



# Third Quarter 2023 Earnings Supplement

# Performance Highlights



## 3Q 2023 Key Financials

Adj. NTI<sup>1</sup>  
\$298M

Adj. NTI/day<sup>1,2</sup>  
\$4.7M

Normalized  
Adj. EPS<sup>1</sup>  
\$0.45

Adj. EBITDA<sup>1</sup>  
\$140M

Adj. EBITDA  
Margin<sup>1,3</sup>  
47%

Debt to LTM  
Adj. EBITDA<sup>1</sup>  
3.0x

## Summary Recent Results

Adj. Net Trading Income / Day<sup>1</sup>



Normalized Adj. EPS<sup>1</sup>



## Commentary & Highlights

- **Market Making and Execution**  
Services performed well against opportunity set
- **Growth initiatives generated \$488K per day of Adj. NTI<sup>1</sup> in 3Q 2023 (10% of firmwide Adj. NTI)**
- **Repurchased 2.7M shares for \$49M in 3Q 2023<sup>4</sup>**
  - *Cumulative repurchases of 42.2M shares for over \$1B, representing 17% of shares outstanding, net of issuances<sup>4,5</sup>*

# Key Financial Metrics



(\$M)	Annual				Quarterly						Comparison			
	FY 2020	FY 2021	FY 2022	YTD 2023	FY 2022				FY 2023			3Q 2023 v		YTD'23 v
					1Q	2Q	3Q	4Q	1Q	2Q	3Q	2Q'23	3Q'22	FY'22
<b>Total Adjusted Net Trading Income<sup>1,2</sup></b>	<b>\$2,271</b>	<b>\$1,910</b>	<b>\$1,468</b>	<b>\$950</b>	<b>\$505</b>	<b>\$357</b>	<b>\$331</b>	<b>\$274</b>	<b>\$373</b>	<b>\$279</b>	<b>\$298</b>	<b>+ 5%</b>	<b>- 9%</b>	<b>- 13%</b>
<i>Daily Average Adj. NTI<sup>1,2</sup></i>	<i>\$9.0</i>	<i>\$7.6</i>	<i>\$5.8</i>	<i>\$5.1</i>	<i>\$8.1</i>	<i>\$5.8</i>	<i>\$5.2</i>	<i>\$4.4</i>	<i>\$6.0</i>	<i>\$4.5</i>	<i>\$4.7</i>			
Market Making Adj. NTI <sup>1</sup>	\$1,782	\$1,428	\$1,058	\$679	\$382	\$254	\$238	\$185	\$278	\$193	\$208	+ 6%	- 11%	- 14%
<i>Market Making Daily Average Adj. NTI<sup>1</sup></i>	<i>\$7.0</i>	<i>\$5.7</i>	<i>\$4.2</i>	<i>\$3.6</i>	<i>\$6.2</i>	<i>\$4.1</i>	<i>\$3.7</i>	<i>\$2.9</i>	<i>\$4.5</i>	<i>\$3.1</i>	<i>\$3.3</i>			
Execution Services Adj. NTI <sup>1,2</sup>	\$489	\$482	\$409	\$271	\$123	\$104	\$93	\$89	\$95	\$85	\$90	+ 4%	- 2%	- 11%
<i>Execution Services Daily Average Adj. NTI<sup>1,2</sup></i>	<i>\$1.9</i>	<i>\$1.9</i>	<i>\$1.6</i>	<i>\$1.4</i>	<i>\$2.0</i>	<i>\$1.7</i>	<i>\$1.5</i>	<i>\$1.4</i>	<i>\$1.5</i>	<i>\$1.4</i>	<i>\$1.4</i>			
Adjusted Cash Operating Expenses <sup>1,3</sup>	\$623	\$609	\$609	\$481	\$161	\$148	\$150	\$149	\$166	\$157	\$158	+ 1%	+ 5%	+ 5%
Total Adjusted Operating Expenses <sup>1,3</sup>	\$690	\$677	\$675	\$528	\$179	\$164	\$167	\$165	\$181	\$173	\$174	+ 1%	+ 4%	+ 4%
<b>Adjusted EBITDA<sup>1,3</sup></b>	<b>\$1,648</b>	<b>\$1,301</b>	<b>\$859</b>	<b>\$469</b>	<b>\$344</b>	<b>\$209</b>	<b>\$181</b>	<b>\$125</b>	<b>\$207</b>	<b>\$122</b>	<b>\$140</b>	<b>+ 14%</b>	<b>- 23%</b>	<b>- 27%</b>
<i>Adjusted EBITDA Margin<sup>1,4</sup></i>	<i>73%</i>	<i>68%</i>	<i>59%</i>	<i>49%</i>	<i>68%</i>	<i>59%</i>	<i>55%</i>	<i>46%</i>	<i>56%</i>	<i>44%</i>	<i>47%</i>	<i>+ 3 pts</i>	<i>- 8 pts</i>	<i>- 9 pts</i>
Long-Term Debt (at end of period)	\$1,670	\$1,630	\$1,824	\$1,805	\$1,829	\$1,826	\$1,824	\$1,824	\$1,808	\$1,806	\$1,805	- 0%	- 1%	- 1%
<i>Debt / LTM Adjusted EBITDA<sup>1</sup></i>	<i>1.0x</i>	<i>1.3x</i>	<i>2.1x</i>	<i>3.0x</i>	<i>1.7x</i>	<i>1.7x</i>	<i>1.7x</i>	<i>2.1x</i>	<i>2.5x</i>	<i>2.8x</i>	<i>3.0x</i>			
<b>Normalized Adjusted EPS<sup>1,3</sup></b>	<b>\$5.76</b>	<b>\$4.57</b>	<b>\$3.00</b>	<b>\$1.56</b>	<b>\$1.27</b>	<b>\$0.73</b>	<b>\$0.61</b>	<b>\$0.37</b>	<b>\$0.74</b>	<b>\$0.37</b>	<b>\$0.45</b>	<b>+ 22%</b>	<b>- 26%</b>	<b>- 31%</b>

