien revolving facility to VFH, with a $5.0 million letter of credit subfacility and a $5.0 million swingline subfacility. After the ITG Closing Date, VFH assumed the obligations of the Acquisition Borrower in respect of the acquisition term loans. On October 9, 2019, VFH entered into an amendment, which amended the Acquisition Credit Agreement dated as of March 1, 2019 to, among other things, provide for $525.0 million in aggregate principal amount of incremental term loans (the “Acquisition Incremental Term Loans”), and amend the related collateral agreement. On March 2, 2020, VFH entered into a second amendment, which further amended the Acquisition 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 step-down in the spread based on VFH's first lien leverage ratio.

On January 13, 2022 (the “Credit Agreement Closing Date”), Virtu Financial, VFH Parent LLC, a Delaware limited liability company and a subsidiary of Virtu Financial (“VFH”), entered into the Credit Agreement, with the lenders party thereto, JPMorgan Chase Bank, N.A. as administrative agent and JPMorgan Chase Bank, N.A., Goldman Sachs Bank USA, RBC Capital Markets, Barclays Bank plc, Jefferies Finance LLC, BMO Capital Markets Corp., and CIBC World Markets Corp., as joint lead arrangers and bookrunners (the “Credit Agreement”). The Credit Agreement provides (i) a senior secured first lien term loan in an aggregate principal amount of $1,800.0 million, drawn in its entirety on the Credit Agreement Closing Date, the proceeds of which were used by VFH to repay all amounts outstanding under the Acquisition Credit Agreement, to pay fees and expenses in connection therewith, to fund share repurchases under the Company’s repurchase program and for general corporate purposes, and (ii) a $250.0 million senior secured first lien revolving facility to VFH, with a $20.0 million letter of credit subfacility and a $20.0 million swingline subfacility.

The term loan borrowings and revolver borrowings under the 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 term SOFR rate with an interest period of one month plus 1.00% and (d)(1) in the case of term loan borrowings, 1.50% and (2) in the case of revolver borrowings, 1.00%, plus, (x) in the case of term loan borrowings, 2.00% and (y) in the case of revolver borrowings, 1.50%, or (ii) the greater of (a) an adjusted term SOFR rate for the interest period in effect and (b) (1) in the case of term loan borrowings, 0.50% and (2) in the case of revolver borrowings, 0.00%, plus, (x) in the case of term loan borrowings, 3.00% and (y) in the case of revolver borrowings, 2.50%. In addition, a commitment fee accrues at a rate of 0.50% per annum on the average daily unused amount of the revolving facility, with step-downs to 0.375% and 0.25% per annum based on VFH’s first lien leverage ratio, and is payable quarterly in arrears.

The revolving facility under the 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 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.

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

Under the Credit Agreement, the term loans will mature on January 13, 2029. 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 January 13, 2025. As of June 30, 2022, $1,800 million was outstanding under the term loans, and there were no amounts outstanding under the first lien revolving facility.

In October 2019, the Company entered into a five-year $525 million floating-to-fixed interest rate swap agreement. In January 2020, the Company also entered into a five-year $1,000 million floating-to-fixed interest rate swap agreement. These two interest rate swaps met the criteria to be considered and were designated qualifying cash flow hedges under ASC 815 in the first quarter of 2020, and they effectively fixed interest payment obligations on $525.0 million and $1,000 million of principal under the Acquisition First Lien Term Loan Facility at rates of 4.3% and 4.4% through September 2024 and January 2025, respectively, based on the interest rates set forth in the Acquisition Credit Agreement. In April 2021, each of the swap agreements described above was novated to another counterparty and amended in connection with such novation. The amendments included certain changes to collateral posting obligations, and also had the effect of increasing the effective fixed interest payment obligations to rates of 4.5%, with respect to the earlier maturing swap arrangement, and 4.6% with respect to the later maturing swap arrangement. In January 2022, in order to align the swap agreements with the Credit Agreement, the Company amended each of the swap agreements to align the floating rate term of such swap agreements to SOFR. The effective fixed interest payment obligations remained at 4.5%, with respect to the earlier maturing swap arrangement, and 4.6% with respect to the later maturing swap arrangement.

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 Japannext Co., Ltd. (as described in Note 9 "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 ($25.8 million) as of June 30, 2022 and ¥3.5 billion ($30.7 million) as of December 31, 2021. The Company had a gain $3.0 million and a gain of $0.1 million during the three months ended June 30, 2022 and 2021, and a gain of $4.9 million, and a gain of $2.4 million, during the six months ended June 30, 2022 and 2021, respectively, due to changes in foreign currency rates.

As of June 30, 2022, aggregate future required minimum principal payments based on the terms of the long-term borrowings were as follows:

(in thousands)	June 30, 2022
2022	—
2023	43,788
2024	18,000
2025	18,000
2026	18,000
Thereafter	1,728,000
Total principal of long-term borrowings	$ 1,825,788

9. 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.

Fair value measurements for those items measured on a recurring basis are summarized below as of June 30, 2022:

(in thousands)	June 30, 2022 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	$ 953,663	$ 1,872,668	$ —	$ —	$ 2,826,331
U.S. and Non-U.S. government obligations	509,396	27,024	—	—	536,420
Corporate Bonds	—	722,866	—	—	722,866
Exchange traded notes	26	2,995	—	—	3,021
Currency forwards	—	349,791	—	(347,871)	1,920
Options	11,339	—	—	—	11,339
	$ 1,474,424	$ 2,975,344	$ —	$ (347,871)	$ 4,101,897
Financial instruments owned, pledged as collateral:					
Equity securities	$ 632,311	$ 429,291	$ —	$ —	$ 1,061,602
Exchange traded notes	19	17,203	—	—	17,222
	$ 632,330	$ 446,494	$ —	$ —	$ 1,078,824
Other Assets					
Equity investment	$ —	$ —	$ 77,562	$ —	$ 77,562
Exchange stock	2,581	—	—	—	2,581
	$ 2,581	$ —	$ 77,562	$ —	$ 80,143
Receivables from broker dealers and clearing organizations:					
Interest rate swap	$ —	$ 51,634	$ —	$ —	$ 51,634
Liabilities					
Financial instruments sold, not yet purchased, at fair value:					
Equity securities	$ 1,471,443	$ 1,170,977	$ —	$ —	$ 2,642,420
U.S. and Non-U.S. government obligations	669,422	19,371	—	—	688,793
Corporate Bonds	—	1,105,471	—	—	1,105,471
Exchange traded notes	31	11,493	—	—	11,524
Currency forwards	—	366,947	—	(366,934)	13
Options	23,008	—	—	—	23,008
	$ 2,163,904	$ 2,674,259	$ —	$ (366,934)	$ 4,471,229

Fair value measurements for those items measured on a recurring basis are summarized below as of December 31, 2021:

	December 31, 2021				
(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	$ 572,567	$ 1,700,470	$ —	$ —	$ 2,273,037
U.S. and Non-U.S. government obligations	337,350	18,519	—	—	355,869
Corporate Bonds	—	598,944	—	—	598,944
Exchange traded notes	10	2,459	—	—	2,469
Currency forwards	—	206,258	—	(206,125)	133
Options	8,543	—	—	—	8,543
	$ 918,470	$ 2,526,650	$ —	$ (206,125)	$ 3,238,995
Financial instruments owned, pledged as collateral:					
Equity securities	$ 670,277	$ 342,292	$ —	$ —	$ 1,012,569
Exchange traded notes	—	5,391	—	—	5,391
	$ 670,277	$ 347,683	$ —	$ —	$ 1,017,960
Other Assets					
Equity investment	$ —	$ —	$ 81,358	$ —	$ 81,358
Exchange stock	3,020	—	—	—	3,020
	$ 3,020	$ —	$ 81,358	$ —	$ 84,378
Liabilities					
Financial instruments sold, not yet purchased, at fair value:					
Equity securities	$ 1,482,386	$ 807,631	$ —	$ —	$ 2,290,017
U.S. and Non-U.S. government obligations	330,765	9,955	—	—	340,720
Corporate Bonds	—	851,871	—	—	851,871
Exchange traded notes	—	22,962	—	—	22,962
Currency forwards	—	208,357	—	(208,356)	1
Options	5,208	—	—	—	5,208
	$ 1,818,359	$ 1,900,776	$ —	$ (208,356)	$ 3,510,779
Payables to broker dealers and clearing organizations:					
Interest rate swap	$ —	$ 21,037	$ —	$ —	$ 21,037

JNX Investment

The Company has a minority investment (the “JNX Investment”) in Japannext Co., Ltd. (“JNX”), formerly known as SBI Japannext Co., Ltd., a proprietary trading system based in Tokyo. In connection with the JNX Investment, the Company issued the SBI Bonds (as described in Note 8 "Borrowings") and used the proceeds to partially finance the transaction. The JNX Investment is included within Level 3 of the fair value hierarchy. As of June 30, 2022 and December 31, 2021, the fair value of the JNX 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 JNX Investment:

	June 30, 2022					
(in thousands)	Fair Value	Valuation Technique	Significant Unobservable Input	Range	Weighted Average
Equity investment	$ 77,562	Discounted cash flow	Estimated revenue growth	1.5% - 5.0%	3.5 %
			Discount rate	14.8% - 14.8%	14.8 %
		Market	Future enterprise value/ EBIDTA ratio	(4.8)x - 23.9x	12.5x

	December 31, 2021				
(in thousands)	Fair Value	Valuation Technique	Significant Unobservable Input	Range	Weighted Average
Equity investment	$ 81,358	Discounted cash flow	Estimated revenue growth	2.5% - 32.6%	10.6 %
			Discount rate	14.4% - 14.4%	14.4 %
		Market	Future enterprise value/ EBIDTA ratio	8.7x - 21.1x	14.0x

Changes in the fair value of the JNX 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, 2022						
(in thousands)	Balance at March 31, 2022	Purchases	Total Realized and Unrealized Gains / (Losses) (1)	Net Transfers into (out of) Level 3	Settlement	Balance at June 30, 2022	Change in Net Unrealized Gains / (Losses) on Investments still held at June 30, 2022
Assets							
Other assets:							
Equity investment	$ 84,482	$ —	$ (6,920)	$ —	$ —	$ 77,562	$ (6,920)
Total	$ 84,482	$ —	$ (6,920)	$ —	$ —	$ 77,562	$ (6,920)

(1) Total realized and unrealized gains/(losses) includes gains and losses due to fluctuations in currency rates as well as gains and losses recognized on changes in the fair value of the JNX Investment.

	Three Months Ended June 30, 2021						
(in thousands)	Balance at March 31, 2021	Purchases	Total Realized and Unrealized Gains / (Losses) (1)	Net Transfers into (out of) Level 3	Settlement	Balance at June 30, 2021	Change in Net Unrealized Gains / (Losses) on Investments still held at June 30, 2021
Assets							
Other assets:							
Equity investment	$ 66,192	$ —	$ 12,121	$ —	$ —	$ 78,313	$ 12,121
Total	$ 66,192	$ —	$ 12,121	$ —	$ —	$ 78,313	$ 12,121

(1) Total realized and unrealized gains/(losses) includes gains and losses due to fluctuations in currency rates as well as gains and losses recognized on changes in the fair value of the JNX Investment.

(in thousands)	Six Months Ended June 30, 2022 Balance at December 31, 2021	Purchases	Total Realized and Unrealized Gains / (Losses) (1)	Net Transfers into (out of) Level 3	Settlement	Balance at June 30, 2022	Change in Net Unrealized Gains / (Losses) on Investments still held at June 30, 2022
Assets							
Other assets:							
Equity investment	$ 81,358	$ —	$ (3,796)	$ —	$ —	$ 77,562	$ (3,796)
Total	$ 81,358	$ —	$ (3,796)	$ —	$ —	$ 77,562	$ (3,796)

(1) Total realized and unrealized gains/(losses) includes gains and losses due to fluctuations in currency rates as well as gains and losses recognized on changes in the fair value of the JNX Investment.

(in thousands)	Six Months Ended June 30, 2021 Balance at December 31, 2020	Purchases	Total Realized and Unrealized Gains / (Losses) (1)	Net Transfers into (out of) Level 3	Settlement	Balance at June 30, 2021	Change in Net Unrealized Gains / (Losses) on Investments still held at June 30, 2021
Assets							
Other assets:							
Equity investment	$ 66,030	$ —	$ 12,283	$ —	$ —	$ 78,313	$ 12,283
Total	$ 66,030	$ —	$ 12,283	$ —	$ —	$ 78,313	$ 12,283

(1) Total realized and unrealized gains/(losses) includes gains and losses due to fluctuations in currency rates as well as gains and losses recognized on changes in the fair value of the JNX Investment.

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 Statements 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, 2022:

	June 30, 2022				
(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	$ 810,649	$ 810,649	$ 810,649	$ —	$ —
Cash restricted or segregated under regulations and other	39,121	39,121	39,121	—	—
Securities borrowed	1,369,616	1,369,616	—	1,369,616	—
Securities purchased under agreements to resell	122,766	122,766	—	122,766	—
Receivables from broker-dealers and clearing organizations (2)	1,419,628	1,419,628	(39,350)	1,458,978	—
Receivables from customers	226,933	226,933	—	226,933	—
Other assets (1)	24,657	24,657	—	24,657	—
Total Assets	$ 4,013,370	$ 4,013,370	$ 810,420	$ 3,202,950	$ —
Liabilities					
Short-term borrowings	$ 157,114	$ 158,000	$ —	$ 158,000	$ —
Long-term borrowings	1,792,383	1,736,922	—	1,736,922	—
Securities loaned	1,049,609	1,049,609	—	1,049,609	—
Securities sold under agreements to repurchase	501,193	501,193	—	501,193	—
Payables to broker-dealers and clearing organizations	704,897	704,897	(227)	705,124	—
Payables to customers	106,969	106,969	—	106,969	—
Other liabilities (3)	15,111	15,111	—	15,111	—
Total Liabilities	$ 4,327,276	$ 4,272,701	$ (227)	$ 4,272,928	$ —

(1) Includes cash collateral and deposits, and interest and dividends receivables.

(2) Receivables from broker-dealers and clearing organizations include interest rate swaps carried at fair value.

(3) Includes deposits, interest and dividends payable.

The table below summarizes financial assets and liabilities not carried at fair value on a recurring basis as of December 31, 2021:

	December 31, 2021				
(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	$ 1,071,463	$ 1,071,463	$ 1,071,463	$ —	$ —
Cash restricted or segregated under regulations and other	49,490	49,490	49,490	—	—
Securities borrowed	1,349,322	1,349,322	—	1,349,322	—
Securities purchased under agreements to resell	119,453	119,453	—	119,453	—
Receivables from broker-dealers and clearing organizations	1,026,807	1,026,807	(24,037)	1,050,844	—
Receivables from customers	146,476	146,476	—	146,476	—
Other assets (1)	20,266	20,266	—	20,266	—
Total Assets	$ 3,783,277	$ 3,783,277	$ 1,096,916	$ 2,686,361	$ —
Liabilities					
Short-term borrowings	61,510	63,046	—	63,046	—
Long-term borrowings	1,605,132	1,628,497	—	1,628,497	—
Securities loaned	1,142,048	1,142,048	—	1,142,048	—
Securities sold under agreements to repurchase	514,325	514,325	—	514,325	—
Payables to broker dealer and clearing organizations (2)	571,526	571,526	235	571,291	—
Payables to customers	54,999	54,999	—	54,999	—
Other liabilities (3)	9,414	9,414	—	9,414	—
Total Liabilities	$ 3,958,954	$ 3,983,855	$ 235	$ 3,983,620	$ —

(1) Includes cash collateral and deposits, and interest and dividends receivables.

(2) Payables to broker-dealers and clearing organizations include interest rate swaps carried at fair value.

(3) Includes deposits, interest and dividends payable.

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, 2022 and December 31, 2021:

	June 30, 2022					
				Amounts Not Offset in the Condensed Consolidated Statements of Financial Condition		
(in thousands)	Gross Amounts of Recognized Assets	Amounts Offset in the Condensed Consolidated Statement of Financial Condition	Net Amounts of Assets Presented in the Condensed Consolidated Statements of Financial Condition	Financial Instrument Collateral	Counterparty Netting/ Cash Collateral	Net Amount
Offsetting of Financial Assets:						
Securities borrowed	$ 1,369,616	$ —	$ 1,369,616	$ (1,314,536)	$ (17,691)	$ 37,389
Securities purchased under agreements to resell	122,766	—	122,766	(122,766)	—	—
Trading assets, at fair value:						
Currency forwards	349,791	(347,871)	1,920	—	—	1,920
Options	11,339	—	11,339	—	(11,339)	—
Total	$ 1,853,512	$ (347,871)	$ 1,505,641	$ (1,437,302)	$ (29,030)	$ 39,309

				Amounts Not Offset in the Condensed Consolidated Statements of Financial Condition		
(in thousands)	Gross Amounts of Recognized Liabilities	Amounts Offset in the Condensed Consolidated Statement of Financial Condition	Net Amounts of Liabilities Presented in the Consolidated Statement of Financial Condition	Financial Instruments	Counterparty Netting/ Cash Collateral	Net Amount
Offsetting of Financial Liabilities:						
Securities loaned	$ 1,049,609	$ —	$ 1,049,609	$ (1,014,541)	$ (17,691)	$ 17,377
Securities sold under agreements to repurchase	501,193	—	501,193	(501,193)	—	—
Payable to broker-dealers and clearing organizations						
Interest rate swaps	—	—	—	—	—	—
Trading liabilities, at fair value:						
Currency forwards	366,947	(366,934)	13	—	—	13
Options	23,008	—	23,008	—	(11,339)	11,669
Total	$ 1,940,757	$ (366,934)	$ 1,573,823	$ (1,515,734)	$ (29,030)	$ 29,059

	December 31, 2021					
				Amounts Not Offset in the Condensed Consolidated Statements of Financial Condition		
(in thousands)	Gross Amounts of Recognized Assets	Amounts Offset in the Condensed Consolidated Statement of Financial Condition	Net Amounts of Assets Presented in the Condensed Consolidated Statements of Financial Condition	Financial Instrument Collateral	Counterparty Netting/ Cash Collateral	Net Amount
Offsetting of Financial Assets:						
Securities borrowed	$ 1,349,322	$ —	$ 1,349,322	$ (1,299,270)	$ (5,054)	$ 44,998
Securities purchased under agreements to resell	119,453	—	119,453	(119,453)	—	—
Trading assets, at fair value:						
Currency forwards	206,258	(206,125)	133	—	—	133
Options	8,543	—	8,543	—	(5,208)	3,335
Total	$ 1,683,576	$ (206,125)	$ 1,477,451	$ (1,418,723)	$ (10,262)	$ 48,466