Daily Average Adj. NTI<sup>1</sup> Trend



# Major Market Metrics

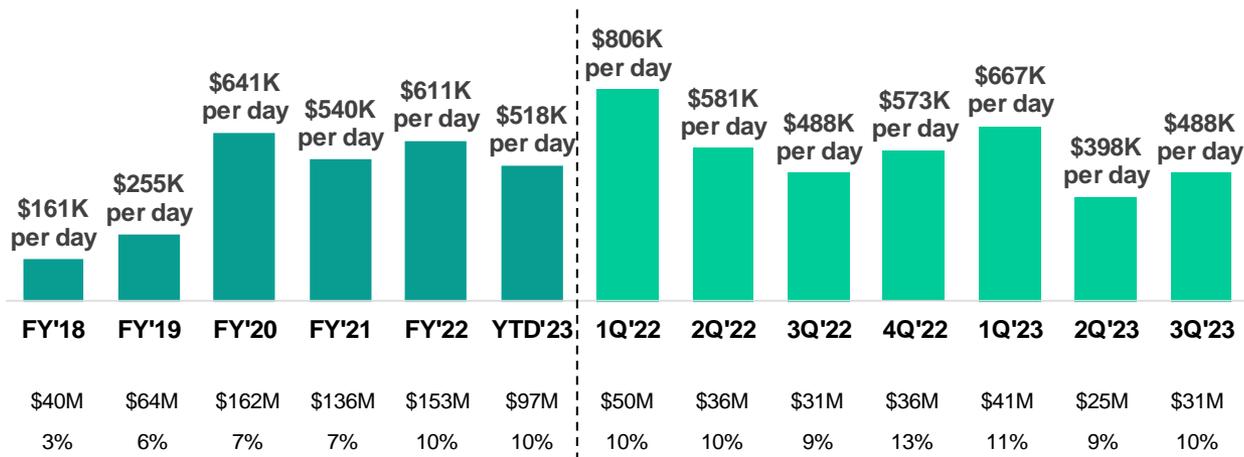


	Annual				Quarterly						Comparison			
	FY 2020	FY 2021	FY 2022	YTD 2023	FY 2022				FY 2023		3Q 2023 v 2Q '23	3Q'22	YTD'23 v FY'22	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q							
<b>Market Metrics (Average Daily)</b>														
<b>Volume Metrics</b>														
US Equity Consolidated Volume (M shares)	10,924	11,404	11,874	11,015	12,880	12,585	10,899	11,174	11,784	10,756	10,512	- 2%	- 4%	- 7%
US Equity Consolidated Notional Volume (\$B)	\$479	\$565	\$573	\$509	\$718	\$612	\$478	\$488	\$522	\$498	\$506	+ 2%	+ 6%	- 11%
IBKR Retail Equity Share Volume (M)	1,326	3,041	1,299	1,024	1,548	1,292	1,171	1,190	1,203	931	941	+ 1%	- 20%	- 21%
OCC ADV (M contracts)	30	39	41	44	42	39	40	43	46	43	43	+ 1%	+ 9%	+ 7%
CME FX ADV (K contracts)	861	798	989	961	905	950	1,096	1,000	982	913	987	+ 8%	- 10%	- 3%
Hotspot ADV FX (\$B)	\$35	\$34	\$40	\$43	\$42	\$39	\$40	\$40	\$45	\$42	\$42	- 1%	+ 3%	+ 6%
<b>Volatility Metrics</b>														
S&P 500 Average Implied Volatility (VIX)	29.3	19.7	25.6	17.4	25.4	27.4	24.8	25.0	20.7	16.4	15.0	- 9%	- 39%	- 32%
S&P 500 Average Realized Volatility	30.4	13.0	24.0	13.1	21.4	28.6	21.3	24.8	16.7	11.9	10.8	- 9%	- 49%	- 45%
S&P 500 Intraday Volatility	1.7%	1.0%	1.8%	1.1%	1.8%	2.1%	1.6%	1.7%	1.4%	0.9%	0.9%	- 6%	- 47%	- 42%
SX5E Realized Volatility	30.1	14.8	22.7	14.4	30.8	23.0	19.1	18.3	18.2	10.9	14.0	+ 29%	- 26%	- 37%
NKY Realized Volatility	24.1	18.5	20.2	15.0	25.0	19.7	18.6	17.8	14.8	14.9	15.4	+ 4%	- 17%	- 26%
CVIX Realized Volatility	66.7	29.3	54.3	29.8	61.9	55.0	58.4	42.1	35.4	28.9	25.0	- 13%	- 57%	- 45%

# Organic Business Growth



Daily Average Adj. NTI<sup>1</sup> from Organic Growth Initiatives



Total Adj. NTI from Organic Growth Initiatives<sup>1</sup>  
% of Firmwide Adj. NTI<sup>1</sup>

\$40M	\$64M	\$162M	\$136M	\$153M	\$97M	\$50M	\$36M	\$31M	\$36M	\$41M	\$25M	\$31M
3%	6%	7%	7%	10%	10%	10%	10%	9%	13%	11%	9%	10%

- **ETF Block:** We continue to see meaningful revenue from our ETF Block offering as we expand to cover more products across more regions.
- **Fixed Income:** Recent upticks in credit volumes and volatility have presented increased opportunity as we continue to onboard clients and develop our credit and rates offerings.
- **Options Market Making:** Consistent performance relative to market opportunity driven by expansion across venues and geographies, including single names as well as the index complex.
- **Virtu Capital Markets:** Outsized performance in the quarter as we continue to raise significant capital on behalf of our clients.
- **Digital Assets:** Uptick in recent opportunities; preparing to support spot crypto ETFs.

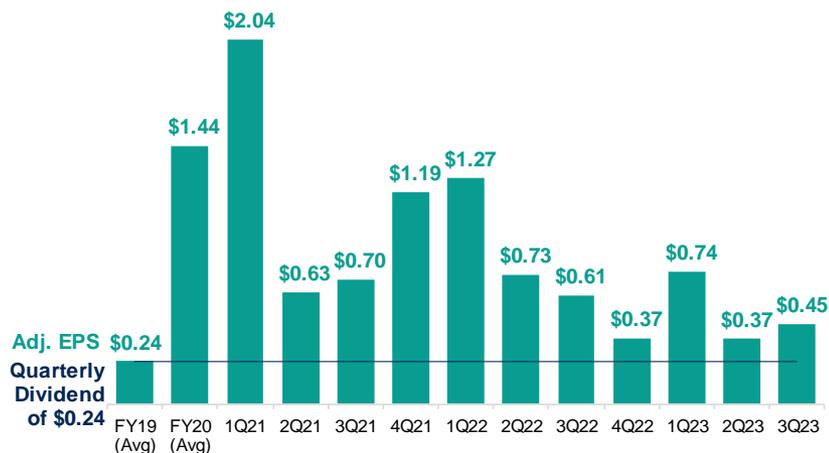
# Capital Management



We continue to return capital to shareholders through dividends and share repurchases