(in thousands)	Gross Amounts of Recognized Assets	Amounts Offset in the Condensed Consolidated Statement of Financial Condition	Net Amounts of Assets Presented in the Condensed Consolidated Statements of Financial Condition	Amounts Not Offset in the Condensed Consolidated Statements of Financial Condition: Financial Instrument Collateral	Counterparty Netting/ Cash Collateral	Net Amount
Offsetting of Financial Liabilities:						
Securities loaned	$ 1,142,048	$ —	$ 1,142,048	$ (1,107,688)	$ (17,272)	$ 17,088
Securities sold under agreements to repurchase	514,325	—	514,325	(514,325)	—	—
Interest rate swaps	21,037	—	21,037	—	—	21,037
Trading liabilities, at fair value:						
Currency forwards	208,357	(208,356)	1	—	—	1
Options	5,208	—	5,208	—	(5,208)	—
Total	$ 1,890,975	$ (208,356)	$ 1,682,619	$ (1,622,013)	$ (22,480)	$ 38,126

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, 2022					
	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	$ —	$ 140,000	$ 50,000	$ 160,000	$ 50,000	$ 400,000
U.S. and Non-U.S. government obligations	101,193	—	—	—		101,193
Total	$ 101,193	$ 140,000	$ 50,000	$ 160,000	$ 50,000	$ 501,193
Securities loaned:						
Equity securities	$ 1,049,609	$ —	$ —	$ —	$ —	$ 1,049,609
Total	$ 1,049,609	$ —	$ —	$ —	$ —	$ 1,049,609

	December 31, 2021					
	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	$ —	$ 140,000	$ 50,000	$ 210,000	$ —	$ 400,000
U.S. and Non-U.S. government obligations	114,325	—	—	—	—	114,325
Total	$ 114,325	$ 140,000	$ 50,000	$ 210,000	$ —	$ 514,325
Securities loaned:						
Equity securities	1,142,048	—	—	—	—	1,142,048
Total	$ 1,142,048	$ —	$ —	$ —	$ —	$ 1,142,048

10. Derivative Instruments

The fair value of the Company's derivative instruments on a gross basis consisted of the following at June 30, 2022 and December 31, 2021:

(in thousands)		June 30, 2022		December 31, 2021	
Derivatives Assets	**Financial Statement Location**	**Fair Value**	**Notional**	**Fair Value**	**Notional**
Derivative instruments not designated as hedging instruments:					
Equities futures	Receivables from broker-dealers and clearing organizations	$ 39,436	$ 1,270,805	$ 1,619	$ 406,420
Commodity futures	Receivables from broker-dealers and clearing organizations	(40,651)	9,999,771	(24,405)	5,285,216
Currency futures	Receivables from broker-dealers and clearing organizations	(7,645)	2,720,588	(8,205)	4,760,173
Fixed income futures	Receivables from broker-dealers and clearing organizations	165	243,267	147	8,489
Options	Financial instruments owned	11,339	1,424,612	8,543	1,063,686
Currency forwards	Financial instruments owned	349,791	24,702,505	206,258	21,445,374
Derivative instruments designated as hedging instruments:					
Interest rate swap	Receivables from broker-dealers and clearing organizations	51,634	1,525,000	—	—
Derivatives Liabilities	**Financial Statement Location**	**Fair Value**	**Notional**	**Fair Value**	**Notional**
Derivative instruments not designated as hedging instruments:					
Equities futures	Payables to broker-dealers and clearing organizations	$ (336)	$ 487,400	$ 791	$ 1,362,684
Commodity futures	Payables to broker-dealers and clearing organizations	60	42,553	(49)	27,224
Currency futures	Payables to broker-dealers and clearing organizations	(275)	272,595	1,671	725,162
Fixed income futures	Payables to broker-dealers and clearing organizations	(75)	24,521	(161)	120,212
Options	Financial instruments sold, not yet purchased	23,008	1,360,143	5,208	1,066,801
Currency forwards	Financial instruments sold, not yet purchased	366,947	24,711,084	208,357	21,446,422
Derivative instruments designated as hedging instruments:					
Interest rate swaps	Payables to broker-dealers and clearing organizations	—	—	21,037	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 initially recorded in other comprehensive income in the accompanying Condensed Consolidated Statements of Comprehensive Income for the three and six months ended June 30, 2022, and 2021.

(in thousands)	Financial Statements Location	Three Months Ended June 30, 2022	Three Months Ended June 30, 2021	Six Months Ended June 30, 2022	Six Months Ended June 30, 2021
Derivative instruments not designated as hedging instruments:					
Futures	Trading income, net	$ 118,455	$ 81,471	$ 195,801	$ 128,694
Currency forwards	Trading income, net	(44,665)	(47,034)	(35,754)	62,355
Options	Trading income, net	157	4,825	(938)	53,561
Interest rate swap on term loan	Other, net	(469)	(923)	(932)	(1,396)
		$ 73,478	$ 38,339	$ 158,177	$ 243,214
Derivative instruments designated as hedging instruments:					
Interest rate swaps (1)	Other comprehensive income	$ 16,430	$ (8,485)	$ 72,575	$ 17,341
		$ 16,430	$ (8,485)	$ 72,575	$ 17,341

(1) The Company entered into a five-year $1,000 million floating-to-fixed interest rate swap agreement in the first quarter of 2020 and a five-year $525 million floating-to-fixed interest rate swap agreement in the fourth quarter of 2019. These two interest rate swaps met the criteria to be considered qualifying cash flow hedges under ASC 815 in the first quarter of 2020, and as such, the mark-to-market gains (losses) on the instruments were deferred within Other comprehensive income on the Condensed Consolidated Statements of Comprehensive Income beginning in the first quarter of 2020.

11. 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, 2022, the Company held noncontrolling interests of 10.0% and 50.0%, 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, 2022, the Company held approximately a 9.8% noncontrolling interest in this JV.

The Company has an interest in a JV that operates 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 U.S. As of June 30, 2022, the Company held approximately a 14.9% noncontrolling interest in this JV.

In the second quarter of 2022, the Company invested in a JV that was formed for the purpose of developing and operating a cryptocurrency trading platform with the goal of increasing competition and transparency, while improving trading performance and reducing operational risk. As of June 30, 2022, the Company held approximately a 10.0% noncontrolling interest in this JV.

The Company's five JVs noted above meet the criteria to be considered VIEs, which it does not consolidate. 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 applicable JVs within Accounts payable, accrued expenses and other liabilities on the 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, 2022:

(in thousands)	Carrying Amount Asset	Carrying Amount Liability	Maximum Exposure to Loss	VIEs' assets
Equity investment	$ 39,755	$ —	$ 39,755	$ 225,929

The following table presents the Company’s nonconsolidated VIEs at December 31, 2021:

(in thousands)	Carrying Amount Asset	Carrying Amount Liability	Maximum Exposure to Loss	VIEs' assets
Equity investment	$ 38,319	$ —	$ 38,319	$ 136,378

During the second quarter of 2022, the Company formed a JV that was formed to support the growth and expansion of a multi-asset request-for-quote communication platform. As of June 30, 2022, the Company held a 51% controlling interest in this entity. Based on the standard for control set forth above, this JV meets the criteria to be considered a VIE, and the Company consolidates this entity and records the interest that the Company does not own as noncontrolling interest in the condensed consolidated statement of changes in equity.

12. Revenues from Contracts with Customers

For more information on revenue recognition and the nature of services provided, see Note 2 "Summary of Significant Accounting Policies" and Note 14 "Revenues from Contracts with Customers" to the Consolidated Financial Statements of the Company's 2021 Annual Report on Form 10-K.

Disaggregation of Revenues

The following tables present the Company’s revenue from contracts with customers disaggregated by service, by timing of revenue recognition, reconciled to the Company’s segments, for the three and six months ended June 30, 2022, and 2021:

	Three Months Ended June 30, 2022			
(in thousands)	Market Making	Execution Services	Corporate	Total
Revenues from contracts with customers:				
Commissions, net	$ 11,145	$ 90,998	$ —	$ 102,143
Workflow technology	—	24,334	—	24,334
Analytics	—	9,863	—	9,863
Total revenue from contracts with customers	11,145	125,195	—	136,340
Other sources of revenue	421,450	5,802	41,146	468,398
Total revenues	$ 432,595	$ 130,997	$ 41,146	$ 604,738
Timing of revenue recognition:				
Services transferred at a point in time	$ 432,595	$ 112,989	$ 41,146	$ 586,730
Services transferred over time	—	18,008	—	18,008
Total revenues	$ 432,595	$ 130,997	$ 41,146	$ 604,738

(in thousands)	Three Months Ended June 30, 2021 Market Making	Execution Services	Corporate	Total
Revenues from contracts with customers:				
Commissions, net	$ 9,087	$ 98,076	$ —	$ 107,163
Workflow technology	—	25,850	—	25,850
Analytics	—	10,102	—	10,102
Total revenue from contracts with customers	9,087	134,028	—	143,115
Other sources of revenue	393,454	4,102	8,294	405,850
Total revenues	$ 402,541	$ 138,130	$ 8,294	$ 548,965
Timing of revenue recognition:				
Services transferred at a point in time	$ 402,541	$ 119,821	$ 8,294	$ 530,656
Services transferred over time	—	18,309	—	18,309
Total revenues	$ 402,541	$ 138,130	$ 8,294	$ 548,965

(in thousands)	Six Months Ended June 30, 2022 Market Making	Execution Services	Corporate	Total
Revenues from contracts with customers:				
Commissions, net	$ 20,194	$ 199,187	$ —	$ 219,381
Workflow technology	—	51,270	—	51,270
Analytics	—	20,344	—	20,344
Total revenue from contracts with customers	20,194	270,801	—	290,995
Other sources of revenue	958,964	11,941	44,100	1,015,005
Total revenues	$ 979,158	$ 282,742	$ 44,100	$ 1,306,000
Timing of revenue recognition:				
Services transferred at a point in time	$ 979,158	$ 246,303	$ 44,100	$ 1,269,561
Services transferred over time	—	36,439	—	36,439
Total revenues	$ 979,158	$ 282,742	$ 44,100	$ 1,306,000

(in thousands)	Six Months Ended June 30, 2021 Market Making	Execution Services	Corporate	Total
Revenues from contracts with customers:				
Commissions, net	$ 23,217	$ 238,524	$ —	$ 261,741
Workflow technology	—	52,424	—	52,424
Analytics	—	20,599		20,599
Total revenue from contracts with customers	23,217	311,547	—	334,764
Other sources of revenue	1,203,048	15,822	7,903	1,226,773
Total revenues	$ 1,226,265	$ 327,369	$ 7,903	$ 1,561,537
Timing of revenue recognition:				
Services transferred at a point in time	$ 1,226,265	$ 290,359	$ 7,903	$ 1,524,527
Services transferred over time	—	37,010	—	37,010
Total revenues	$ 1,226,265	$ 327,369	$ 7,903	$ 1,561,537

Remaining Performance Obligations and Revenue Recognized from Past Performance Obligations

As of June 30, 2022 and 2021, the aggregate amount of the transaction price allocated to the performance obligations relating to workflow technology and analytics revenues that are unsatisfied (or partially unsatisfied) was not material.

Contract Assets and Contract Liabilities

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

Receivables related to revenues from contracts with customers amounted to $58.7 million and $51.5 million as of June 30, 2022 and December 31, 2021, respectively. The Company did not identify any contract assets. There were no impairment losses on receivables as of June 30, 2022.

Deferred revenue primarily relates to deferred commissions allocated to analytics products and subscription fees billed in advance of satisfying the performance obligations. Deferred revenue related to contracts with customers was $11.5 million and $9.2 million as of June 30, 2022 and December 31, 2021, respectively. The Company recognized the full amount of revenue during the six months ended June 30, 2022 and 2021, that had been recorded as deferred revenue in the respective prior year.

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, 2022 and 2021, 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 non-U.S. subsidiaries are subject to foreign income taxes in the jurisdictions in which they operate. The Company's provisions for income taxes and effective tax rates were $24.9 million, 14.3%, and $26.1 million, 19.3% for the three months ended June 30, 2022 and 2021, respectively and $66.7 million, 16.0% and $106.7 million, 17.1% for the for the six months ended June 30, 2022 and 2021, 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, 2022 and December 31, 2021 are current income tax receivables of $61.1 million and $37.2 million, respectively. The balances at June 30, 2022 and December 31, 2021 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, 2022 and December 31, 2021 are current tax liabilities of $15.8 million and $16.8 million, respectively. The balances at June 30, 2022 and December 31, 2021 primarily comprise income taxes owed to federal, state and local, and foreign tax jurisdictions based on income before taxes.

Deferred income taxes arise primarily due to the amortization of the deferred tax assets recognized in connection with the IPO (see Note 4 "Tax Receivable Agreements"), the Acquisition of KCG and the 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, 2022 and December 31, 2021, the Company did not have any U.S. federal net operating loss carryforwards and therefore the Company did not record a deferred tax asset related to federal net operating loss carryforwards. At June 30, 2022 and December 31, 2021, the Company recorded deferred income taxes related to state and local net operating losses of $0.4 million. These net operating losses will begin to expire in 2039. 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, 2022 and December 31, 2021 of $66.5 million and $67.2 million, respectively, and recorded a related deferred tax asset of $12.9 million and $13.4 million, respectively. A valuation allowance of $12.9 million and $13.3 million was recorded against this deferred tax asset at June 30, 2022 and December 31, 2021, respectively as it is more likely than not that a substantial 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, 2022 and December 31, 2021 of $239.3 million, and recorded a related deferred tax asset of $44.9 million in both years. A full valuation allowance was also recorded against this deferred tax asset at both June 30, 2022 and December 31, 2021 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, 2022 and December 31, 2021 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, 2022, the Company's tax years for 2015 through 2020 and 2016 through 2020 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 2020. 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 its 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 Statements of Comprehensive Income, respectively.

The Company had $6.4 million of unrecognized tax benefits as of June 30, 2022, 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, 2022.

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 November 30, 2020, the Company was named as a defendant in *In re United States Oil Fund, LP Securities Litigation*, No. 20-cv-4740. The consolidated amended complaint was filed in federal district court in New York on behalf of a putative class, and asserts claims against the Company and numerous other financial institutions under Section 11 of the Securities Act of 1933 in connection with trading in United States Oil Fund, LP, a crude oil ETF. The complaint also names the ETF, its sponsor, and related individuals as defendants. The complaint did not specify the amount of alleged damages. Defendants moved to dismiss the consolidated amended complaint on January 29, 2021 and plaintiffs subsequently filed their opposition to the motion on March 30, 2021. The Company believes that the claims are without merit and is defending itself vigorously.

On August 31, 2021, the Company was named as a defendant in *Alers v. Robinhood Financial, LLC et al* No. 21-cv-61848. The complaint was filed in federal district court in Florida on behalf of a putative class, and asserts claims against the Company and numerous other financial institutions alleging a breach of fiduciary duty by Robinhood and aiding and abetting thereof by the Company and other market making firms. The complaint did not specify the amount of alleged damages. On December 31, 2021, plaintiffs filed an amended complaint, after which, on January 21, 2022, Robinhood and the market-maker defendants moved to transfer the case to the Northern District of California, or in the alternative, to dismiss the amended complaint. The motion for transfer was granted on July 1, 2022. The Company believes that the claims are without merit and is defending itself vigorously.

On March 7, 2022, the Company was named as a defendant in *Iron Workers Local No. 55 Pension Fund v. Virtu Financial, Inc.*, No. 2022-0211-PAF pending in the Court of Chancery of the State of Delaware. The complaint, filed by a purported stockholder, seeks to compel the inspection of certain Company books and records pursuant to Section 220 of the Delaware General Corporation Law. The complaint alleges that the stockholder seeks Company information to investigate (a) whether wrongdoing or mismanagement occurred in connection with distributions made to the partners of Virtu Financial pursuant to the Company's Up-C corporate structure; (b) the independence and disinterestedness of the Company's directors and/or officers and whether the directors breached their fiduciary duties; and (c) potential damages relating thereto. 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 increased regulatory, congressional and media scrutiny of U.S. equities market structure, the retail trading environment in the U.S., wholesale market making and the relationships between retail broker-dealers and market making firms, including but not limited to payment for order flow arrangements, other remuneration arrangements such as profit-sharing relationships and exchange fee and rebate structures, alternative trading systems and off-exchange trading more generally, high frequency trading, short selling, market fragmentation, colocation, and access to market data feeds. From time to time, the Company is the subject of requests for information and documents from the SEC, the Financial Industry Regulatory Authority ("FINRA"), state attorneys general, and other regulators and governmental authorities. 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 state, federal and foreign regulators and SROs, including the SEC and FINRA. In some instances, these matters may result in a disciplinary action and/or a civil or administrative action.

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, including indemnification obligations in connection with the Acquisition of KCG and the ITG Acquisition. 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.

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 primarily enters into lessee arrangements for corporate office space, data centers, and technology equipment. For more information on lease accounting, see Note 2 "Summary of Significant Accounting Policies" and Note 17 "Leases" to the Consolidated Financial Statements of the Company's 2021 Annual Report on Form 10-K.

Lease assets and liabilities are summarized as follows:

(in thousands)	Financial Statement Location		June 30, 2022		December 31, 2021
Operating leases					
Operating lease right-of-use assets	Operating lease right-of-use assets	$	208,476	$	225,328
Operating lease liabilities	Operating lease liabilities		257,673		278,745
Finance leases					
Property and equipment, at cost	Property, equipment, and capitalized software, net		29,924		18,965
Accumulated depreciation	Property, equipment, and capitalized software, net		(16,359)		(12,465)
Finance lease liabilities	Accounts payable, accrued expenses, and other liabilities		13,694		6,612

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

	June 30, 2022	December 31, 2021
Weighted average remaining lease term		
Operating leases	6.41 years	6.68 years
Finance leases	2.23 years	1.62 years
Weighted average discount rate		
Operating leases	5.40 %	5.47 %
Finance leases	2.75 %	2.38 %

The components of lease expense are as follows:

	Three Months Ended June 30,				Six Months Ended June 30,			
(in thousands)		2022		2021		2022		2021
Operating lease cost:								
Fixed	$	18,426	$	18,676	$	36,494	$	37,776
Variable		1,349		1,766		3,245		3,231
Impairment of ROU Asset		—		—		—		1,198
Total Operating lease cost	$	19,775	$	20,442	$	39,739	$	42,205
Sublease income		4,923		4,425		9,846		8,868
Finance lease cost:								
Amortization of ROU Asset	$	1,986	$	1,431	$	3,894	$	3,564
Interest on lease liabilities		96		59		174		133
Total Finance lease cost	$	2,082	$	1,490	$	4,068	$	3,697

Future minimum lease payments under operating and finance leases with non-cancelable lease terms, as of June 30, 2022, are as follows:

(in thousands)	Operating Leases	Finance Leases
2022	$ 39,970	$ 4,069
2023	65,275	6,076
2024	62,675	4,465
2025	34,200	600
2026	29,708	—
2027 and thereafter	98,435	—
Total lease payments	$ 330,263	$ 15,210
Less imputed interest	(72,590)	(1,516)
Total lease liability	$ 257,673	$ 13,694

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, 2022	December 31, 2021
Cash and cash equivalents	$ 810,649	$ 1,071,463
Cash restricted or segregated under regulations and other	39,121	49,490
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ 849,770	$ 1,120,953

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. The Founder Member controls approximately 84.6% of the combined voting power of our common stock as a result of its ownership of our Class A, Class C and Class D Common Stock. The Company holds approximately a 61.0% interest in Virtu Financial at June 30, 2022.