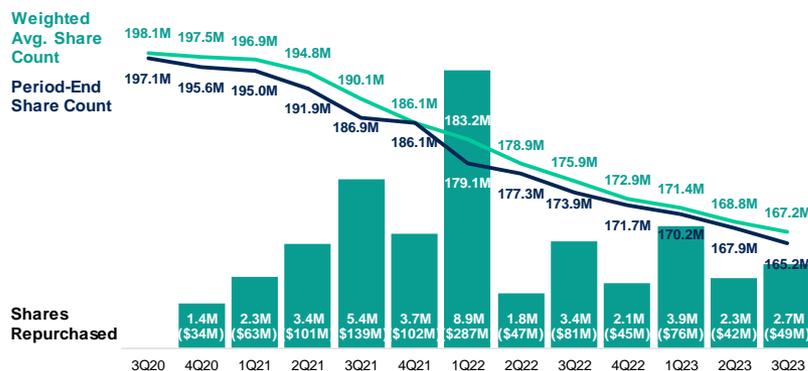
## Steady Payout in All Environments

Dividends declared per share and Adjusted EPS<sup>1</sup>, quarterly

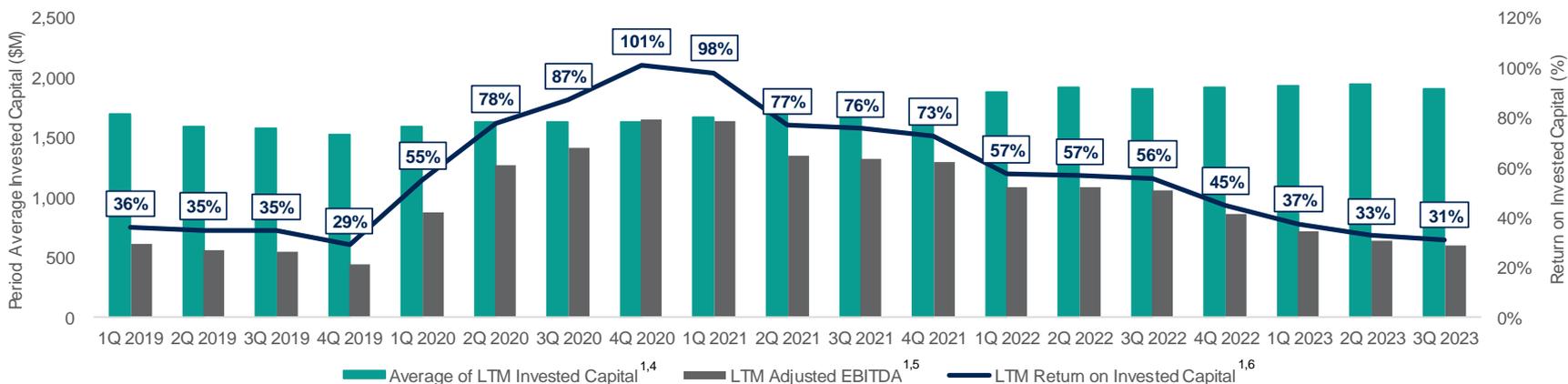


## Share Buybacks<sup>2,3</sup>

Shares outstanding and share repurchases, quarterly



## Return on Invested Capital<sup>1,4</sup>

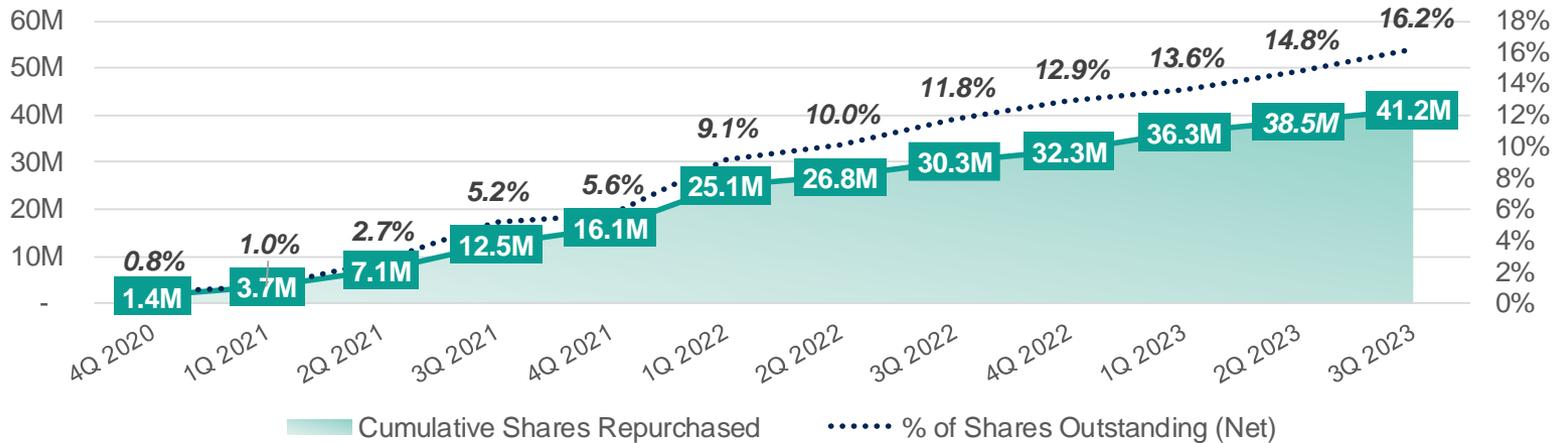


See endnotes at end of this supplement

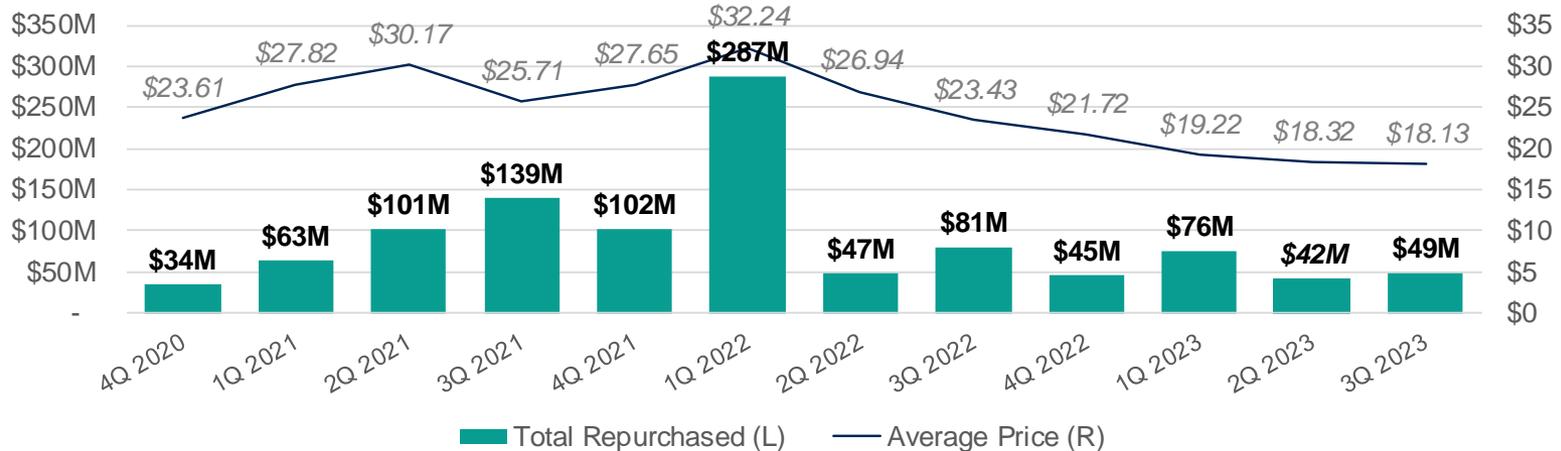
# Update on Share Buybacks



**Cumulative Shares Repurchased to Date<sup>1,2</sup>**



**Total Buybacks per Quarter<sup>1</sup>**



# Analysis at Various Levels of ANTI



(\$M) ANTI/Day <sup>1</sup>	Full Year Adj. NTI <sup>1</sup>	Cash OpEx Total <sup>1,2</sup>	Adj. EBITDA <sup>1,2</sup>	EBITDA Margin <sup>1,2</sup>	Adj. EPS <sup>1,3</sup>	Target Available for Buybacks Annually <sup>4</sup>
\$5.00 M	\$1,255	\$636	\$619	49%	\$2.08	\$50-\$120
\$6.00 M	\$1,506	\$642	\$864	57%	\$3.19	\$120-\$160
\$7.00 M	\$1,757	\$642	\$1,115	63%	\$4.33	\$160-\$270
\$8.00 M	\$2,008	\$642	\$1,366	68%	\$5.47	\$270-\$400
\$9.00 M	\$2,259	\$642	\$1,617	72%	\$6.61	\$400-\$500
\$10.00 M	\$2,510	\$668	\$1,842	73%	\$7.64	\$500-\$600
\$11.00 M	\$2,761	\$703	\$2,058	75%	\$8.62	\$600-\$700

YTD Adj. EPS & share buybacks ahead of guidance

Reflects 3Q23 weighted average shares outstanding of 167M

- **Clarity on results at different ANTI levels**
- **Stability in operating expenses and debt levels**
- **Focus on returning capital to shareholders**

# Operating Expenses and Long-Term Debt



Disciplined focus on expense management

## Operating Expense Results

Adjusted Operating Expenses (\$M)	Annual					Quarterly						
	FY 2019 <sup>2</sup>	FY 2020	FY 2021	FY 2022	YTD 2023	2022 1Q	2022 2Q	2022 3Q	2022 4Q	2023 1Q	2023 2Q	2023 3Q
Adj. Cash Compensation <sup>1</sup>	\$230	\$321	\$314	\$315	\$243	\$88	\$79	\$84	\$65	\$85	\$78	\$80
Adj. Communications & Data Processing <sup>1</sup>	209	214	212	220	171	56	56	53	55	57	57	57
Adj. Operations & Administrative <sup>1</sup>	103	88	83	74	67	18	14	14	29	24	22	21
<b>Adjusted Cash Operating Expenses<sup>1</sup></b>	<b>\$543</b>	<b>\$623</b>	<b>\$609</b>	<b>\$609</b>	<b>\$481</b>	<b>\$161</b>	<b>\$148</b>	<b>\$150</b>	<b>\$149</b>	<b>\$166</b>	<b>\$157</b>	<b>\$158</b>
Depreciation & Amortization	66	67	68	66	47	17	16	17	16	15	16	16
<b>Total Adjusted Operating Expenses<sup>1</sup></b>	<b>\$608</b>	<b>\$690</b>	<b>\$677</b>	<b>\$675</b>	<b>\$528</b>	<b>\$179</b>	<b>\$164</b>	<b>\$167</b>	<b>\$165</b>	<b>\$181</b>	<b>\$173</b>	<b>\$174</b>
Cash Compensation Ratio	24%	14%	16%	21%	26%	17%	22%	25%	24%	23%	28%	27%
Total Compensation Ratio	29%	17%	19%	26%	31%	20%	27%	31%	30%	27%	34%	32%