During the period prior to certain 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 these reorganization transactions, all Class A-2 profits interests and Class B interests were reclassified into Virtu Financial Units. As of June 30, 2022 and December 31, 2021, there were 4,462,840 and 4,791,839 Virtu Financial Units outstanding held by Employee Holdco (as defined below), respectively, and 328,999 and 427,903 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, 2022 and 2021 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, June 5, 2020 and June 2, 2022. 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 26,000,000 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 November 13, 2020, the Company amended its form award agreement for the issuance of RSUs to provide for the continued vesting of outstanding RSU awards upon the occurrence of a qualified retirement (the "RSU Amendment"). A qualified retirement generally means a voluntary resignation by the participant (i) after five years of service, (ii) the participant attaining the age of 50 and (iii) the sum of the participant's age and service at the time of termination equaling or exceeding 65. Continued vesting is subject to the participant entering into a 2 year non-compete. The RSU Amendment was authorized and approved by the Compensation Committee of the Company's Board of Directors. As a result of the RSU Amendment, currently issued and outstanding RSUs held by the Company's employees, including its executive officers, shall be deemed to be subject to the amended terms of the form award agreement, and any future RSU awards shall also be governed by such amended terms.

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.

Share Repurchase Program

On November 6, 2020, the Company's Board of Directors authorized a new share repurchase program of up to $100.0 million in Class A common stock and Virtu Financial Units by December 31, 2021. On February 11, 2021, the Company's Board of Directors authorized the expansion of the program by an additional $70 million in Class A Common Stock and Virtu Financial Units. On May 4, 2021, the Company's Board of Directors authorized the expansion of the Company's share repurchase program, increasing the total authorized amount by $300 million to $470 million in Class A Common Stock and Virtu Financial Units and extending the duration of the program through May 4, 2022. Additionally, on November 3, 2021 the Company's Board of Directors authorized the expansion of the program by an additional $750 million to $1,220 million and extending the duration of the program through November 3, 2023. The share repurchase program authorizes the Company to repurchase shares from time to time in open market transactions, privately negotiated transactions or by other means. Repurchases are also permitted to be made under Rule 10b5-1 plans. The timing and amount of repurchase transactions are determined by the Company's management based on its evaluation of market conditions, share price, cash sources, legal requirements and other factors. From the inception of the program through June 30, 2022, the Company repurchased approximately 26.8 million shares of Class A Common Stock and Virtu Financial Units for approximately $773.8 million. As of June 30, 2022, the Company has approximately $446.2 million remaining capacity for future purchases of shares of Class A Common Stock and Virtu Financial Units under the program.

Employee Exchanges

During the six months ended June 30, 2022, and 2021, 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 92,930, and 382,281 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.

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 8 "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 was entitled to purchase up to 3,000,000 shares of Class A Common Stock on or after May 22, 2020 up to and including January 15, 2022. If at any time during the term of the Founder Member Loan Facility, the Founder Member Loans equal to or greater than $100 million had remained outstanding for a certain period of time specified in the Warrant, the number of shares would have increased to 10,000,000. The Founder Member Loan Facility Term expired on September 20, 2020 without the Company having borrowed any Founder Member Loans thereunder (as described in Note 8 "Borrowings"). The exercise price per share of the Class A Common Stock issuable pursuant to the Warrant was $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. On December 17, 2021, the Founder Member exercised in full the Warrant to purchase 3,000,000 shares of the Company's Class A Common Stock. The Warrant and Class A Common Stock issued pursuant to the Warrant were offered, issued and sold, in reliance on the exemption from the registration requirements of the Securities Act of 1933, as amended (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.

Upon issuance, 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 Statements of Financial Condition and as an increase to Additional paid-in capital on the Condensed Consolidated Statements of Changes in Equity. The balance was amortized on a straight-line basis from March 20, 2020 through September 20, 2020, the date on which the Founder Member Loan Facility expired, and recorded as expense within Debt issue cost related to debt refinancing, prepayment and commitment fees in the Condensed Consolidated Statements of Comprehensive Income.

Accumulated Other Comprehensive Income

The following table presents the changes in Other Comprehensive Income for the three and six months ended June 30, 2022, and 2021:

	Three Months Ended June 30, 2022			
(in thousands)	**AOCI Beginning Balance**	**Amounts recorded in AOCI**	**Amounts reclassified from AOCI to income**	**AOCI Ending Balance**
Net change in unrealized cash flow hedges gains (losses) (1)	$ 18,906	$ 6,391	$ 2,189	$ 27,486
Foreign exchange translation adjustment	(2,887)	(10,773)	—	(13,660)
Total	$ 16,019	$ (4,382)	$ 2,189	$ 13,826

(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. As of June 30, 2022, the Company expects approximately $9.0 million to be reclassified from AOCI into earnings over the next 12 months. The timing of the reclassification is based on the interest payment schedule of the long-term borrowings.

	Three Months Ended June 30, 2021			
(in thousands)	**AOCI Beginning Balance**	**Amounts recorded in AOCI**	**Amounts reclassified from AOCI to income**	**AOCI Ending Balance**
Net change in unrealized cash flow hedges gains (losses) (1)	$ (20,837)	$ (7,872)	$ 3,757	$ (24,952)
Foreign exchange translation adjustment	5,792	43	—	5,835
Total	$ (15,045)	$ (7,829)	$ 3,757	$ (19,117)

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

	Six Months Ended June 30, 2022			
(in thousands)	**AOCI Beginning Balance**	**Amounts recorded in AOCI**	**Amounts reclassified from AOCI to income**	**AOCI Ending Balance**
Net change in unrealized cash flow hedges gains (losses) (1)	$ (10,481)	$ 32,797	$ 5,170	$ 27,486
Foreign exchange translation adjustment	285	(13,945)	—	(13,660)
Total	$ (10,196)	$ 18,852	$ 5,170	$ 13,826

(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. As of June 30, 2022, the Company expects approximately $9.0 million to be reclassified from AOCI into earnings over the next 12 months. The timing of the reclassification is based on the interest payment schedule of the long-term borrowings.

	Six Months Ended June 30, 2021			
(in thousands)	**AOCI Beginning Balance**	**Amounts recorded in AOCI**	**Amounts reclassified from AOCI to income**	**AOCI Ending Balance**
Net change in unrealized cash flow hedges gains (losses) (1)	$ (33,444)	$ 1,424	$ 7,068	$ (24,952)
Foreign exchange translation adjustment	7,957	(2,122)	—	5,835
Total	$ (25,487)	$ (698)	$ 7,068	$ (19,117)

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

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, 2022, and 2021:

	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, 2020	2,324,152	$ 19.00	4.24	2,324,152	$ 19.00
Granted	—	—	—	—	—
Exercised	(407,997)	19.00	—	(407,997)	19.00
Forfeited or expired	—	—	—	—	—
At June 30, 2021	1,916,155	$ 19.00	3.74	1,916,155	$ 19.00
At December 31, 2021	1,795,655	$ 19.00	3.24	1,795,655	$ 19.00
Granted	—	—	—	—	—
Exercised	(268,879)	19.00	—	(268,879)	19.00
Forfeited or expired	(5,000)	—	—	(5,000)	—
At June 30, 2022	1,521,776	$ 19.00	2.74	1,521,776	$ 19.00

The expected life was 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.

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, RSUs and 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, 2022, and 2021, respectively, there were 580,710, and 633,938 shares of immediately vested Class A Common Stock granted as part of year-end compensation. In addition, the Company accrued compensation expense of $9.6 million and $6.5 million for the three months ended June 30, 2022, and 2021, respectively, and $15.5 million, and $11.5 million for the six months ended June 30, 2022, and 2021, 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 RSUs (including the Assumed Awards) and RSAs for the six months ended June 30, 2022, and 2021:

	Number of RSUs and RSAs	Weighted Average Fair Value
At December 31, 2020	3,393,084	$ 21.35
Granted	2,106,795	27.35
Forfeited	(112,060)	22.63
Vested	(1,929,323)	23.27
At June 30, 2021	3,458,496	$ 23.89
At December 31, 2021	3,224,447	$ 24.30
Granted (1)	2,951,863	30.03
Forfeited	(322,220)	25.47
Vested	(1,669,030)	25.07
At June 30, 2022	4,185,060	$ 27.94

(1) Excluded in the number of RSUs and RSAs are 75,000 participating RSAs where the grant date has not been achieved because the performance conditions have not been met.

The Company recognized $9.5 million and $6.1 million for the three months ended June 30, 2022, and 2021, respectively, and $18.1 million, and $13.9 million for the six months ended June 30, 2022, and 2021, respectively, of compensation expense in relation to RSUs. As of June 30, 2022 and December 31, 2021, total unrecognized share-based compensation expense related to unvested RSUs was $79.5 million and $41.9 million, respectively, and this amount is to be recognized over a weighted average period of 1.5 years and 0.9 years, respectively. Awards in which the specific performance conditions have not been met are not included in unrecognized share-based compensation expense.

On November 13, 2020, the Company adopted the Virtu Financial, Inc. Deferred Compensation Plan (the "DCP"). The DCP permits eligible executive officers and other employees to defer cash or equity-based compensation beginning in the calendar year ending December 31, 2021, subject to certain limitations and restrictions. Deferrals of cash compensation may also be directed to notional investments in certain of the employee investment opportunities. The Company recognized $7.3 million as compensation cost under the DCP as of June 30, 2022.

19. Regulatory Requirement

U.S. Subsidiary

The Company's U.S. broker-dealer subsidiary, VAL, is subject to the SEC Uniform Net Capital Rule 15c3-1, which requires the maintenance of minimum net capital as detailed in the table below. Pursuant to New York Stock Exchange ("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, 2022. 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.

VAL's regulatory capital and regulatory capital requirements as of June 30, 2022 was as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Virtu Americas LLC	$ 523,360	$ 2,393	$ 520,967

As of June 30, 2022, VAL had $32.6 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 $5.8 million of cash in reserve bank accounts for the benefit of proprietary accounts of brokers. The balances are included within Cash restricted or segregated under regulations and other on the Condensed Consolidated Statements of Financial Condition.

VAL's regulatory capital and regulatory capital requirements as of December 31, 2021 was as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Virtu Americas LLC	$ 536,647	$ 1,194	$ 535,453

As of December 31, 2021, VAL had $43.0 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 $5.8 million 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 ("CBI"), the Financial Conduct Authority ("FCA") in the United Kingdom, the Australian Securities and Investments Commission ("ASIC"), the Securities and Futures Commission in Hong Kong ("SFC"), and the Monetary Authority of Singapore ("MAS").

The regulatory net capital balances and regulatory capital requirements applicable to the Company's foreign subsidiaries as of June 30, 2022 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Canada			
Virtu ITG Canada Corp	$ 12,865	$ 194	$ 12,671
Virtu Financial Canada ULC	197	194	3
Ireland			
Virtu ITG Europe Limited (1)	125,052	29,266	95,786
Virtu Financial Ireland Limited (1)	88,081	44,142	43,939
United Kingdom			
Virtu ITG UK Limited (1)	1,028	747	281
Asia Pacific			
Virtu ITG Australia Limited	32,692	13,168	19,524
Virtu ITG Hong Kong Limited	4,188	400	3,788
Virtu ITG Singapore Pte Limited	916	72	844
Virtu Financial Singapore Pte. Ltd.	135,281	62,129	73,152

(1) Preliminary

As of June 30, 2022, Virtu ITG Europe Limited and Virtu ITG Canada Corp had $0.2 million and $0.4 million, respectively, of segregated 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, 2021 were as follows:

(in thousands)	Regulatory Capital	Regulatory Capital Requirement	Excess Regulatory Capital
Canada			
Virtu ITG Canada Corp	$ 15,482	$ 198	$ 15,284
Virtu Financial Canada ULC	200	198	2
Ireland			
Virtu ITG Europe Limited	79,087	39,331	39,756
Virtu Financial Ireland Limited	107,293	47,872	59,421
United Kingdom			
Virtu ITG UK Limited	1,142	830	312
Asia Pacific			
Virtu ITG Australia Limited	32,186	7,164	25,022
Virtu ITG Hong Kong Limited	4,514	529	3,985
Virtu ITG Singapore Pte Limited	897	74	823

As of December 31, 2021, Virtu ITG Europe Limited and Virtu ITG Canada Corp had $0.1 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.

20. Geographic Information and Business Segments

The Company operates its business in the U.S. and internationally, primarily in Europe, Asia and Canada. 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, 2022, and 2021:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Revenues:				
United States	$ 485,744	$ 429,588	$ 1,035,193	$ 1,245,641
Ireland	58,072	66,106	136,030	187,475
Singapore	31,043	29,420	77,320	72,268
Canada	21,514	12,938	38,711	29,968
Australia	7,347	9,218	16,268	21,885
Others	1,018	1,695	2,478	4,300
Total revenues	$ 604,738	$ 548,965	$ 1,306,000	$ 1,561,537

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, 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, Electronic Communications Networks ("ECNs") and alternative trading systems ("ATSs"). The Company is an active participant on all major global equity and futures exchanges and also trades on substantially all domestic electronic options exchanges. As a complement to electronic market making, the cash trading business handles specialized orders and also transacts on the OTC 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, and POSIT. 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 segment also includes the results of the Company's capital markets business, in which the Company acts as an agent for issuers in connection with at-the-market offerings and buyback programs.

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, 2022 and 2021 and are summarized in the following table:

(in thousands)	Market Making	Execution Services	Corporate	Consolidated Total
2022:				
Total revenue	$ 432,595	$ 130,997	$ 41,146	$ 604,738
Income before income taxes and noncontrolling interest	125,446	7,887	40,451	173,784
2021:				
Total revenue	402,541	138,130	8,294	548,965
Income (loss) before income taxes and noncontrolling interest	124,571	4,058	6,373	135,002

The Company's Pre-tax earnings by segment for the six months ended June 30, 2022, and 2021 are summarized in the following table:

(in thousands)	Market Making	Execution Services	Corporate	Consolidated Total
2022				
Total revenue	$ 979,158	$ 282,742	$ 44,100	$ 1,306,000
Income before income taxes and noncontrolling interest	349,668	23,013	42,813	415,494
2021				
Total revenue	1,226,265	327,369	7,903	1,561,537
Income before income taxes and noncontrolling interest	577,848	44,409	2,532	624,789

21. Related Party Transactions

The Company incurs expenses and maintains balances with its affiliates in the ordinary course of business. As of June 30, 2022, and December 31, 2021 the Company had net receivables from its affiliates of $7.5 million and $2.2 million, respectively.

The Company has held a minority interest in JNX since 2016 (see Note 9 "Financial Assets and Liabilities"). The Company pays exchange fees to JNX for the trading activities conducted on its proprietary trading system. The Company paid $3.7 million and $3.4 million for the three months ended June 30, 2022 and 2021, respectively, $7.5 million and $6.3 million for the six months ended June 30, 2022 and 2021, respectively, to JNX for these trading activities.

The Company pays monthly use fees to two JVs in which it holds interests (see Note 11 "Variable Interest Entities"). These monthly fees are for the use of microwave communication networks operated by each of these JVs and are recorded within Communications and data processing on the Condensed Consolidated Statements of Comprehensive Income. The Company made payments to these JVs of $5.5 million and $4.7 million for the three months ended June 30, 2022 and 2021, respectively, and $10.9 million and $9.3 million for the six months ended June 30, 2022 and 2021, 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 made payments to Level 3 for these services of $0.2 million and $0.3 million for the three months ended June 30, 2022 and 2021, respectively, and $0.5 million and $0.7 million for the six months ended June 30, 2022 and 2021, respectively.

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. Payments made for the three and six months ended June 30, 2022 and 2021 were immaterial.

The Company has an interest in Members Exchange, a member-owned equities exchange. The Company pays regulatory and transaction fees and receives rebates from trading activities. The Company received rebates of $6.2 million and made payments of $0.1 million for the three months ended June 30, 2022 and 2021, respectively, and received rebates of $12.8 million and $0.7 million for the six months ended June 30, 2022 and 2021, respectively.

In the second quarter of 2022, the Company formed a JV to support the growth and expansion of a multi-asset request-for-quote communication platform. The Company consolidates this JV, and recorded noncontrolling interest of $39.2 million in the condensed consolidated statement of changes in equity as of June 30, 2022. Refer to Note 11 "Variable Interest Entities" for further details.

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 27, 2022, 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, 2022 to holders of record as of September 1, 2022.

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

The following management's discussion and analysis covers the three and six months ended June 30, 2022 and 2021 and should be read in conjunction with the condensed consolidated financial statements of Virtu Financial, Inc. (the Company") for the period ended June 30, 2022, which are in Part 1, Item 1 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, 2021, 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, 2021. 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 our Annual Report on Form 10-K for the year ended December 31, 2021, as filed with the Securities and Exchange Commission ("SEC") on February 18, 2022 (the "2021 Form 10-K"), 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 2021 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 risk of employees and executives contracting COVID-19 and the deployment of our business continuity plan pursuant to which a significant number of our employees may 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;
- volatility in 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;
- enhanced regulatory, congressional, and media scrutiny, including attention to electronic trading, wholesale market making and off-exchange trading, payment for order flow, and other market structure topics and both the impact of potential changes in regulation or law which could have an adverse effect on our business as well as the potential impact upon public perception of us or of companies in our industry;
- 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, including but limited to risks related to funding and liquidity;
- obligations to comply with applicable regulatory capital requirements;
- litigation or other legal and regulatory-based liabilities;

- changes in laws, rules or regulations, including proposed legislation that would impose taxes on certain financial transactions in the European Union, the U.S. (and certain states therein) and other jurisdictions and other potential changes which could increase our corporate or other tax obligations in one or more jurisdictions;
- obligations to comply with laws and regulations applicable to our operations in the U.S. and abroad;
- need to maintain and continue developing proprietary technologies;
- the effect of the Acquisition of KCG and the ITG Acquisition (each as defined below) on ongoing business operations generally, including the assumption of potential liabilities and risks relating to these historical acquisitions;
- 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, monetary payment demands 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, geopolitical conflicts, 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.

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.

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, cryptocurrencies 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.

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 other financial instruments, 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 and POSIT. 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. The segment also includes the results of our capital markets business, in which we act as an agent for issuers in connection with at-the-market offerings and buyback programs.

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 ITG

On March 1, 2019, the "ITG Closing Date", we announced the completion of Investment Technology Group, Inc. and its subsidiaries ("ITG") in an all-cash transaction (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 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 "Acquisition Credit Agreement"). The Acquisition Credit Agreement provided (i) a senior secured first lien term loan (together with the Acquisition Incremental Term Loans, as defined below; the "Acquisition First Lien Term Loan Facility") in an aggregate principal amount of $1,500.0 million, drawn in its entirety on the ITG Closing Date, of which approximately $404.5 million was borrowed by VFH to repay all amounts outstanding under a previous 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 (the "Acquisition 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, VFH entered into an amendment (“Amendment No. 1”), which amended the Acquisition Credit Agreement dated as of March 1, 2019, to, among other things, provide for $525.0 million in aggregate principal amount of incremental term loans (the “Acquisition Incremental Term Loans”), and amend the related collateral agreement. On March 2, 2020, VFH entered into a second amendment (“Amendment No. 2”), which further amended the Acquisition 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 step-down in the spread based on VFH's first lien leverage ratio.