## Debt Structure at September 30, 2023

Debt Description (\$M)	Maturity	Effective Rate	Balance	Annual Interest
First Lien Debt - Floating <sup>3</sup>	Jan 2029	S + 3.00%	\$257	\$21
First Lien Debt - Fixed with 4.560% swap <sup>3,4</sup>	Jan 2029	4.560%	\$1,000	\$46
First Lien Debt - Fixed with 4.460% swap <sup>3,5</sup>	Jan 2029	4.460%	\$525	\$23
Japannext <sup>6</sup>	Jan 2026	5.00%	\$23	\$1
<b>Total<sup>7</sup></b>		<b>5.07%</b>	<b>\$1,805</b>	<b>\$92</b>
<b>LTM Adjusted EBITDA<sup>1</sup></b>			<b>\$594</b>	
<b>Debt / LTM Adjusted EBITDA<sup>1</sup></b>				<b>3.0x</b>

See endnotes at end of this supplement



# GAAP Reconciliations and Other Information



# GAAP Balance Sheet



Assets (\$M)	9/30/2023
Cash and cash equivalents	\$689
Cash and securities segregated under regulations and other	38
Securities borrowed	1,524
Securities purchased under agreements to resell	3,127
Receivables from broker-dealers and clearing organizations	1,696
Receivables from customers	148
Trading assets, at fair value	8,288
Property, equipment and capitalized software, net	92
Operating lease right-of-use assets	162
Goodwill	1,149
Intangibles (net of accumulated amortization)	273
Deferred taxes	132
Other assets	300
<b>Total Assets</b>	<b>\$17,618</b>

Liabilities and Equity (\$M)	9/30/2023
Short-term borrowings, net	\$97
Securities loaned	1,460
Securities sold under agreements to repurchase	3,377
Payables to broker-dealers and clearing organizations	540
Payables to customers	74
Trading liabilities, at fair value	7,941
Accounts payable and accrued expenses and other liabilities	412
Operating lease liabilities	211
Tax receivable agreement obligations	215
Long-term borrowings, net	1,779
<b>Total Liabilities</b>	<b>\$16,108</b>
Equity	1,511
<b>Total Liabilities and Equity</b>	<b>\$17,618</b>

Invested Capital (\$M)	As of:												
	12/31/19	12/31/20	3/31/21	6/30/21	9/30/21	12/31/21	3/31/22	6/30/22	9/30/22	12/31/22	3/31/23	6/30/23	9/30/23
<b>Trading Capital<sup>1</sup></b>	<b>\$1,604</b>	<b>\$2,075</b>	<b>\$2,266</b>	<b>\$2,089</b>	<b>\$1,984</b>	<b>\$2,165</b>	<b>\$2,116</b>	<b>\$2,178</b>	<b>\$2,188</b>	<b>\$2,180</b>	<b>\$2,057</b>	<b>\$2,008</b>	<b>\$2,020</b>
(-) Cash reserved for operations, taxes payable, and other accrued and unpaid liabilities <sup>2</sup>	(77)	(338)	(418)	(246)	(180)	(319)	(206)	(173)	(171)	(191)	(101)	(115)	(211)
<b>Invested Capital</b>	<b>\$1,527</b>	<b>\$1,737</b>	<b>\$1,848</b>	<b>\$1,843</b>	<b>\$1,804</b>	<b>\$1,846</b>	<b>\$1,910</b>	<b>\$2,005</b>	<b>\$2,017</b>	<b>\$1,989</b>	<b>\$1,956</b>	<b>\$1,892</b>	<b>\$1,808</b>