On January 13, 2022 (the "Credit Agreement Closing Date"), VFH and Virtu Financial entered into the Credit Agreement, with the lenders party thereto, JPMorgan Chase Bank, N.A. as administrative agent and JPMorgan Chase bank, N.A., Goldman Sachs Bank USA, RBC Capital Markets, Barclays Bank plc, Jefferies Finance LLC, BMO Capital Markets Corp., and CIBC World Markets Corp., as joint lead arrangers and bookrunners (the “Credit Agreement”). The Credit Agreement provides (i) a senior secured first lien term loan in an aggregate principal amount of $1,800.0 million, drawn in its entirety on the Credit Agreement Closing Date, the proceeds of which were used by VFH to repay all amounts outstanding under the Acquisition Credit Agreement, to pay fees and expenses in connection therewith, to fund share repurchases under the Company’s repurchase program and for general corporate purposes, and (ii) a $250.0 million senior secured first lien revolving facility to VFH, with a $20.0 million letter of credit subfacility and a $20.0 million swingline subfacility.

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. On April 22, 2022, the Company’s Board of Directors adopted another 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 21,000,000 shares of Class A Common Stock to an aggregate of 26,000,000 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 2, 2022.

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, 2022, options to purchase 1,633,750 shares in the aggregate were forfeited and 6,072,474 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 Statements of Financial Condition as of June 30, 2022 in the amount of $13.2 million; (ii) deferred tax assets reflected on our Condensed Consolidated Statements of Financial Condition as of June 30, 2022 in the amount of $133.4 million and tax receivable agreement obligation in the amount of $237.9 million, in each case as described in greater detail in Note 4 "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 noncontrolling interest on our Condensed Consolidated Statements of Financial Condition as of June 30, 2022; and (iv) provision for corporate income tax in the amount of $13.7 million and $40.8 million reflected on our Condensed Consolidated Statements of Comprehensive Income for the three and six months ended June 30, 2022, 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, 2022, and 2021:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
Market Making	**2022**	**2021**	**2022**	**2021**
Total revenue	$ 432,595	$ 402,541	$ 979,158	$ 1,226,265
Total operating expenses	307,149	277,970	629,490	648,417
Income before income taxes and noncontrolling interest	125,446	124,571	349,668	577,848
Execution Services				
Total revenue	130,997	138,130	282,742	327,369
Total operating expenses	123,110	134,072	259,729	282,960
Income before income taxes and noncontrolling interest	7,887	4,058	23,013	44,409
Corporate				
Total revenue	41,146	8,294	44,100	7,903
Total operating expenses	695	1,921	1,287	5,371
Income before income taxes and noncontrolling interest	40,451	6,373	42,813	2,532
Consolidated				
Total revenue	604,738	548,965	1,306,000	1,561,537
Total operating expenses	430,954	413,963	890,506	936,748
Income before income taxes and noncontrolling interest	$ 173,784	$ 135,002	$ 415,494	$ 624,789

The following table shows our results of operations for the three and six months ended June 30, 2022, and 2021:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Revenues:				
Trading income, net	$ 395,928	$ 384,832	$ 918,235	$ 1,197,576
Interest and dividends income	30,792	9,545	51,804	16,541
Commissions, net and technology services	136,340	143,115	290,995	334,764
Other, net	41,678	11,473	44,966	12,656
Total revenue	604,738	548,965	1,306,000	1,561,537
Operating Expenses:				
Brokerage, exchange, clearance fees and payments for order flow, net	156,986	170,691	307,366	430,023
Communication and data processing	55,699	52,507	111,534	104,197
Employee compensation and payroll taxes	98,604	83,849	202,084	188,620
Interest and dividends expense	48,716	24,971	91,254	48,999
Operations and administrative	13,577	21,753	38,792	47,408
Depreciation and amortization	16,334	16,349	33,812	33,127
Amortization of purchased intangibles and acquired capitalized software	16,277	18,077	32,757	36,154
Termination of office leases	677	3,667	1,384	4,888
Debt issue cost related to debt refinancing, prepayment and commitment fees	1,437	1,989	27,121	3,744
Transaction advisory fees and expenses	558	(3)	980	(17)
Financing interest expense on long-term borrowings	22,089	20,113	43,422	39,605
Total operating expenses	430,954	413,963	890,506	936,748
Income before income taxes and noncontrolling interest	173,784	135,002	415,494	624,789
Provision for income taxes	24,888	26,095	66,674	106,650
Net income	$ 148,896	$ 108,907	$ 348,820	$ 518,139

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 comprises of small amounts earned on millions of trades on various exchanges. 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 70% and 77% of our total revenues for the six months ended June 30, 2022 and 2021, 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 “JNX Investment”) in Japannext Co., Ltd. (“JNX”), a proprietary trading system based in Tokyo. In connection with the investment, we issued bonds to certain affiliates of JNX 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.

Other, net can also include gains on sales of strategic investments and businesses, as well as revenues from service agreements related to the sale of businesses.

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. 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 cost 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 cost 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 one or more acquisitions or dispositions.

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, and foreign 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. We also disclose Adjusted Net Trading Income by segment, including daily averages. Management believes that Adjusted Net Trading Income 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, reserves for legal matters, transaction advisory fees and expenses, termination of office leases, charges related to share-based compensation and other expenses, which includes 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 gains and losses from strategic investments and the sales of businesses, 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. 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 consolidated 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, 2022, and 2021.

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Reconciliation of Trading income, net to Adjusted Net Trading Income				
Trading income, net	$ 395,928	$ 384,832	$ 918,235	$ 1,197,576
Interest and dividends income	30,792	9,545	51,804	16,541
Commissions, net and technology services	136,340	143,115	290,995	334,764
Brokerage, exchange, clearance fees and payments for order flow, net	(156,986)	(170,691)	(307,366)	(430,023)
Interest and dividends expense	(48,716)	(24,971)	(91,254)	(48,999)
Adjusted Net Trading Income	$ 357,358	$ 341,830	$ 862,414	$ 1,069,859
Reconciliation of Net Income to EBITDA and Adjusted EBITDA				
Net income	$ 148,896	$ 108,907	$ 348,820	$ 518,139
Financing interest expense on long-term borrowings	22,089	20,113	43,422	39,605
Debt issue cost related to debt refinancing, prepayment, and commitment fees	1,437	1,989	27,121	3,744
Depreciation and amortization	16,334	16,349	33,812	33,127
Amortization of purchased intangibles and acquired capitalized software	16,277	18,077	32,757	36,154
Provision for income taxes	24,888	26,095	66,674	106,650
EBITDA	$ 229,921	$ 191,530	$ 552,606	$ 737,419
Severance	757	1,020	2,759	3,039
Transaction advisory fees and expenses	558	(3)	980	(17)
Termination of office leases	677	3,667	1,384	4,888
Other	(41,631)	(11,434)	(37,369)	(8,603)
Share based compensation	18,997	12,552	32,709	25,330
Adjusted EBITDA	$ 209,279	$ 197,332	$ 553,069	$ 762,056
Selected Operating Margins				
Net Income Margin (1)	41.7 %	31.9 %	40.4 %	48.4 %
EBITDA Margin (2)	64.3 %	56.0 %	64.1 %	68.9 %
Adjusted EBITDA Margin (3)	58.6 %	57.7 %	64.1 %	71.2 %

(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, 2022, and 2021:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except share and per share data)	**2022**	**2021**	**2022**	**2021**
Reconciliation of Net Income to Normalized Adjusted Net Income				
Net income	$ 148,896	$ 108,907	$ 348,820	$ 518,139
Provision for income taxes	24,888	26,095	66,674	106,650
Income before income taxes	173,784	135,002	415,494	624,789
Amortization of purchased intangibles and acquired capitalized software	16,277	18,077	32,757	36,154
Debt issue cost related to debt refinancing, prepayment, and commitment fees	1,437	1,989	27,121	3,744
Severance	757	1,020	2,759	3,039
Transaction advisory fees and expenses	558	(3)	980	(17)
Termination of office leases	677	3,667	1,384	4,888
Other	(41,631)	(11,434)	(37,369)	(8,603)
Share based compensation	18,997	12,552	32,709	25,330
Normalized Adjusted Net Income before income taxes	170,856	160,870	475,835	689,324
Normalized provision for income taxes (1)	41,006	38,609	114,201	165,438
Normalized Adjusted Net Income	$ 129,850	$ 122,261	$ 361,634	$ 523,886
Weighted Average Adjusted shares outstanding (2)	178,886,524	194,770,445	181,017,758	195,861,065
Normalized Adjusted EPS	$ 0.73	$ 0.63	$ 2.00	$ 2.67

(1) Reflects U.S. federal, state, and local income tax rate applicable to corporations of approximately 24% for all periods presented.
(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, 2022, and 2021.

The following tables reconcile Trading income, net to Adjusted Net Trading Income by segment for the three and six months ended June 30, 2022, and 2021:

	Three Months Ended June 30, 2022			
(in thousands)	**Market Making**	**Execution Services**	**Corporate**	**Total**
Trading income, net	$ 390,263	$ 5,665	$ —	$ 395,928
Commissions, net and technology services	11,145	125,195	—	136,340
Interest and dividends income	30,792	—	—	30,792
Brokerage, exchange, clearance fees and payments for order flow, net	(131,121)	(25,865)	—	(156,986)
Interest and dividends expense	(47,355)	(1,361)	—	(48,716)
Adjusted Net Trading Income	$ 253,724	$ 103,634	$ —	$ 357,358

	Three Months Ended June 30, 2021			
(in thousands)	**Market Making**	**Execution Services**	**Corporate**	**Total**
Trading income, net	$ 380,644	$ 4,188	$ —	$ 384,832
Commissions, net and technology services	9,087	134,028	—	143,115
Interest and dividends income	9,569	(24)	—	9,545
Brokerage, exchange, clearance fees and payments for order flow, net	(144,784)	(25,907)	—	(170,691)
Interest and dividends expense	(22,442)	(2,529)	—	(24,971)
Adjusted Net Trading Income	$ 232,074	$ 109,756	$ —	$ 341,830

	Six Months Ended June 30, 2022			
(in thousands)	**Market Making**	**Execution Services**	**Corporate**	**Total**
Trading income, net	$ 906,621	$ 11,614	$ —	$ 918,235
Commissions, net and technology services	20,194	270,801	—	290,995
Interest and dividends income	51,775	29	—	51,804
Brokerage, exchange, clearance fees and payments for order flow, net	(254,636)	(52,730)	—	(307,366)
Interest and dividends expense	(88,382)	(2,872)	—	(91,254)
Adjusted Net Trading Income	$ 635,572	$ 226,842	$ —	$ 862,414

	Six Months Ended June 30, 2021			
(in thousands)	**Market Making**	**Execution Services**	**Corporate**	**Total**
Trading income, net	$ 1,181,926	$ 15,650	$ —	$ 1,197,576
Commissions, net and technology services	23,217	311,547	—	334,764
Interest and dividends income	16,469	72	—	16,541
Brokerage, exchange, clearance fees and payments for order flow, net	(367,978)	(62,045)	—	(430,023)
Interest and dividends expense	(46,436)	(2,563)	—	(48,999)
Adjusted Net Trading Income	$ 807,198	$ 262,661	$ —	$ 1,069,859

The following table shows our Adjusted Net Trading Income and average daily Adjusted Net Trading Income by segment for the three and six months ended June 30, 2022, and 2021:

Adjusted Net Trading Income by Segment (in thousands):	Three Months Ended June 30, 2022	2021	% Change
Market Making	$ 253,724	$ 232,074	9.3%
Execution Services	103,634	109,756	(5.6)%
Adjusted Net Trading Income	$ 357,358	$ 341,830	4.5%

Average Daily Adjusted Net Trading Income by Segment (in thousands):	Three Months Ended June 30, 2022	2021	% Change
Market Making	$ 4,092	$ 3,684	11.1%
Execution Services	1,672	1,742	(4.0)%
Average Daily Adjusted Net Trading Income	$ 5,764	$ 5,426	6.2%

Adjusted Net Trading Income by Segment (in thousands):	Six Months Ended June 30, 2022	2021	% Change
Market Making	$ 635,572	$ 807,198	(21.3)%
Execution Services	226,842	262,661	(13.6)%
Adjusted Net Trading Income	$ 862,414	$ 1,069,859	(19.4)%

Average Daily Adjusted Net Trading Income by Segment (in thousands):	Six Months Ended June 30, 2022	2021	% Change
Market Making	$ 5,126	$ 6,510	(21.3)%
Execution Services	1,829	2,118	(13.6)%
Average Daily Adjusted Net Trading Income	$ 6,955	$ 8,628	(19.4)%

Three Months Ended June 30, 2022 Compared to Three Months Ended June 30, 2021

Total Revenues

Our total revenues increased $55.8 million, or 10.2%, to $604.7 million for the three months ended June 30, 2022, compared to $549.0 million for the three months ended June 30, 2021. The increase was primarily due to by an increase of $30.2 million in Other, net, which was driven by gains recorded on sales of various strategic investments, as well as an increase of $21.2 million in Interest and dividends income which is largely driven by the level of trading assets held over periods when dividends are paid, and the levels of stock borrowing and trading asset financing during the three months ended June 30, 2022 compared to the same period in 2021. Trading income, net increased 2.9% to $395.9 million from $384.8 million for the three months ended June 30, 2022 and 2021, respectively.

The following table shows total revenues by segment for the three months ended June 30, 2022 and 2021.

(in thousands, except for percentage)	Three Months Ended June 30, 2022	2021	% Change
Market Making			
Trading income, net	$ 390,263	$ 380,644	2.5%
Interest and dividends income	30,792	9,569	221.8%
Commissions, net and technology services	11,145	9,087	22.6%
Other, net	395	3,241	(87.8)%
Total revenues from Market Making	$ 432,595	$ 402,541	7.5%
Execution Services			
Trading income, net	$ 5,665	$ 4,188	35.3%
Interest and dividends income	—	(24)	(100.0)%
Commissions, net and technology services	125,195	134,028	(6.6)%
Other, net	137	(62)	NM
Total revenues from Execution Services	$ 130,997	$ 138,130	(5.2)%
Corporate			
Other, net	$ 41,146	$ 8,294	396.1%
Total revenues from Corporate	$ 41,146	$ 8,294	396.1%
Consolidated			
Trading income, net	$ 395,928	$ 384,832	2.9%
Interest and dividends income	30,792	9,545	222.6%
Commissions, net and technology services	136,340	143,115	(4.7)%
Other, net	41,678	11,473	263.3%
Total revenues	$ 604,738	$ 548,965	10.2%

Trading income, net. Trading income, net was primarily earned by our Market Making segment. Trading income, net increased $11.1 million, or 3%, to $395.9 million for the three months ended June 30, 2022, compared to $384.8 million for the three months ended June 30, 2021. The increase was primarily driven by the higher market volumes and volatility across global markets and major asset categories during the three months ended June 30, 2022 compared to the same period in 2021. Average daily U.S. equity consolidated volumes increased 19%, average daily realized volatility of the S&P 500 Index increased 155%, and average daily CVIX volatility increased 120% in the period compared to the prior period, driven by macroeconomic conditions, including increased inflation, uncertainty around geopolitical developments in eastern Europe, and the governmental and other responses thereto. There was also one less trading day in the three months ended June 30, 2022 than the same period in 2021. 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 increased $21.2 million, or 222.6%, to $30.8 million for the three months ended June 30, 2022, compared to $9.5 million for the three months ended June 30, 2021. This increase was primarily attributable to the higher dividends earned on market making trading assets held over periods when dividends are paid along with an increase in interest income earned on cash collateral posted as part of securities borrowing transactions and interest earned on balances maintained at prime brokers, both of which benefited from higher interest rates for the period compared to the same period during the prior year. 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 decreased $6.8 million, or 4.7%, to $136.3 million for the three months ended June 30, 2022, compared to $143.1 million for the three months ended June 30, 2021. There was one less trading day in the three months ended June 30, 2022 than the same period in 2021. 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.

Other, net. Other, net increased $30.2 million, or 263.3%, to $41.7 million for the three months ended June 30, 2022, compared to $11.5 million for the three months ended June 30, 2021. The increase was primarily due to gains recognized during the 2022 period on sales of investments in our strategic investments portfolio.

Adjusted Net Trading Income

Adjusted Net Trading Income, which is a non-GAAP measure, increased $15.5 million, or 4.5%, to $357.4 million for the three months ended June 30, 2022, compared to $341.8 million for the three months ended June 30, 2021. This increase was primarily attributable to higher Trading income, net in the Market Making segment driven by higher market volumes and volatility across major asset categories during the three months ended June 30, 2022 compared to the same period in 2021, as noted above, and lower Brokerage, exchange, clearing fees and payments for order flow, net as described below. Adjusted Net Trading Income per day increased $0.3 million, or 6.2%, to $5.8 million for the three months ended June 30, 2022, compared to $5.4 million for the three months ended June 30, 2021. Although average Adjusted Net Trading Income per day increased, there was one less trading day in the three months ended June 30, 2022 than the same period in 2021. 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 $17.0 million, or 4.1%, to $431.0 million for the three months ended June 30, 2022, compared to $414.0 million for the three months ended June 30, 2021. The increase in operating expenses is primarily due to an increase in Employee compensation and payroll taxes, and Interest and dividends expense, partially offset by decreases in Brokerage, exchange, clearance fees and payments for order flow, net, and Operations and administrative, 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, decreased $13.7 million, or 8.0%, to $157.0 million for the three months ended June 30, 2022, compared to $170.7 million for the three months ended June 30, 2021. These costs vary period to period based upon the level and composition of our trading activities. 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 $3.2 million, or 6.1%, to $55.7 million for the three months ended June 30, 2022, compared to $52.5 million for the three months ended June 30, 2021. This increase was primarily due to increased connectivity spending on colocation, subscriber connections and trading membership fees.

Employee compensation and payroll taxes. Employee compensation and payroll taxes increased $14.8 million, or 17.6%, to $98.6 million for the three months ended June 30, 2022, compared to $83.8 million for the three months ended June 30, 2021. The increase in compensation levels was primarily attributable to an increase in salaries and an increase in share-based compensation related to prior year incentive awards and the portion of anticipated current year incentive awards that is accrued in the current period.

We have capitalized and therefore excluded employee compensation and benefits related to software development of $8.3 million and $8.9 million for the three months ended June 30, 2022, and 2021, respectively.

Interest and dividends expense. Interest and dividends expense increased $23.7 million or 95.1% to $48.7 million for the three months ended June 30, 2022, compared to $25.0 million for the three months ended June 30, 2021. This increase was primarily attributable to higher dividend expense with respect to securities sold, not yet purchased and higher interest expense incurred on cash collateral received as part of securities lending transactions and higher financing costs with respect to trading assets driven by higher interest rates. 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 $8.2 million or 37.6% to $13.6 million for the three months ended June 30, 2022, compared to $21.8 million for the three months ended June 30, 2021. This decrease was primarily driven by the beneficial effect of a strong U.S. dollar on foreign exchange translation gains during the three months ended June 30, 2022.

Depreciation and amortization. Depreciation and amortization remained consistent at $16.3 million both for the three months ended June 30, 2022, and June 30, 2021.