# GAAP Income Statement



Income Statement (\$mm)	Annual						Quarterly						
	FY	FY	FY	FY	FY	YTD	FY 2022				FY 2023		
	2018	2019 <sup>1</sup>	2020	2021	2022	2023	1Q	2Q	3Q	4Q	1Q	2Q	3Q
Trading income, net	\$1,267	\$912	\$2,493	\$2,105	\$1,629	\$1,035	\$522	\$396	\$397	\$313	\$413	\$306	\$316
Commissions, net and technology services	184	499	601	614	530	341	155	136	121	118	121	110	110
Interest and dividends income	88	109	62	75	159	308	21	31	44	64	82	98	128
Other, net	340	(2)	83	16	47	73	3	42	(1)	3	4	(7)	76
<b>Total Revenues</b>	<b>\$1,879</b>	<b>\$1,517</b>	<b>\$3,239</b>	<b>\$2,811</b>	<b>\$2,365</b>	<b>\$1,757</b>	<b>\$701</b>	<b>\$605</b>	<b>\$561</b>	<b>\$498</b>	<b>\$620</b>	<b>\$507</b>	<b>\$630</b>
Brokerage, exchange, clearance fees and payments for order flow, net	376	387	759	745	619	391	150	157	169	143	146	122	123
Communications and data processing	176	209	214	212	220	171	56	56	53	55	57	57	57
Employee compensation and payroll taxes	216	384	394	376	391	296	103	99	103	86	103	96	97
Interest and dividends expense	142	158	126	140	231	343	43	49	62	78	98	112	133
Operations and administrative	67	104	95	88	86	72	25	14	14	33	24	25	22
Depreciation and amortization	61	66	67	68	66	47	17	16	17	16	15	16	16
Amortization of purchased intangibles and acquired capitalized software	26	71	74	70	65	48	16	16	16	16	16	16	16
Termination of office leases	23	66	10	28	7	0	1	1	0	5	0	(0)	0
Debt issue cost related to debt refinancing and prepayment	12	41	29	7	30	6	26	1	1	1	2	2	2
Transaction fees and expenses	11	26	3	1	1	0	0	1	0	0	0	0	0
Financing interest expense	72	122	88	80	92	74	21	22	23	25	24	25	25
<b>Total Operating Expenses</b>	<b>\$1,182</b>	<b>\$1,633</b>	<b>\$1,856</b>	<b>\$1,815</b>	<b>\$1,808</b>	<b>\$1,449</b>	<b>\$460</b>	<b>\$431</b>	<b>\$459</b>	<b>\$458</b>	<b>\$486</b>	<b>\$471</b>	<b>\$492</b>
<b>Income (Loss) Before income taxes</b>	<b>\$696</b>	<b>\$(116)</b>	<b>\$1,383</b>	<b>\$997</b>	<b>\$557</b>	<b>\$308</b>	<b>\$242</b>	<b>\$174</b>	<b>\$102</b>	<b>\$40</b>	<b>\$135</b>	<b>\$35</b>	<b>\$138</b>
Provision for income taxes (benefit)	76	(12)	262	170	88	51	42	25	22	0	25	6	21
<b>Net Income (Loss)</b>	<b>\$620</b>	<b>\$(104)</b>	<b>\$1,121</b>	<b>\$827</b>	<b>\$468</b>	<b>\$257</b>	<b>\$200</b>	<b>\$149</b>	<b>\$80</b>	<b>\$40</b>	<b>\$110</b>	<b>\$30</b>	<b>\$118</b>

# Adjusted EBITDA & Normalized Adjusted EPS



Income Statement (\$mm)	Annual					
	FY	FY	FY	FY	FY	YTD
	2018	2019 <sup>1</sup>	2020	2021	2022	2023
<b>Adjusted Net Trading Income</b>	\$1,020	\$975	\$2,271	\$1,910	\$1,468	\$950
<b>Adj. EBITDA / Adj. EPS (\$M)</b>	FY	FY	FY	FY	FY	YTD
	2018	2019 <sup>1</sup>	2020	2021	2022	2023
<b>Income (Loss) Before income taxes</b>	\$696	\$(116)	\$1,383	\$997	\$557	\$308
(+) Financing interest expense	72	122	88	80	92	74
(+) Debt issue cost related to debt refinancing and prepayment	12	41	29	7	30	6
(+) Depreciation and amortization	61	66	67	68	66	47
(+) Amortization of purchased intangibles and acquired capitalized software	26	71	74	70	65	48
<b>EBITDA</b>	\$867	\$183	\$1,640	\$1,221	\$810	\$484
<i>EBITDA Margin<sup>2</sup></i>	85%	19%	72%	64%	55%	51%
(+) Severance	11	103	10	6	8	5
(+) Transaction fees and expenses	11	26	3	1	1	0
(+) Termination of office leases	23	66	10	28	7	0
(+) Share-based compensation	35	51	60	56	67	47
(+) Other	(328)	3	(75)	(11)	(34)	(67)
<b>Adjusted EBITDA</b>	\$620	\$432	\$1,648	\$1,301	\$859	\$469
<i>Adjusted EBITDA Margin<sup>3</sup></i>	61%	44%	73%	68%	59%	49%
(-) Financing interest expense	72	122	88	80	92	74
(-) Depreciation and amortization	61	66	67	68	66	47
<b>Normalized Adjusted Pre-Tax Income</b>	\$487	\$244	\$1,494	\$1,153	\$701	\$347
(-) Normalized provision for income taxes	112	59	358	277	168	83
<b>Normalized Adjusted Net Income</b>	\$375	\$186	\$1,135	\$876	\$533	\$264
Weighted average fully diluted shares outstanding	191	193	197	192	178	169
<b>Normalized Adjusted EPS</b>	\$1.96	\$0.96	\$5.76	\$4.57	\$3.00	\$1.56