Amortization of purchased intangibles and acquired capitalized software. Amortization of purchased intangibles and acquired capitalized software decreased $1.8 million, or 10.0%, to $16.3 million for the three months ended June 30, 2022, compared to $18.1 million for the three months ended June 30, 2021. This decrease was due to certain intangible assets being fully amortized.

Termination of office leases. Termination of office leases decreased $3.0 million or 81.5% to $0.7 million for the three months ended June 30, 2022, compared to $3.7 million for the three months ended June 30, 2021. The expenses incurred during the period ended June 30, 2021 primarily related to the effort to integrate and consolidate office space in connection with the ITG Acquisition.

Debt issue cost related to debt refinancing, prepayment and commitment fees. Expense from debt issue cost related to debt refinancing, prepayment and commitment fees decreased $0.6 million, or 27.8%, to $1.4 million for the three months ended June 30, 2022, compared to $2.0 million for the three months ended June 30, 2021. The decrease was primarily driven by the acceleration of deferred debt issuance costs as a result of refinancing our long-term debt transaction in January 2022, as described in further detail below.

Transaction advisory fees and expenses. Transaction advisory fees and expenses remained consistent at $0.6 million for the three months ended June 30, 2022, compared to immaterial amounts incurred during the three months ended June 30, 2021. These expenses were primarily incurred in relation to our strategic investment portfolio.

Financing interest expense on long-term borrowings. Financing interest expense on long-term borrowings increased $2.0 million or 9.8% to $22.1 million for the three months ended June 30, 2022, compared to $20.1 million for the three months ended June 30, 2021.The increase was primarily attributable to the increase in outstanding principal as a result of refinancing our long-term debt transaction in January 2022, as described in further detail below.

Provision for 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 and effective tax rates were $24.9 million and 14.3% for the three months ended June 30, 2022, compared to $26.1 million and 19.3% for the three months ended June 30, 2021.

Six Months Ended June 30, 2022 Compared to Six Months Ended June 30, 2021

Total Revenues

Our total revenues decreased $255.5 million, or 16.4%, to $1,306.0 million for the six months ended June 30, 2022, compared to $1,561.5 million for the six months ended June 30, 2021. This decrease was primarily attributable to a decrease of $279.3 million in Trading income, net, which was primarily driven by lower market volatility during the six months ended June 30, 2022 compared to the prior period. This decrease was offset, in part, by an increase of $32.3 million in Other, net, which was driven by gains recorded on sales of various strategic investments, as well as an increase of $35.3 million in Interest and dividends income which is largely driven by the level of trading assets held over periods when dividends are paid, and the levels of stock borrowing and trading asset financing during the six months ended June 30, 2022 compared to the same period in 2021.

The following table shows the total revenues by segment for the six months ended June 30, 2022 and 2021.

	Six Months Ended June 30,		
(in thousands, except for percentage)	**2022**	**2021**	**% Change**
Market Making			
Trading income, net	$ 906,621	$ 1,181,926	(23.3)%
Interest and dividends income	51,775	16,469	214.4%
Commissions, net and technology services	20,194	23,217	(13.0)%
Other, net	568	4,653	(87.8)%
Total revenues from Market Making	$ 979,158	$ 1,226,265	(20.2)%
Execution Services			
Trading income, net	$ 11,614	$ 15,650	(25.8)
Interest and dividends income	29	72	(59.7)%
Commissions, net and technology services	270,801	311,547	(13.1)%
Other, net	298	100	198%
Total revenues from Execution Services	$ 282,742	$ 327,369	(13.6)%
Corporate			
Other, net	$ 44,100	$ 7,903	458.0%
Total revenues from Corporate	$ 44,100	$ 7,903	458.0%
Consolidated			
Trading income, net	$ 918,235	$ 1,197,576	(23.3)%
Interest and dividends income	51,804	16,541	213.2%
Commissions, net and technology services	290,995	334,764	(13.1)%
Other, net	44,966	12,656	255.3%
Total revenues	$ 1,306,000	$ 1,561,537	(16.4)%

Trading income, net. Trading income, net was primarily earned by our Market Making segment. Trading income, net, decreased $279.3 million, or 23.3%, to $918.2 million for the six months ended June 30, 2022, compared to $1,197.6 million for the six months ended June 30, 2021. The decrease was largely a result of lower trading income in the first quarter of 2022, driven by lower market volumes as compared to the same period in 2021. 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 increased $35.3 million, or 213.2%, to $51.8 million for the six months ended June 30, 2022, compared to $16.5 million for the six months ended June 30, 2021. This increase was primarily attributable to higher dividends earned on market making trading assets held over periods when dividends are paid, along with an increase in interest income earned on cash collateral posted as part of securities borrowed transactions, both of which benefited from higher interest rates for the period 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 decreased $43.8 million, or 13.1%, to $291.0 million for the six months ended June 30, 2022, compared to $334.8 million for the six months ended June 30, 2021.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.

Other, net. Other, net increased $32.3 million, or 255.3%, to $45.0 million for the six months ended June 30, 2022, compared to $12.7 million for the six months ended June 30, 2021. The increase was primarily due to gains recognized during the 2022 period from sales of investments in our strategic investments portfolio.

Adjusted Net Trading Income

Adjusted Net Trading Income, which is a non-GAAP measure, decreased $207.4 million, or 19.4%, to $862.4 million for the six months ended June 30, 2022, compared to $1,069.9 million for the six months ended June 30, 2021. This decrease was primarily attributable to lower Trading Income, net as noted above, partially offset by lower Brokerage, exchange, clearance fees and payments for order flow, net as described below, incurred by Market Making. Adjusted Net Trading Income per day decreased $1.6 million, or 19.4%, to $7.0 million for the six months ended June 30, 2022, compared to $8.6 million for the six months ended June 30, 2021. The number of trading days was 124 days for both the six months ended June 30, 2022 and June 30, 2021. 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 decreased $46.2 million, or 4.9%, to $890.5 million for the six months ended June 30, 2022, compared to $936.7 million for the six months ended June 30, 2021. The decrease in operating expenses was primarily due to lower Brokerage, exchange, clearance fees and payments for order flow, net, partially offset by increases in Debt issue cost related to debt refinancing, prepayment, and commitment fees, and Interest and dividends expense.

Brokerage, exchange, clearance fees and payments for order flow, net. Brokerage, exchange, clearance fees and payments for order flow, net, decreased $122.7 million, or 28.5%, to $307.4 million for the six months ended June 30, 2022, compared to $430.0 million for the six months ended June 30, 2021. These costs vary period to period based upon the level and composition of our trading activities. 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 $7.3 million, or 7.0%, to $111.5 million for the six months ended June 30, 2022, compared to $104.2 million for the six months ended June 30, 2021. This increase was primarily attributable to increased connectivity spending on colocation, subscriber connections and trading membership fees.

Employee compensation and payroll taxes. Employee compensation and payroll taxes increased $13.5 million, or 7.1%, to $202.1 million for the six months ended June 30, 2022, compared to $188.6 million for the six months ended June 30, 2021. The increase in compensation levels was primarily attributable to an increase in salaries and an increase in share-based compensation related to prior year incentive awards and the portion of anticipated current year incentive awards that is accrued in the current period.

We have capitalized and therefore excluded employee compensation and benefits related to software development of $16.7 million and $18.0 million for the six months ended June 30, 2022 and 2021, respectively.

Interest and dividends expense. Interest and dividends expense increased $42.3 million, or 86.2%, to $91.3 million for the six months ended June 30, 2022, compared to $49.0 million for the six months ended June 30, 2021. This increase was primarily attributable to higher dividend expense with respect to securities sold, not yet purchased and higher interest expense incurred on cash collateral received driven by higher interest rates, as well as an increase in securities lending transactions for the period compared to the same period during the prior year. 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 $8.6 million, or 18.2%, to $38.8 million for the six months ended June 30, 2022, compared to $47.4 million for the six months ended June 30, 2021. The decrease was primarily driven by the beneficial effect of a strong U.S. dollar on foreign exchange translation gains during the six months ended June 30, 2022.

Depreciation and amortization. Depreciation and amortization increased $0.7 million, or 2.1%, to $33.8 million for the six months ended June 30, 2022, compared to $33.1 million for the six months ended June 30, 2021. 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 $3.4 million, or 9.4%, to $32.8 million for the six months ended June 30, 2022, compared to $36.2 million for the six months ended June 30, 2021. This decrease was primarily attributable to certain intangible assets being fully amortized in 2021.

Termination of office leases. Termination of office leases was $1.4 million for the six months ended June 30, 2022, compared to $4.9 million for the six months ended June 30, 2021. These expenses are related to the impairment of leasehold improvements and fixed assets for certain abandoned office space.

Debt issue cost related to debt refinancing, prepayment and commitment fees. Expense from debt issue cost related to debt refinancing, prepayment and commitment fees increased $23.4 million, or 624.4%, to $27.1 million for the six months ended June 30, 2022, compared to $3.7 million for the six months ended June 30, 2021. The increase was primarily driven by the acceleration of deferred debt issuance costs as a result of refinancing our long-term debt transaction in January 2022. See Note 8 "Borrowings" of Part I Item 1 “Financial Statements” of this Quarterly Report on Form 10-Q for additional details.

Transaction advisory fees and expenses. Transaction advisory fees and expenses were $1.0 million for the six months ended June 30, 2022, compared to immaterial amounts for the six months ended June 30, 2021. These expenses were primarily incurred in relation to our strategic investment portfolio.

Financing interest expense on long term borrowings. Financing interest expense on long-term borrowings increased $3.8 million, or 9.6%, to $43.4 million for the six months ended June 30, 2022, compared to $39.6 million for the six months ended June 30, 2021. This increase was primarily attributable to the increase in outstanding principal as a result of refinancing our long-term debt in January 2022, as described in further detail below.

Provision for 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 and effective tax rates were $66.7 million, and 16.0% for the six months ended June 30, 2022, compared to a provision for income taxes of $106.7 million, and 17.1% for the six months ended June 30, 2021.

Liquidity and Capital Resources

General

As of June 30, 2022, we had $810.6 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, 2022, we had borrowings under our prime brokerage credit facilities of approximately $218.4 million, borrowings under our broker dealer facilities of $158.0 million, and long-term debt outstanding in an aggregate principal amount of approximately $1,825.8 million.

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 U.S. broker-dealer subsidiary, as discussed in Note 8 "Borrowings" of Part I Item 1 “Financial Statements” of this Quarterly Report on Form 10-Q.

Short-term Liquidity and Capital Resources

Based on our current level of operations, we believe our cash flows from operations, available cash and cash equivalents, and available borrowings under our broker-dealer credit facilities will be adequate to meet our future liquidity needs for 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 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.

Long-term Liquidity and Capital Resources

Our principal demand for funds beyond the next twelve months will be payments on our long-term debt, operating lease payments, common stock repurchases under our share repurchase program, and dividend payments. Based on our current level of operations, we believe our cash flow from operations, and ability to raise funding, notably the refinancing of our term loan in January 2022, will be sufficient to fund capital demands.

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 4 "Tax Receivable Agreements" of Part I Item 1 “Financial Statements” of this Quarterly Report on Form 10-Q are expected to range from approximately $0.4 million to $22.0 million per year over the next 15 years. Such payments will occur only after we have filed our U.S. federal and state income tax returns and realized the cash tax savings from the favorable tax attributes. We made our first payment of $7.0 million in February 2017, and subsequent payments of $12.4 million in September 2018, $13.3 million in March 2020, $16.5 million in April 2021, and $21.3 million in March 2022. 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 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

Our principal U.S. subsidiary, Virtu Americas LLC ("VAL") is subject to separate regulation and capital requirements in the U.S. and other jurisdictions. VAL is a registered U.S. broker-dealer, and its primary regulators include the SEC and the Financial Industry Regulatory Authority ("FINRA").

The SEC and FINRA impose rules that require notification when regulatory capital falls below certain pre-defined criteria. These rules also dictate the ratio of debt-to-equity in the regulatory capital composition of a broker-dealer and constrain the ability of a broker-dealer to expand its business under certain circumstances. If a firm fails to maintain the required regulatory capital, it may be subject to suspension or revocation of registration by the applicable regulatory agency, and suspension or expulsion by these regulators could ultimately lead to the firm’s liquidation. Additionally, certain applicable rules impose requirements that may have the effect of prohibiting a broker-dealer from distributing or withdrawing capital and requiring prior notice to and/or approval from the SEC and FINRA for certain capital withdrawals. VAL 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. 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. Our Irish subsidiaries, Virtu Financial Ireland Limited ("VFIL") and Virtu ITG Europe Limited ("VIEL") 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, VFIL and VIEL 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 and Investments Commission, the Securities and Futures Commission of Hong Kong, 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 8 "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, 2022, the outstanding principal balance on our broker-dealer facilities was $158.0 million and the outstanding aggregate short-term credit facilities with various prime brokers and other financial institutions from which the Company receives execution or clearing services was approximately $218.4 million, which was netted within Receivables from broker-dealers and clearing organizations on the Condensed Consolidated Statements of Financial Condition of Part I Item 1 “Financial Statements” of this Quarterly Report on Form 10-Q.

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 were available to be borrowed in one or more borrowings on or after March 20, 2020 and prior to September 20, 2020, though no borrowings were made during such period, which is now expired. 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 Founder Member Loan Facility, the Company delivered to the Founder Member a warrant to purchase shares of the Company’s Class A Common Stock, as described below.

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 was entitled to purchase up to 3,000,000 shares of Class A Common Stock on or after May 22, 2020 up to and including January 15, 2022. If at any time during the term of the Founder Member Loan Facility, the Founder Member Loans equal to or greater than $100 million had remained outstanding for a certain period of time specified in the Warrant, the number of shares would have increased to 10,000,000. The exercise price per share of the Class A Common Stock issuable pursuant to the Warrant was $22.98. The Warrant was exercised on December 17, 2021 for the full 3,000,000 shares of the Company's Class A Common Stock. The Warrant and Class A Common Stock issued pursuant to the Warrant were offered, 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.

Credit Agreement

On January 13, 2022 (the “Credit Agreement Closing Date”), Virtu Financial, VFH Parent LLC, a Delaware limited liability company and a subsidiary of Virtu Financial (“VFH”), entered into the Credit Agreement, with the lenders party thereto, JPMorgan Chase Bank, N.A. as administrative agent and JPMorgan Chase bank, N.A., Goldman Sachs Bank USA, RBC Capital Markets, Barclays Bank plc, Jefferies Finance LLC, BMO Capital Markets Corp., and CIBC World Markets Corp., as joint lead arrangers and bookrunners (the “Credit Agreement”). On the Credit Agreement Closing Date, VFH and Virtu Financial entered into the Credit Agreement. The Credit Agreement provides (i) a senior secured first lien term loan in an aggregate principal amount of $1,800.0 million, drawn in its entirety on the Credit Agreement Closing Date, the proceeds of which were used by VFH to repay all amounts outstanding under the Acquisition Credit Agreement, to pay fees and expenses in connection therewith, to fund share repurchases under the Company’s repurchase program and for general corporate purposes, and (ii) a $250.0 million senior secured first lien revolving facility to VFH, with a $20.0 million letter of credit subfacility and a $20.0 million swingline subfacility.

In connection with the ITG Acquisition, Virtu Financial, VFH and the Acquisition Borrower entered into the Acquisition 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 Acquisition Credit Agreement provided (i) the Acquisition First Lien Term Loan Facility in an aggregate principal amount of $1,500.0 million, drawn in its entirety on the ITG Closing Date, of which approximately $404.5 million was borrowed by VFH to repay all amounts outstanding under a previous term loan facility and the remaining approximately $1,095 million was borrowed by the Acquisition Borrower to finance the consideration and fees and expenses paid in connection with the ITG Acquisition, and (ii) the $50 million Acquisition First Lien Revolving Facility, with a $5.0 million letter of credit subfacility and a $5.0 million swing-line 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, VFH entered into Amendment No. 1, which amended the Acquisition Credit Agreement dated as of March 1, 2019, to, among other things, provide for $525.0 million in aggregate principal amount of the Acquisition Incremental Term Loans, and amend the related collateral agreement. On March 2, 2020, VFH entered into Amendment No. 2, which further amended the Acquisition 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 step-down in the spread based on VFH's first lien leverage ratio. There were no outstanding borrowings under the Acquisition Credit Agreement as of June 30, 2022

The term loan borrowings and revolver borrowings under the 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 term SOFR rate with an interest period of one month plus 1.00% and (d)(1) in the case of term loan borrowings, 1.50% and (2) in the case of revolver borrowings, 1.00%, plus, (x) in the case of term loan borrowings, 2.00% and (y) in the case of revolver borrowings, 1.50% or (ii) the greater of (a) an adjusted term SOFR rate for the interest period in effect and (b) (1) in the case of term loan borrowings, 0.50% and (2) in the case of revolver borrowings, 0.00%, plus, (x) in the case of term loan borrowings, 3.00% and (y) in the case of revolver borrowings, 2.50%. In addition, a commitment fee accrues at a rate of 0.50% per annum on the average daily unused amount of the revolving facility, with step-downs to 0.375% and 0.25% per annum based on VFH’s first lien leverage ratio, and is payable quarterly in arrears.

The revolving facility under the Credit Agreement is subject to a springing net first lien leverage ratio which may spring into effect as of the last day of a fiscal quarter 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.

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

Under the Credit Agreement, the term loans will mature on January 13, 2029. 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 January 13, 2025. As of June 30, 2022, $1,800.0 million was outstanding under the term loans. We were in compliance with all applicable covenants under the Credit Agreement as of June 30, 2022.

In October 2019, the Company entered into a five-year $525.0 million floating-to-fixed interest rate swap agreement. In January 2020, the Company entered into a five-year $1,000.0 million floating-to-fixed interest rate swap agreement. These two interest rate swaps met the criteria to be considered and were designated as qualifying cash flow hedges under ASC 815 in the first quarter of 2020, and they effectively fixed interest payment obligations on $525.0 million and $1,000.0 million of principal under the Acquisition First Lien Term Loan Facility at rates of 4.3% and 4.4% through September 2024 and January 2025, respectively, based on the interest rates set forth in the Acquisition Credit Agreement. In April 2021, each of the swap agreements described above was novated to another counterparty and amended in connection with such novation. The amendments included certain changes to collateral posting obligations and also had the effect of increasing the effective fixed interest payment obligations to rates of 4.5%, with respect to the earlier maturing swap arrangement, and 4.6% with respect to the later maturing swap arrangement. In January 2022, in order to align the swap agreements with the Credit Agreement, the Company amended each of the swap agreements to align the floating rate term of such swap agreements to SOFR. The effective fixed interest payment obligations remained at 4.5%, with respect to the earlier maturing swap arrangement, and 4.6% with respect to the later maturing swap arrangement.

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, 2022, and 2021 and 2020.

	Six Months Ended June 30,	
Net cash provided by (used in):	**2022**	**2021**
Operating activities	$ 57,622	$ 355,441
Investing activities	4,003	(42,738)
Financing activities	(307,830)	(400,843)
Effect of exchange rate changes on cash and cash equivalents	(24,978)	(3,610)
Net decrease in cash and cash equivalents	$ (271,183)	$ (91,750)

Operating Activities

Net cash provided by operating activities was $57.6 million for the six months ended June 30, 2022, compared to net cash provided by operating activities of $355.4 million for the six months ended June 30, 2021. The decrease in net cash provided by operating activities was primarily attributable to lower net income, as well as increased in operating assets, net of operating liabilities, related to our trading activities for the six months ended June 30, 2022 compared to the prior period.

Investing Activities

Net cash provided by investing activities was $4.0 million for the six months ended June 30, 2022, compared to net cash used in investing activities of $42.7 million for the six months ended June 30, 2021. The increase in cash provided by investing activities for the six months ended June 30, 2022 was primarily attributable to sales of strategic investments during the six months ended June 30, 2022 as compared to the prior period, offset by cash used for the acquisition of property and equipment, and capitalized software for both periods.

Financing Activities

Net cash used in financing activities was $307.8 million for the six months ended June 30, 2022, while net cash used in financing activities was $400.8 million for the six months ended June 30, 2021. The cash used in financing activities for the six months ended June 30, 2022 was primarily attributable to $228.8 million in dividends to stockholders and distributions made to noncontrolling interests and $353.1 million in purchases of treasury stock, partially offset by the net proceeds of $200.2 million from the issuance of the new term loan and repayment of the existing term loan in January 2022. The cash used in financing activities of $400.8 million during the same period of 2021 primarily reflects $321.9 million net dividends to stockholders and distributions to noncontrolling interests, and $180.8 million purchase of treasury stock, partially offset by an increase of $151.4 million in short-term borrowings.

Share Repurchase Program

On February 8, 2018, the Company's Board of Directors authorized a share repurchase program of up to $50.0 million in Class A Common Stock and Virtu Financial Units, which was expanded to $100.0 million on July 27, 2018. The Company repurchased approximately 2.6 million shares of Class A Common Stock and Virtu Financial Units for approximately $65.9 million under this program, which expired on September 30, 2019.

On November 6, 2020, the Company's Board of Directors authorized a new share repurchase program of up to $100.0 million in Class A common stock and Virtu Financial Units by December 31, 2021.

On February 11, 2021, the Company's Board of Directors authorized the expansion of the Company's share repurchase program, increasing the total authorized amount by $70.0 million to $170.0 million in Class A Common Stock and Virtu Financial Units up to December 31, 2021.

On May 4, 2021, the Company's Board of Directors authorized the expansion of the Company's share repurchase program, increasing the total authorized amount by $300 million to $470 million in Class A Common Stock and Virtu Financial Units and extending the duration of the program through May 4, 2022.

On November 3, 2021, the Company's Board of Directors authorized the expansion of the Company's current share repurchase program, increasing the total authorized amount by $750 million to $1,220 million and extended the duration through November 3, 2023.

The share repurchase program authorizes the Company to repurchase shares from time to time in open market transactions, privately negotiated transactions or by other means. Repurchases are also permitted to be made under Rule 10b5-1 plans. The timing and amount of repurchase transactions are determined by the Company's management based on its evaluation of market conditions, share price, cash sources, legal requirements and other factors. From the inception of the program through June 30, 2022, the Company repurchased approximately 26.8 million shares of Class A Common Stock and Virtu Financial Units for approximately $773.8 million. As of June 30, 2022, the Company has approximately of $446.2 million remaining capacity for future purchases of shares of Class A Common Stock and Virtu Financial Units under the program.

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 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. Due to the relative immateriality of our financial instruments classified as level 3, we do not believe that a significant change to the inputs underlying the fair value of our level 3 financial instruments would have a material impact on our consolidated financial statements See Note 9 "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.

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 ("RSUs"). The fair value of the stock option grants is determined through the application of the Black-Scholes-Merton model. The fair value of the Class A Common Stock and RSUs 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. The assessment of the performance condition becomes certain within the year of grant. 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 RSUs 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. We believe the judgments and estimates discussed above are reasonable. However, if actual results are not consistent with our estimates or assumptions, we may be exposed to losses or gains that could be material.

Tax Receivable Agreements

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. An exchange of membership interests by the Virtu Members for Class A Common Stock or Class B Common Stock (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, we estimate the cumulative tax receivable agreement obligations to be reported on the consolidated financial statements. The tax attributes are computed as the difference between our basis in the partnership interest (“outside basis”) as compared to our share of the adjusted tax basis of partnership property (“inside basis”), at the time of each Exchange. The computation of inside basis requires judgments in estimating the components included in the inside basis as of the date of the Exchange (such as, cash received on hypothetical sale of assets, allocation of gain/loss at the time of the Exchange taking into account complex partnership tax rules). In addition, we estimate the period of time that may generate cash tax savings of such tax attributes and the realizability of the tax attributes.

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). Our estimate of goodwill impairment, if indicated based on results of the qualitative assessment, is highly dependent on our estimate of a reporting unit’s fair value.

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, 2021, we performed a qualitative assessment as described above for each reporting unit. No impairment of goodwill was identified.

Valuation of intangible assets involves 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. We amortize finite-lived intangible assets over their estimated useful lives. Our largest finite-lived intangible asset is customer relationships, which is being amortized over an estimated useful life of ten years. Had we used a shorter estimated useful life of seven years, the Company would have recorded an additional $4.1 million and $8.2 million of amortization expense for the three and six months ended June 30, 2022 and 2021, respectively. 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 7A. 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.

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, 2022 and December 31, 2021 was $5.2 billion and $4.3 billion, respectively, in long positions and $4.5 billion and $3.5 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 20.7% and 20.2% of our total revenues for the six months ended June 30, 2022 and 2021, 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 total revenues of $27.1 million and $31.6 million for the six months ended June 30, 2022 and 2021, 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 9A. 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, 2022. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of June 30, 2022, 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, 2022 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 2021 Form 10-K.

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

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

Total share repurchases for the three months ended June 30, 2022 were as follows:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
April 1, 2022 - April 30, 2022				
Class A Common Stock / Virtu Financial Units repurchases	182,756	$ 36.48	182,756	$ 487,053,678
May 1, 2022 - May 31, 2022				
Class A Common Stock / Virtu Financial Units repurchases	845,000	27.27	845,000	464,014,584
Class C Common Stock/ Virtu Financial Units repurchases	1,800	28.67	N/A	N/A
June 1, 2022 - June 30, 2022				
Class A Common Stock / Virtu Financial Units repurchases	735,000	24.19	735,000	446,233,961
Total Common Stock / Virtu Financial Unit repurchases	1,764,556	$ 26.94	1,762,756	

On November 6, 2020, the Company's Board of Directors authorized a new share repurchase program of up to $100.0 million in Class A common stock and Virtu Financial Units by December 31, 2021. On February 11, 2021, the Company's Board of Directors authorized the expansion of the program by an additional $70 million in Class A Common Stock and Virtu Financial Units. On May 4, 2021, the Company's Board of Directors authorized the expansion of the Company's share repurchase program, increasing the total authorized amount by $300 million to $470 million in Class A Common Stock and Virtu Financial Units and extending the duration of the program through May 4, 2022. Additionally, on November 3, 2021 the Company's Board of Directors authorized the expansion of the program by an additional $750 million to $1,220 million and extending the duration of the program through November 3, 2023. The share repurchase program authorizes the Company to repurchase shares from time to time in open market transactions, privately negotiated transactions or by other means. Repurchases are also permitted to be made under Rule 10b5-1 plans. The timing and amount of repurchase transactions are determined by the Company's management based on its evaluation of market conditions, share price, cash sources, legal requirements and other factors. From the inception of the program through June 30, 2022, the Company repurchased approximately 26.8 million shares of Class A Common Stock and Virtu Financial Units for approximately $773.8 million. As of June 30, 2022, the Company has approximately $446.2 million remaining capacity for future purchases of shares of Class A Common Stock and Virtu Financial Units under the program.

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*†	Virtu Financial, Inc. Second Amended and Restated Employment Agreement, dated as of April 29, 2022, by and between Virtu Financial, Inc. and Douglas A. Cifu.
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 2, 2022	By:	/s/ Douglas A. Cifu Douglas A. Cifu Chief Executive Officer
DATE:	August 2, 2022	By:	/s/ Sean P. Galvin Sean P. Galvin Chief Financial Officer

SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT (this "Agreement"), dated as of April 29, 2022 (the "Effective Date"), between Virtu Financial, Inc., a Delaware corporation (the "Company"), and Douglas A. Cifu ("Executive").

WHEREAS, the Company and Executive are party to that certain Employment Agreement, dated as of April 15, 2015, as amended and restated as of November 15, 2017 (the "Existing Agreement");

WHEREAS, the Company and Executive desire to amend and restate the Existing Agreement as herein provided; and

WHEREAS, Executive's agreement to enter into this Agreement and be bound by the terms hereof, including the restrictive covenants described herein, is a material inducement to the Company's willingness to provide equity-based compensation to Executive as described herein, and the Company would not otherwise grant such equity-based compensation to Executive if Executive did not agree to enter into this Agreement.

NOW, THEREFORE, in consideration of the mutual agreements, provisions and covenants contained herein, and intending to be legally bound hereby, the parties hereto agree as set forth below:

1. Term. (a) The term of Executive's employment under this Agreement shall be effective as of the Effective Date, and shall continue until February 28, 2028 (the "Initial Expiration Date"), provided that on the Initial Expiration Date and each subsequent anniversary of the Initial Expiration Date, the term of Executive's employment under this Agreement shall be extended for one (1) additional year unless either party provides written notice to the other party at least ninety (90) days prior to the Initial Expiration Date (or any such anniversary, as applicable) that Executive's employment hereunder shall not be so extended (in which case, Executive's employment under this Agreement shall terminate on the Initial Expiration Date or expiration of the extended term, as applicable); provided, however, that Executive's employment under this Agreement may be terminated at any time pursuant to the provisions of Section 5. The period of time from the Effective Date through the termination of this Agreement and Executive's employment hereunder pursuant to its terms is herein referred to as the "Term"; and the date on which the Term is scheduled to expire (i.e., the Initial Expiration Date or the scheduled expiration of the extended term, if applicable) is herein referred to as the "Expiration Date." Notwithstanding anything contained herein to the contrary, if upon the effective date of a Change in Control, the Expiration Date is less than two (2) years from the date of such Change in Control, the Term shall automatically be renewed so that the Expiration Date is two (2) years from the effective date of such Change in Control.

(b) Executive agrees and acknowledges that the Company has no obligation to extend the Term or to continue Executive's employment following the Expiration Date, and Executive expressly acknowledges that no promises or understandings to the contrary have been made or reached. Executive also agrees and acknowledges that, should Executive and the Company choose to continue Executive's employment for any period of time following the Expiration Date without extending the term of Executive's employment under this Agreement or entering into a new written employment agreement, Executive's employment with the Company shall be "at will," such that the Company may terminate Executive's employment at any time, with or without reason and with or without notice, and Executive may resign at any time, with or without reason and with or without notice (for the sake of clarity, the provisions of this Agreement shall not apply following the expiration of the Term (except as otherwise expressly provided herein)).

2. Definitions. For purposes of this Agreement, the following terms, as used herein, shall have the definitions set forth below.

(a) "Affiliate" means, with respect to any specified Person, any other Person that directly or indirectly, through one or more intermediaries, Controls, is Controlled by, or is under common Control with, such specified Person; provided, that in no event shall any entity Controlled by Vincent Viola but in which the Company does not have a direct or indirect ownership interest be treated as an Affiliate of the Company.

(b) "Change in Control" has the meaning set forth in the Plan.

(c) "Cause" means (i) Executive's willful engagement in illegal conduct or gross misconduct that is materially and demonstrably injurious to the Company, which action is not cured (if curable) within thirty (30) days after a written demand for substantial performance is received by Executive from the Company that specifically identifies in reasonable detail the action(s) that it believes Executive has engaged in and the related effect on the Company; (ii) conviction of (by a court of competent jurisdiction), or entry of a plea of guilty or no contest by, Executive with respect to, a felony of which fraud or dishonesty is a material element or which involves a violation of securities laws or the rules and regulations of a self-regulatory organization applicable to Executive in connection with his position at the Company; or (iii) the willful and material breach of this Agreement or any Noncompetition Restrictions (as defined below) by Executive which breach is not cured (if curable) within thirty (30) days after a written notice from the Company that specifically identifies in reasonable detail the willful and material breach. Any act, or failure to act, based upon authority given pursuant to a resolution duly adopted by the Board or upon the instructions of the Board or reasonably based upon the advice of outside counsel for the Company shall be conclusively presumed to be done, or omitted to be done, by Executive in good faith and in the best interests of the Company and, for the purposes of clauses (i) and (iii) of the preceding sentence, no act or failure to act on the part of Executive shall be considered "willful," so long as Executive reasonably believed that such action, or failure to act, was in the best interests of the Company. Cause shall not exist unless and until (A) the Board has delivered to Executive written notice (a "Removal Notice") that (x) indicates the specific provision of the definition of "Cause" relied upon, (y) sets forth in reasonable detail the facts and circumstances claimed to provide a basis for Cause under the provision so indicated and (z) includes a copy of a resolution duly adopted by a majority of the Board (excluding Executive) at a meeting of the Board called and held for such purpose (after reasonable notice to Executive and an opportunity for Executive, together with counsel, to be heard before the Board), finding that, in the opinion of the Board, Cause has occurred and setting forth in reasonable detail the facts and circumstances thereof and (B) Executive has been afforded the right to cure (if curable) any such action in accordance with clauses (i) or (iii) of the definition of Cause, as applicable. A removal of Executive for Cause shall be effective only if the Board delivers to Executive a Removal Notice within ninety (90) days after the Company first learns of the existence of the circumstances giving rise to Cause if, and only if, a reasonable Person could have determined that Cause exists upon learning of the circumstances that the Company was actually aware of at such time.

(d) "Control" (including, with correlative meanings, the terms "Controlled by" and "under common Control with"), as used with respect to any Person, means the direct or indirect possession of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of voting securities or by contract.

(e) "Disability" means Executive would be entitled to long-term disability benefits under the Company's long-term disability plan as in effect from time to time, without regard to any waiting or elimination period under such plan and assuming for the purpose of such determination that Executive is actually participating in such plan at such time. If the Company does not maintain a long-term disability plan, "Disability" means Executive's inability to perform Executive's duties and responsibilities hereunder on a full-time basis for a consecutive period of one hundred eighty (180) days in any three hundred sixty-five (365)-day period due to physical or mental illness or incapacity that is determined to be total and permanent by a physician selected by the Company or its insurers and reasonably acceptable to the Executive or his legal representative.

(a) "Good Reason" means the termination of Executive's employment at his initiative after, without Executive's prior written consent, one (1) or more of the following events: (i) a reduction in the Base Salary, or the uncured failure by the Company to fulfill its obligations under this Agreement within thirty (30) days after written notice thereof from Executive to the Company; (ii) the failure to elect Executive to or the removal of Executive (other than for Cause) from any of the positions described in Section 3; any material diminution or adverse change in the duties, authority, responsibilities, or positions of Executive from those contemplated by Section 3(a); any attempt to remove Executive from any executive management position in a manner contrary to this Agreement or the Company's then effective Certificate of Incorporation or By-Laws; (iii) the assignment to Executive of duties or responsibilities which are materially inconsistent with or different from those contemplated by Section 3(a) or requiring Executive to report to an officer or employee instead of the Board; (iv) the Company's requiring Executive to be based at a location in excess of fifty (50) miles from the location of Executive's principal job location or office specified in Section 3(b), except for required travel on the Company's business to an extent substantially consistent with Executive's position; or (v) the failure of the Company to obtain the assumption in writing of its obligation to perform this Agreement by any successor to all or substantially all of the assets or business of the Company after a merger, consolidation, sale, or similar transaction; provided, however, that prior to resigning for Good Reason, Executive shall give written notice to the Company of the facts and circumstances claimed to provide a basis for such resignation not more than sixty (60) days following his knowledge of such facts and circumstances, and the Company shall have thirty (30) days after receipt of such notice to cure such facts and circumstances (and if so cured then Executive shall not be permitted to resign for Good Reason in respect thereof). Any termination of employment by Executive for Good Reason shall be communicated to the Company by written notice, which shall include Executive's date of termination of employment (which, except as set forth in the preceding sentence, shall be a date not later than thirty (30) days after delivery of such notice).

(b) "Governmental Entity" means any national, state, county, local, municipal or other government or any court of competent jurisdiction, administrative agency or commission or other governmental authority or instrumentality.

(c) "Person" means any individual, firm, corporation, partnership, limited liability company, trust, joint venture, association, unincorporated entity or other entity.

(d) "Plan" means the Virtu Financial, Inc. Amended and Restated 2015 Management Incentive Plan, as may be amended and restated from time to time.

3. Duties and Responsibilities. (a) The Company hereby employs Executive and Executive hereby accepts employment, subject to the terms and conditions contained herein, during the Term, as Chief Executive Officer. During the Term, Executive agrees to be employed by and devote substantially all of Executive's business time and attention to the Company and the promotion of its interests and to use his best efforts to faithfully and diligently serve the Company; provided, however, that, to the extent such activities do not significantly interfere with the performance of his duties, services and responsibilities under this Agreement, Executive shall be permitted to (i) manage his personal, financial and legal affairs, (ii) serve on civic or charitable boards and committees of such boards and (iii) to the extent approved by the Board pursuant to a duly authorized resolution of the Board, serve on corporate boards and committees of such boards; provided, further, that Executive (x) shall be permitted to continue

to be engaged in, or provide services to, the businesses and activities set forth on Exhibit A, and (y) to the extent that such activities do not significantly interfere with the performance of his duties, services and responsibilities under this Agreement, shall be permitted to become engaged in, or provide services to, any other business or activity, whether as owner, partner, investor, consultant, agent, employee, co- venturer or otherwise, in which Vincent Viola is permitted to become engaged in during the Term, to the extent that Executive's level of participation in such businesses or activities are consistent with Executive's participation in the businesses or activities set forth on Exhibit A prior to the Effective Date. Executive will report solely to the Board of Directors of the Company (the "Board"). Executive will perform such lawful duties and responsibilities as are commensurate with Executive's titles and positions and as are generally consistent with those exercised by Executive prior to the Effective Date, and such other duties and responsibilities commensurate with Executive's titles and positions as may be reasonably requested by the Board from time to time. Executive will have the authority customarily exercised by an individual serving as Chief Executive Officer of a corporation of the size and nature of the Company and as is generally consistent with Executive's authority prior to the Effective Date. During the Term, Executive shall serve as a member of the Board, and upon request shall serve as a director or an officer of one or more subsidiaries of the Company, or of an Affiliate of the Company. Executive shall not be compensated additionally in Executive's capacity as a member of the Board or as a director or officer of a subsidiary or Affiliate of the Company.

(b) During the Term, Executive's principal place of employment shall be in one of the Company's principal offices, including, but not limited to, the Company's offices in Manhattan, New York, Short Hills, New Jersey and Palm Beach, Florida, or such other location as may otherwise be agreed with the Company. Executive acknowledges that Executive's duties and responsibilities shall require Executive to travel on business to the extent reasonably necessary to fully perform Executive's duties and responsibilities hereunder.

4. Compensation and Related Matters. (a) Base Salary. During the Term, for all services rendered under this Agreement, Executive shall receive an aggregate annual base salary ("Base Salary") at an initial rate of $1,200,000, payable in accordance with the Company's applicable payroll practices. Base Salary may be increased (but not decreased) on an annual basis as determined by the Board in its sole discretion. References in this Agreement to Base Salary shall be deemed to refer to the most recently effective annual base salary rate.

(b) Annual Bonus. During the Term, the Executive shall be eligible to receive an annual bonus (the "Annual Bonus"), with a target Annual Bonus amount equal to $3,000,000 (the "Target Bonus") and a maximum Annual Bonus amount equal to $6,000,000 (the "Maximum Bonus"). Fifty percent (50%) of the Annual Bonus will be based on the achievement of annual quantitative targets comprised of specific components of the Company's annual budget established by the Board (the "Quantitative Goals") and the remaining fifty percent (50%) of the Annual Bonus will be based on annual qualitative targets established by the Board (the "Qualitative Goals"). Accordingly, up to $1,500,000 of the Target Bonus and $3,000,000 of the Maximum Bonus may be earned based on the achievement of the Quantitative Goals and up to $1,500,000 of the Target Bonus and $3,000,000 of the Maximum Bonus may be earned based on the achievement of the Qualitative Goals. Fifty percent (50%) of the Annual Bonus, if any, shall be paid in cash, thirty percent (30%) of the Annual Bonus, if any, shall be paid in the form of restricted shares or restricted share units ("RSUs") in respect of Class A common stock of the Company (the "Stock") that vest in equal annual installments on each the first three (3) anniversaries of the date of grant, and the remaining twenty percent (20%) shall be paid in the form of fully-vested shares of Stock or fully-vested deferred share units ("DSUs") in respect of Stock (in each case, in accordance with any applicable timely deferral election made by Executive); provided, that, the form, manner and timing of payment (including vesting of any payment in equity or equity-based awards) with respect to the Annual Bonus is subject to change in the event of (and consistent with) any change to the payout schedule formulations that is made applicable to the senior executives of the Company. The Annual Bonus, if any, shall be payable within the period required by Section 409A of the Code such that it qualifies as a "short-term deferral" pursuant to Section 1.409A-1(b)(4) of the Department of Treasury Regulations (or any successor thereto). The Annual Bonus payable in respect of the 2022 fiscal year shall be determined on a weighted average basis, based on the elapsed time that the Existing Agreement and this Agreement were each in effect during the 2022 fiscal year.

(c) Equity Awards. The Executive shall be eligible to receive an equity award at the beginning of each calendar year during the Term (each such grant, an "Annual Equity Award"). It is the current intention of the Board that such Annual Equity Award will be in the form of 150,000 restricted shares or RSUs in respect of Stock, and that any such award shall be earned and vest in accordance with the terms hereof.

(i) The number of shares earned with respect to each Annual Equity Award shall be determined based on the percentage of the Company's budgeted EBITDA achieved in the calendar year to which such award relates in accordance with the following table:

Percentage of Budgeted EBITDA Achieved	**Number of Shares Earned**
65% or more	150,000
Less than 65%	As determined at the sole discretion of the Compensation Committee of the Board, which may be 0

(ii) If the Board determines that the number of shares of Stock subject to the Annual Equity Award will be greater or less than 150,000, then the amounts reflected in the table above shall be adjusted to reflect such number of shares.

(iii) To the extent any shares of Stock are earned with respect to any Annual Equity Award in accordance with Section 4(c)(i), 50% of such shares shall vest on the last day of the calendar year to which such award relates and the remaining 50% shall vest on the last day of the subsequent calendar year, subject in all cases to the Executive's continued employment through the applicable vesting date.

(d) Benefits and Perquisites. During the Term, Executive shall be entitled to participate in the benefit plans and programs (including, without limitation, four (4) weeks' vacation per calendar year, health insurance and a 401(k) plan) and receive perquisites, commensurate with Executive's position, that are provided by the Company from time to time for its senior executives generally, subject to the terms and conditions of such plans and programs. In addition, during the Term, the Company shall provide the Executive a car and driver consistent with past practice prior to the Effective Date.

(e) Business Expense Reimbursements. During the Term, the Company shall promptly reimburse Executive for Executive's reasonable and necessary business expenses in accordance with the Company's then-prevailing policies and procedures for expense reimbursement (which shall include appropriate itemization and substantiation of expenses incurred).

(f) Indemnification. The Company shall indemnify and hold harmless Executive, to the fullest extent permitted by law and the Company's governing documents, against all claims, expenses, damages, liabilities and losses incurred by Executive by reason of the fact that Executive is or was, or had agreed to become, a director, officer, employee, agent or fiduciary of the Company or any of its subsidiaries or Affiliates, or is or was serving at the request of the Company as a director, officer, partner, venturer, proprietor, trustee, employee, agent or similar functionary of another corporation, partnership, joint venture, business, person, trust, employee benefit plan or other entity. The indemnification obligations of the Company shall survive from the Effective Date of this Agreement and continue until six
(6) years following his cessation of service with the applicable entity or, if longer, one (1) year after the expiration of any applicable statute of limitations for any potential claim. During the Term and for a period of six (6) years thereafter, the Company shall cause Executive to be covered by and named as an insured under any policy or contract of insurance obtained by it to insure its directors and officers against personal liability for acts, errors or omissions in connection with service as an officer or director of the Company or any of its subsidiaries or Affiliates or service in any other capacities at the request of the Company. The coverage provided to Executive shall be of a scope and on terms and conditions at least as favorable as the most favorable coverage provided to any other officer or director of the Company (or any successor). Anything in this Agreement to the contrary notwithstanding, this Section 4(f) shall survive the termination of this Agreement for any reason. Nothing in this Agreement shall limit or reduce any other rights to indemnification that apply to Executive, whether pursuant to contract or otherwise.

5. Termination of Employment. (a) Executive's employment under this Agreement may be terminated by either party at any time and for any reason; provided, however, that Executive shall be required to give the Company at least sixty (60) days' advance written notice of any voluntary resignation of Executive's employment hereunder (other than resignation for Good Reason) (and in such event the Company in its sole discretion may elect to accelerate Executive's date of termination of employment, it being understood that such termination shall still be treated as a voluntary resignation for purposes of this Agreement). Notwithstanding the foregoing, Executive's employment shall automatically terminate upon Executive's death.

(b) Following any termination of Executive's employment under this Agreement, except for as provided for under this Section 5, the obligations of the Company to pay or provide Executive with compensation and benefits under Section 4 shall cease, and the Company shall have no further obligations to provide compensation or benefits to Executive hereunder, except (i) for payment of any accrued but unpaid Base Salary and for payment of any unreimbursed expenses under Section 4(e), in each case accrued or incurred through the date of termination of employment, payable as soon as practicable and in all events within thirty (30) days following the date of termination of employment,
(ii) for payment of any earned but unpaid Annual Bonus, if any, for the calendar year prior to the calendar year in which such termination of employment occurs, (iii) continued indemnification pursuant to Section 4(f), (iv) as explicitly set forth in any other benefit plans, programs or arrangements applicable to terminated employees in which Executive participates, other than severance plans or policies and (v) as otherwise expressly required by applicable law. For the avoidance of doubt, any unpaid Annual Bonus for the year of termination of employment is forfeited if Executive's employment is terminated for any reason.

(c) If Executive's employment under this Agreement is terminated (i) by the Company without Cause, (ii) due to death or Disability, (iii) by Executive for Good Reason, or (iv) due to expiration of the Term on the Expiration Date as a result of the Company delivering a notice of non- renewal as contemplated by Section 1, in addition to the payments and benefits specified in Section 5(b), Executive shall be entitled to receive (A) severance pay in an aggregate amount (the "Severance Amount") equal to the greater of (x) one (1) times Executive's Base Salary and (y) an amount equal to the total amount of Base Salary that Executive would have been entitled to receive had Executive continued to be employed through the Expiration Date; and (B) continued health, dental, vision and life insurance benefits under the terms of the applicable Company benefit plans for (x) twelve (12) months or (y) the period from Executive's termination of employment through the Expiration Date, whichever is longer (the "Benefits Continuation Period"), subject to Executive's payment of the cost of such benefits to the same extent that active employees of the Company are required to pay for such benefits from time to time; provided, however, that such continuation coverage shall end earlier upon Executive's becoming eligible for comparable coverage under another employer's benefit plans; provided, further, that following the expiration of the Benefits Continuation Period (which was not terminated as a result of Executive becoming eligible for comparable coverage under another employer's benefit plans), Executive shall be eligible to continue his health, dental, vision and life insurance benefits for Executive and his spouse and eligible dependents under the terms of the applicable Company benefit plans until the earlier of (X) Executive's dependents reaching the age of 26, (Y) Executive or his spouse become eligible for Medicare, or (Z) Executive becoming eligible for comparable coverage under another employer's benefit plans, subject to Executive's payment of the full cost of such benefits; and provided, further, that to the extent the provision of such continuation coverage is not permitted under the terms of the Company benefit plans or would result in an adverse tax consequence to the Company, the Company may alternatively provide Executive with a cash payment (the "COBRA Cash Payment") in an amount equal to the applicable COBRA premium that Executive would otherwise be required to pay to obtain COBRA continuation coverage for such benefits for such period (minus the cost of such benefits to the same extent that active employees of the Company are required to pay for such benefits from time to time); provided, further, that the Company will use reasonable best efforts to continue coverage under the Company benefit plans to the extent legally possible without suffering any adverse consequences to the Company or other participants in such plans. In addition, if the Executive's employment is terminated in accordance with the provisions of this Section 5(c), (I) the Executive shall remain eligible to earn restricted shares of Stock or RSUs under his then-current Annual Equity Award in accordance with the criteria set forth in Section 4(c)(i) and, to the extent earned, the product of such earned shares multiplied by a fraction, the numerator of which is the number of calendar days the Executive was employed in the calendar year of termination, and the denominator of which is 365, shall be deemed vested on the last day of the calendar year to which such award relates, (II) any earned but unvested restricted shares of Stock or RSUs under the Annual Equity Award granted in the calendar year prior to the calendar year of the Executive's termination shall be deemed vested as of the date of termination and (III) the Executive shall receive 150,000 fully-vested shares of Stock or, if Executive has made an applicable and timely deferral election, DSUs (clauses (I), (II) and (III), the "Equity Acceleration"). The Severance Amount (and the COBRA Cash Payment, if applicable) shall be paid in cash in a lump sum within thirty (30) days following the execution of the Release (defined below) that has become irrevocable by its terms, subject to any required delay of payment pursuant to Section 23.

(d) Notwithstanding anything herein to the contrary, if at any time within sixty (60) days before, or twenty-four (24) months following, a Change in Control, Executive's employment under this Agreement is terminated (i) by the Company without Cause, (ii) due to death or Disability, (iii) by Executive for Good Reason, or (iv) due to expiration of the Term on the Expiration Date as a result of the Company delivering a notice of non-renewal as contemplated by Section 1, then (A) in lieu of the Severance Amount described in Section 5(c)(A) the Executive shall be entitled to receive two and a half (2.5) times the sum of (x) Executive's Base Salary and (y) the Annual Bonus (including any amounts deferred or satisfied through the grant of equity awards) most recently awarded to Executive for completed fiscal years of the Company (the "CIC Severance Amount"), (B) the Benefits Continuation Period shall be extended to (x) twenty-four (24) months or (y) the period from Executive's termination of employment through the Expiration Date, whichever is longer, and (C) in lieu of the Equity Acceleration described in Section 5(c), (I) the product of the number of shares of Stock under the Executive's then-current Annual Equity Award multiplied by a fraction, the numerator of which is the number of calendar days the Executive was employed in the calendar year of termination, and the denominator of which is 365, shall be deemed vested as of the date of termination, (II) any earned but unvested restricted shares of Stock or

RSUs under the Annual Equity Award granted in the calendar year prior to the calendar year of the Executive's termination, shall be deemed vested as of the date of termination and (III) the Executive shall receive 150,000 fully-vested shares of Stock or, if Executive has made an applicable and timely deferral election, DSUs (clauses (I), (II) and (III), the "CIC Equity Acceleration"); provided, that if the Executive's employment is terminated prior to a Change in Control and a Change in Control occurs within sixty (60) days of such termination triggering this Section 5(d), then any amounts paid prior to the Change in Control pursuant to the Equity Acceleration shall reduce the amount required to be paid pursuant to the CIC Equity Acceleration. The CIC Severance Amount shall be paid in cash in a lump sum within thirty (30) days following the execution of the Release that has become irrevocable by its terms, subject to any required delay of payment pursuant to Section 23. In addition, Executive shall be entitled to the payments and benefits specified in Section 5(b). For purposes of determining the Severance Amount and CIC Severance Amount, Base Salary shall be the Base Salary as in effect prior to any reduction giving rise to a termination for Good Reason.

(e) Executive's entitlement to the payment and benefits and certain rights set forth in Sections 5(c) and 5(d) shall be conditioned upon Executive having provided an irrevocable waiver and release of claims in favor of the Company, its Affiliates, their respective predecessors and successors, and all of the respective current or former directors, officers, employees, shareholders, partners, members, agents or representatives of any of the foregoing (collectively, the "Released Parties"), substantially in the form attached hereto as Exhibit B (the "Release"), that has become effective in accordance with its terms. Simultaneous with the delivery of the signed Release by Executive, the Company shall deliver an irrevocable waiver and release of claims in favor of Executive and his heirs, agents and representatives substantially in the form attached hereto as Exhibit C, and if the Company fails to timely deliver its release, Executive's obligation to deliver the Release shall lapse and be void for all purposes hereof, including for purposes of the Company's obligation to pay or provide the payments and benefits under Sections 5(c) and 5(d).

(f) Upon termination of Executive's employment for any reason, and regardless of whether Executive continues as a consultant to the Company, upon the Company's request Executive agrees to resign, as of the date of such termination of employment or such other date requested, from the Board and any committees thereof, and, if applicable, from the board of directors (and any committees thereof) of any Affiliate of the Company to the extent Executive is then serving thereon.

(g) The payment of any amounts accrued under any benefit plan, program or arrangement in which Executive participates shall be subject to the terms of the applicable plan, program or arrangement, and any elections Executive has made thereunder. The Company's obligation to make the payments provided for in this Agreement and otherwise to perform its obligations hereunder shall not be affected by any set-off, counterclaim, recoupment, defense, or other claim, right or action that the Company may have against Executive or others.

(h) Following any termination of Executive's employment, Executive shall have no obligation to seek other employment or take any other action by way of mitigation of the amounts payable to Executive under any of the provisions of this Agreement. There shall be no offset against amounts due Executive under this agreement on account of any remuneration attributable to later employment, consultancy or other remunerative activity of Executive.

6. 280G Matters.

(a) If any payment to or in respect of Executive by the Company or any Affiliate, whether pursuant to this Agreement or otherwise (a "Payment"), is determined by the Auditor (as defined below) to be a "parachute payment" as defined in Section 280G(b)(2) of the Code (as defined below) (a

"Parachute Payment") and also to be subject to the excise tax imposed by Section 4999 of the Code, or any interest or penalties are incurred by Executive with respect to such excise tax (such excise tax, together with any such interest and penalties, being herein collectively referred to as the "Excise Tax"), then the aggregate amount of the Parachute Payments otherwise payable to Executive under this Agreement (unless otherwise agreed by Executive) shall be reduced if and to the extent that such reduction would result in Executive retaining a greater net after-tax amount than Executive would have retained had he received the full amount of the Parachute Payments (and paid the applicable Excise Tax), with such reductions coming first from amounts that are exempt from Section 409A and, thereafter, from amounts that are subject to Section 409A, in each case in reverse chronological order of their scheduled distributions.

(b) All determinations required to be made under this Section 6, including whether an Excise Tax is payable by Executive, the amount of such Excise Tax and the determination of which Parachute Payments shall be reduced, shall be made by the Company's regular auditor, unless Executive objects to the use of that auditor, in which event the auditor shall be an independent auditor or other independent professional services organization that is a certified public accounting firm recognized as an expert in determinations and calculations for purposes of Section 280G of the Code selected by the Company and reasonably acceptable to Executive, which auditor shall not, without Executive's consent, be a firm serving as accountant or auditor for the individual, entity or group effecting the Change in Control (the "Auditor"). If the Auditor determines that the aggregate Payments to Executive under this Agreement should be reduced in accordance with Section 6(a), the Company shall promptly give Executive notice to that effect and a copy of the detailed calculation thereof. All determinations made by the Auditor under this Section 6 shall be binding upon the Company and Executive and shall be made as soon as reasonably practicable and in no event later than 10 days following the date of Executive's termination of employment. All fees and expenses of the Auditor shall be borne solely by the Company.

(c) For purposes of this Agreement, the term "Code" shall mean the Internal Revenue Code of 1986, as amended, including all final regulations promulgated thereunder and any reference to a particular section of the Code shall include any provision that modifies, replaces or supersedes such section. The parties acknowledge that Executive's continuing agreement to be bound by the confidentiality and restrictive covenant provisions set forth in the Third Amended and Restated Limited Liability Company Agreement of Virtu Financial LLC, a Delaware limited liability company, dated as of April 15, 2015, as amended (collectively, the "Noncompetition Restrictions") are partial consideration for the Company's entering into this Agreement, and that at the request of Executive, the Company shall cause the Auditor to take into account the value of any reasonable compensation for services to be rendered by Executive before or after a Change in Control, including the Noncompetition Restrictions, in computing the amount of Parachute Payments under Section 280G of the Code, and the Company shall cooperate with Executive and the Auditor in performing such valuation.

7. Confidential Information; Restrictive Covenants. For purposes of Sections 7, 8, 9 and 10, references to the Company shall include its subsidiaries and any Affiliates of the Company that are Controlled by the Company. Executive acknowledges and agrees that Executive shall be bound by the Noncompetition Restrictions, in accordance with the terms and conditions thereof; provided, however, that the Executive shall not be held criminally or civilly liable under any federal or state trade secret law for any disclosure of a trade secret that is made: (A) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney; and (B) solely for the purpose of reporting or investigating a suspected violation of law; or is made in a complaint or other document that is filed under seal in a lawsuit or other proceeding. If the Executive files a lawsuit for retaliation by the Company for reporting a suspected violation of law, the Executive may disclose the Company's trade secrets to the Executive's attorney and use the trade secret information in the court proceeding if the

Executive: (1) files any document containing the trade secret under seal; and (2) does not disclose the trade secret, except pursuant to court order.

8. Return of Property. Executive acknowledges that all notes, memoranda, specifications, devices, formulas, records, files, lists, drawings, documents, models, equipment, property, computer, software or intellectual property relating to the businesses of the Company, in whatever form (including electronic), and all copies thereof, that are received or created by Executive while an employee of the Company or its subsidiaries or Affiliates (including but not limited to Confidential Information and Inventions (as defined below)) are and shall remain the property of the Company, and Executive shall immediately return such property to the Company upon the termination of Executive's employment and, in any event, at the Company's request and subject to inspection in accordance with applicable Company employee policies generally, except as may otherwise be agreed by Executive and the Company at the time of termination; provided, that Executive shall be permitted to retain a copy of his contacts/rolodex, including in electronic form.

9. Intellectual Property Rights. (a) Executive agrees that the results and proceeds of Executive's services for the Company (including, but not limited to, any trade secrets, products, services, processes, know-how, designs, developments, innovations, analyses, drawings, reports, techniques, formulas, methods, developmental or experimental work, improvements, discoveries, inventions, ideas, source and object codes, programs, matters of a literary, musical, dramatic or otherwise creative nature, writings and other works of authorship) resulting from services performed while an employee of the Company and any works in progress, whether or not patentable or registrable under copyright or similar statutes, that were made, developed, conceived or reduced to practice or learned by Executive, either alone or jointly with others (collectively, "Inventions"), shall be works-made-for-hire and the Company shall be deemed the sole owner throughout the universe of any and all trade secret, patent, copyright and other intellectual property rights (collectively, "Proprietary Rights") of whatsoever nature therein, whether or not now or hereafter known, existing, contemplated, recognized or developed, with the right to use the same in perpetuity in any manner the Company determines in its sole discretion, without any further payment to Executive whatsoever. If, for any reason, any of such results and proceeds shall not legally be a work- made-for-hire and/or there are any Proprietary Rights which do not accrue to the Company under the immediately preceding sentence, then Executive hereby irrevocably assigns and agrees to assign any and all of Executive's right, title and interest thereto, including any and all Proprietary Rights of whatsoever nature therein, whether or not now or hereafter known, existing, contemplated, recognized or developed, to the Company, and the Company shall have the right to use the same in perpetuity throughout the universe in any manner determined by the Company without any further payment to Executive whatsoever. As to any Invention that Executive is required to assign, Executive shall promptly and fully disclose to the Company all information known to Executive concerning such Invention.

(b) Executive agrees that, from time to time, as may be requested by the Company and at the Company's sole cost and expense, Executive shall do any and all things that the Company may reasonably deem useful or desirable to establish or document the Company's exclusive ownership throughout the United States of America or any other country of any and all Proprietary Rights in any such Inventions, including the execution of appropriate copyright and/or patent applications or assignments. To the extent Executive has any Proprietary Rights in the Inventions that cannot be assigned in the manner described above, Executive unconditionally and irrevocably waives the enforcement of such Proprietary Rights. This Section 9(b) is subject to and shall not be deemed to limit, restrict or constitute any waiver by the Company of any Proprietary Rights of ownership to which the Company may be entitled by operation of law by virtue of the Company's being Executive's employer. Executive further agrees that, from time to time, as may be requested by the Company and at the Company's sole cost and expense, Executive shall assist the Company in every proper and lawful way to obtain and from time to time enforce Proprietary Rights relating to Inventions in any and all countries.

Executive shall execute, verify and deliver such documents and perform such other acts (including appearances as a witness) as the Company may reasonably request for use in applying for, obtaining, perfecting, evidencing, sustaining, and enforcing such Proprietary Rights and the assignment thereof. In addition, Executive shall execute, verify and deliver assignments of such Proprietary Rights to the Company or its designees. Executive's obligations under this Section 9 shall continue beyond the termination of Executive's employment with the Company.

(c) Executive hereby waives and quitclaims to the Company any and all claims, of any nature whatsoever, that Executive now or may hereafter have for infringement of any Proprietary Rights assigned hereunder to the Company.

10. Remedies and Injunctive Relief. Executive acknowledges that a violation by Executive of any of the covenants contained in Sections 7, 8 or 9 would cause irreparable damage to the Company in an amount that would be material but not readily ascertainable, and that any remedy at law (including the payment of damages) would be inadequate. Accordingly, Executive agrees that, notwithstanding any provision of this Agreement to the contrary, the Company shall be entitled (without the necessity of showing economic loss or other actual damage) to injunctive relief (including temporary restraining orders, preliminary injunctions and/or permanent injunctions) in any court of competent jurisdiction for any actual or threatened breach of any of the covenants set forth in Sections 7, 8 or 9 in addition to any other legal or equitable remedies it may have. The preceding sentence shall not be construed as a waiver of the rights that the Company may have for damages under this Agreement or otherwise, and all of the Company's rights shall be unrestricted.

11. Representations of Executive; Advice of Counsel. (a) Executive represents, warrants and covenants that as of the date hereof: (i) Executive has the full right, authority and capacity to enter into this Agreement and perform Executive's obligations hereunder, (ii) Executive is not bound by any agreement that conflicts with or prevents or restricts the full performance of Executive's duties and obligations to the Company hereunder during or after the Term, and (iii) the execution and delivery of this Agreement shall not result in any breach or violation of, or a default under, any existing obligation, commitment or agreement to which Executive is subject.

(b) Prior to execution of this Agreement, Executive was advised by the Company of Executive's right to seek independent advice from an attorney of Executive's own selection regarding this Agreement. Executive acknowledges that Executive has entered into this Agreement knowingly and voluntarily and with full knowledge and understanding of the provisions of this Agreement after being given the opportunity to consult with counsel. Executive further represents that in entering into this Agreement, Executive is not relying on any statements or representations made by any of the Company's directors, officers, employees or agents which are not expressly set forth herein, and that Executive is relying only upon Executive's own judgment and any advice provided by Executive's attorney.

12. Cooperation. Executive agrees that, upon reasonable notice and without the necessity of the Company obtaining a subpoena or court order, Executive shall provide reasonable cooperation in connection with any suit, action or proceeding (or any appeal from any suit, action or proceeding), and any investigation and/or defense of any claims asserted against the Company or its Affiliates, which relates to events occurring during Executive's employment with the Company and its Affiliates as to which Executive may have relevant information (including but not limited to furnishing relevant information and materials to the Company or its designee and/or providing testimony at depositions and at trial); provided that with respect to such cooperation occurring following termination of employment, the Company shall reimburse Executive for expenses reasonably incurred in connection therewith, and further provided that any such cooperation occurring after the termination of Executive's

employment shall be scheduled so as not to unreasonably interfere with Executive's business or personal affairs.

13. Withholding. The Company may deduct and withhold from any amounts payable under this Agreement such Federal, state, local, non-U.S. or other taxes as are required to be withheld pursuant to any applicable law or regulation.

14. Assignment. (a) This Agreement is personal to Executive and without the prior written consent of the Company shall not be assignable by Executive, except for the assignment by will or the laws of descent and distribution of any accrued pecuniary interest of Executive, and any assignment in violation of this Agreement shall be void. The Company may only assign this Agreement, and its rights and obligations hereunder, in accordance with the terms of Section 14(b).

(b) This Agreement shall be binding on, and shall inure to the benefit of, the parties to it and their respective heirs, legal representatives, successors and permitted assigns (including, without limitation, successors by merger, consolidation, sale or similar transaction, and, in the event of Executive's death or Disability, Executive's estate, successors, heirs and assigns in the case of any payments due to Executive hereunder). The Company will require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company to assume expressly and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place. "Company" means the Company as hereinbefore defined and any successor to its business and/or assets as aforesaid that assumes and agrees to perform this Agreement by operation of law or otherwise. Following a Change in Control, if the Company is not the ultimate parent corporation and the Company's common stock is not publicly traded, the "Board of Directors" or "Board" as used in this Agreement shall refer to the board of directors of the ultimate parent of the Company.

(c) Executive acknowledges and agrees that all of Executive's covenants and obligations to the Company, as well as the rights of the Company hereunder, shall run in favor of and shall be enforceable by the Company and its successors and assigns.

15. Governing Law; No Construction Against Drafter. This Agreement shall be deemed to be made in the State of New York, and the validity, interpretation, construction, and performance of this Agreement in all respects shall be governed by the laws of the State of New York without regard to its principles of conflicts of law. No provision of this Agreement or any related document will be construed against or interpreted to the disadvantage of any party hereto by any court or other governmental or judicial authority by reason of such party having or being deemed to have structured or drafted such provision.

16. Consent to Jurisdiction; Waiver of Jury Trial. (a) Except as otherwise specifically provided herein, Executive and the Company each hereby irrevocably submits to the exclusive jurisdiction of the federal courts located within the Borough of Manhattan (or, if subject matter jurisdiction in such courts are not available, in any state court located within the Borough of Manhattan) over any dispute arising out of or relating to this Agreement. Except as otherwise specifically provided in this Agreement, the parties undertake not to commence any suit, action or proceeding arising out of or relating to this Agreement in a forum other than a forum described in this Section 16(a); provided, however, that nothing herein shall preclude either party from bringing any suit, action or proceeding in any other court for the purpose of enforcing the provisions of this Section 16 or enforcing any judgment obtained by either party.

(b) The agreement of the parties to the forum described in Section 16(a) is independent of the law that may be applied in any suit, action, or proceeding and the parties agree to such forum even if such forum may under applicable law choose to apply non-forum law. The parties hereby waive, to the fullest extent permitted by applicable law, any objection which they now or hereafter have to personal jurisdiction or to the laying of venue of any such suit, action or proceeding brought in an applicable court described in Section 16(a), and the parties agree that they shall not attempt to deny or defeat such personal jurisdiction by motion or other request for leave from any such court. The parties agree that, to the fullest extent permitted by applicable law, a final and non-appealable judgment in any suit, action or proceeding brought in any applicable court described in Section 16(a) shall be conclusive and binding upon the parties and may be enforced in any other jurisdiction.

(c) The parties hereto irrevocably consent to the service of any and all process in any suit, action or proceeding arising out of or relating to this Agreement by the mailing of copies of such process to such party at such party's address specified in Section 20.

(d) Each party hereto hereby waives, to the fullest extent permitted by applicable law, any right it may have to a trial by jury in respect of any suit, action or proceeding arising out of or relating to this Agreement. Each party hereto (i) certifies that no representative, agent or attorney of any other party has represented, expressly or otherwise, that such party would not, in the event of any action, suit or proceeding, seek to enforce the foregoing waiver, and (ii) acknowledges that it and the other party hereto has been induced to enter into this Agreement by, among other things, the mutual waiver and certifications in this Section 16(d).

(e) Each party shall bear its own costs and expenses (including reasonable attorneys' fees and expenses) incurred in connection with any dispute arising out of or relating to this Agreement, except as provided in the following sentence. The Company agrees to pay as incurred (within ten (10) days following the Company's receipt of an invoice from Executive), to the fullest extent permitted by law, all legal fees and expenses that Executive may reasonably incur as a result of any contest (regardless of the outcome thereof) by the Company, Executive or others of the validity or enforceability of, or liability under, any provision of this Agreement or any guarantee of performance thereof (including as a result of any contest by Executive about the amount of any payment pursuant to this Agreement) that arises in connection with or following a Change in Control, plus, in each case, interest on any delayed payment at the applicable federal rate provided for in Section 7872(f)(2)(A) of the Code ("Interest"), based on the applicable rate on the date such legal fees and expenses were incurred.

17. Amendment; No Waiver; Severability. (a) No provisions of this Agreement may be amended, modified, waived or discharged except by a written document signed by Executive and a duly authorized officer of the Company (other than Executive). The failure of a party to insist upon strict adherence to any term of this Agreement on any occasion shall not be considered a waiver of such party's rights or deprive such party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement. No failure or delay by either party in exercising any right or power hereunder will operate as a waiver thereof, nor will any single or partial exercise of any such right or power, or any abandonment of any steps to enforce such a right or power, preclude any other or further exercise thereof or the exercise of any other right or power.

(b) If any term or provision of this Agreement is invalid, illegal or incapable of being enforced by any applicable law or public policy, all other conditions and provisions of this Agreement shall nonetheless remain in full force and effect so long as the economic and legal substance of the transactions contemplated by this Agreement is not affected in any manner materially adverse to any party; provided, that in the event that any court of competent jurisdiction shall finally hold in a non- appealable judicial determination that any provision of Section 7, 8 or 9 (whether in whole or in part) is void or constitutes an unreasonable restriction against Executive, such provision shall not be rendered void but shall be deemed to be modified to the minimum extent necessary to make such provision enforceable for the longest duration and the greatest scope as such court may determine constitutes a reasonable restriction under the circumstances. Subject to the foregoing, upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the fullest extent possible.

18. Entire Agreement. This Agreement constitutes the entire agreement and understanding between the Company and Executive with respect to the subject matter hereof and supersedes all prior agreements and understandings (whether written or oral), between Executive and the Company, relating to such subject matter. None of the parties shall be liable or bound to any other party in any manner by any representations and warranties or covenants relating to such subject matter except as specifically set forth herein.

19. Survival. The rights and obligations of the parties under the provisions of this Agreement shall survive, and remain binding and enforceable, notwithstanding the expiration of the Term, the termination of this Agreement, the termination of Executive's employment hereunder or any settlement of the financial rights and obligations arising from Executive's employment hereunder, to the extent necessary to preserve the intended benefits of such provisions.

20. Notices. All notices or other communications required or permitted to be given hereunder shall be in writing and shall be delivered by hand or sent by facsimile or sent, postage prepaid, by registered, certified or express mail or overnight courier service and shall be deemed given when so delivered by hand or facsimile, or if mailed, three days after mailing (one (1) business day in the case of express mail or overnight courier service) to the parties at the following addresses or facsimiles (or at such other address for a party as shall be specified by like notice):

If to the Company: Virtu Financial, Inc.
1633 Broadway, 41st Floor New York, NY 10019
Attn: Legal Department Fax: (212) 418-0010
E-mail: Legal@virtu.com

With a copy (which shall not
constitute notice) to: Paul, Weiss, Rifkind, Wharton & Garrison LLP 1285 Avenue of the Americas
New York, NY 10019-6064
Telephone: (212) 373-3000
Facsimile: (212) 757-3990 Attention: John C. Kennedy
Jeffrey D. Marell

If to Executive: At the most recent address on file in the Company's records

Notices delivered by facsimile shall have the same legal effect as if such notice had been delivered in person.

21. Headings and References. The headings of this Agreement are inserted for convenience only and neither constitute a part of this Agreement nor affect in any way the meaning or interpretation of this Agreement. When a reference in this Agreement is made to a Section, such reference shall be to a Section of this Agreement unless otherwise indicated.

22. Counterparts. This Agreement may be executed in one or more counterparts (including via facsimile and electronic image scan (.pdf)), each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument and shall become effective when one or more counterparts have been signed by each of the parties and delivered to the other parties.

23. Section 409A. (a) For purposes of this Agreement, "Section 409A" means Section 409A of the Code, and the Treasury Regulations promulgated thereunder (and such other Treasury or Internal Revenue Service guidance) as in effect from time to time. The parties intend that any amounts payable hereunder that could constitute "deferred compensation" within the meaning of Section 409A will be compliant with Section 409A or exempt from Section 409A.

(b) Notwithstanding anything in this Agreement to the contrary, the following special rule shall apply, if and to the extent required by Section 409A, in the event that (i) Executive is deemed to be a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) (as determined in accordance with the methodology established by the Company as in effect on the date of Executive's "separation from service" (within the meaning of Treasury Regulations Section 1.409A-1(h))), (ii) amounts or benefits under this Agreement or any other program, plan or arrangement of the Company or a controlled group affiliate thereof are due or payable on account of separation from service and (iii) Executive is employed by a public company or a controlled group affiliate thereof: no payments hereunder that are "deferred compensation" subject to Section 409A shall be made to Executive prior to the date that is six (6) months after the date of Executive's separation from service or, if earlier, ten (10) days following Executive's date of death; following any applicable six (6)-month delay, all such delayed payments, plus Interest based on the applicable rate as of the date payment would have been made but for the Section 409A delay, will be paid in a single lump sum on the earliest permissible payment date.

(c) Any payment or benefit due or payable on account of Executive's separation from service that represents a "deferral of compensation" within the meaning of Section 409A shall commence to be paid or provided to Executive sixty-one (61) days following Executive's separation from service; provided that Executive executes, if required by Section 5(e), the Release described therein, within sixty (60) days following his "separation from service." Each payment made under this Agreement (including each separate installment payment in the case of a series of installment payments) shall be deemed to be a separate payment for purposes of Section 409A. Amounts payable under this Agreement shall be deemed not to be a "deferral of compensation" subject to Section 409A to the extent provided in the exceptions in Treasury Regulations §§ 1.409A-1(b)(4) ("short-term deferrals") and (b)(9) ("separation pay plans," including the exception under subparagraph (iii)) and other applicable provisions of Section 409A, and shall be paid under any such exception to the maximum extent permitted. For purposes of this Agreement, with respect to payments of any amounts that are considered to be "deferred compensation" subject to Section 409A, references to "termination of employment," "termination," or words and phrases of similar import, shall be deemed to refer to Executive's "separation from service" as defined in Section 409A, and shall be interpreted and applied in a manner that is consistent with the requirements of Section 409A. In no event may Executive, directly or indirectly, designate the calendar year of any payment under this Agreement.

(d) Notwithstanding anything to the contrary in this Agreement, any payment or benefit under this Agreement or otherwise that is eligible for exemption from Section 409A pursuant to

Treasury Regulation § 1.409A-1(b)(9)(v)(A) or (C) (relating to certain reimbursements and in-kind benefits) shall be paid or provided to Executive only to the extent that the expenses are not incurred, or the benefits are not provided, beyond the last day of the second calendar year following the calendar year in which Executive's "separation from service" occurs; and provided further that such expenses are reimbursed no later than the last day of the third calendar year following the calendar year in which Executive's "separation from service" occurs. To the extent any indemnification payment, expense reimbursement, or the provision of any in-kind benefit is determined to be subject to Section 409A (and not exempt pursuant to the prior sentence or otherwise), the amount of any such indemnification payment or expenses eligible for reimbursement, or the provision of any in-kind benefit, in one (1) calendar year shall not affect the indemnification payment or provision of in-kind benefits or expenses eligible for reimbursement in any other calendar year (except for any lifetime or other aggregate limitation applicable to medical expenses), and in no event shall any indemnification payment or expenses be reimbursed after the last day of the calendar year following the calendar year in which Executive incurred such indemnification payment or expenses, and in no event shall any right to indemnification payment or reimbursement or the provision of any in-kind benefit be subject to liquidation or exchange for another benefit.

[*Signature Page Follows*]

IN WITNESS WHEREOF, this Agreement has been duly executed by the parties as of the date first written above.

VIRTU FINANCIAL, INC.

By: Robert Greifeld (Apr 29, 2022

Name: Robert Greifeld Title: Chairman

DOUGLAS A. CIFU

Douglas A. Cifu

[Signature Page to Cifu Employment Agreement]

EXHIBIT A

PERMITTED ACTIVITIES

[Signature Page to Cifu Employment Agreement]

EXHIBIT B

FORM OF EXECUTIVE RELEASE

[Signature Page to Cifu Employment Agreement]

EXHIBIT C

FORM OF COMPANY RELEASE

[Signature Page to Cifu Employment Agreement]

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, 2022 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 2, 2022

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, Sean Galvin, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ending June 30, 2022 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 2, 2022

By: /s/ Sean P. Galvin
Sean Galvin
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, 2022 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 2, 2022

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, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Sean P. Galvin, 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/ Sean P. Galvin
Sean Galvin
Chief Financial Officer

Date: August 2, 2022