Income Statement (\$mm)	Quarterly						
	FY 2022				FY 2023		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q
<b>Adjusted Net Trading Income</b>	\$505	\$357	\$331	\$274	\$373	\$279	\$298
<b>Adj. EBITDA / Adj. EPS (\$M)</b>	FY 2022	FY 2022	FY 2022	FY 2022	FY 2023	FY 2023	FY 2023
	1Q	2Q	3Q	4Q	1Q	2Q	3Q
<b>Income (Loss) Before income taxes</b>	\$242	\$174	\$102	\$40	\$135	\$35	\$138
(+) Financing interest expense	21	22	23	25	24	25	25
(+) Debt issue cost related to debt refinancing and prepayment	26	1	1	1	2	2	2
(+) Depreciation and amortization	17	16	17	16	15	16	16
(+) Amortization of purchased intangibles and acquired capitalized software	16	16	16	16	16	16	16
<b>EBITDA</b>	\$323	\$230	\$159	\$98	\$193	\$94	\$197
<i>EBITDA Margin<sup>2</sup></i>	64%	64%	48%	36%	52%	34%	66%
(+) Severance	2	1	1	4	3	1	1
(+) Transaction fees and expenses	0	1	0	0	0	0	0
(+) Termination of office leases	1	1	0	5	0	(0)	0
(+) Share-based compensation	14	19	18	16	16	16	15
(+) Other	4	(42)	2	2	(3)	11	(75)
<b>Adjusted EBITDA</b>	\$344	\$209	\$181	\$125	\$207	\$122	\$140
<i>Adjusted EBITDA Margin<sup>3</sup></i>	68%	59%	55%	46%	56%	44%	47%
(-) Financing interest expense	21	22	23	25	24	25	25
(-) Depreciation and amortization	17	16	17	16	15	16	16
<b>Normalized Adjusted Pre-Tax Income</b>	\$305	\$171	\$141	\$84	\$168	\$81	\$98
(-) Normalized provision for income taxes	73	41	34	20	40	19	24
<b>Normalized Adjusted Net Income</b>	\$232	\$130	\$107	\$64	\$128	\$62	\$75
Weighted average fully diluted shares outstanding	183	179	176	173	171	169	167
<b>Normalized Adjusted EPS</b>	\$1.27	\$0.73	\$0.61	\$0.37	\$0.74	\$0.37	\$0.45

# Share Count Roll Forward



(M shares)	4Q 2020	2021 Total	1Q 2022	2Q 2022	3Q 2022	4Q 2022	2022 Total	1Q 2023	2Q 2023	3Q 2023	Grand Total
<b>Beginning of Period Shares</b>	<b>197.1</b>	<b>195.6</b>	<b>186.1</b>	<b>179.1</b>	<b>177.3</b>	<b>173.9</b>	<b>186.1</b>	<b>171.7</b>	<b>170.2</b>	<b>167.9</b>	<b>197.1</b>
Shares Repurchased	- 1.44	- 14.71	- 8.90	- 1.76	- 3.44	- 2.23	- 16.34	- 4.91	- 2.27	- 2.90	- 42.56
Net Shares Issued	- 0.05	+ 5.16	+ 1.90	- 0.00	+ 0.00	+ 0.08	+ 1.97	+ 3.40	- 0.04	+ 0.21	+ 10.65
<b>End of Period Shares</b>	<b>195.6</b>	<b>186.1</b>	<b>179.1</b>	<b>177.3</b>	<b>173.9</b>	<b>171.7</b>	<b>171.7</b>	<b>170.2</b>	<b>167.9</b>	<b>165.2</b>	<b>165.2</b>
<i>Cumulative Repurchases as % of Shares Outstanding</i>	<i>0.8%</i>	<i>5.6%</i>	<i>9.1%</i>	<i>10.0%</i>	<i>11.8%</i>	<i>12.9%</i>	<i>12.9%</i>	<i>13.6%</i>	<i>14.8%</i>	<i>16.2%</i>	<i>16.2%</i>
<i>Weighted Avg. Adj. Shares</i>	<i>197.5</i>	<i>192.0</i>	<i>183.2</i>	<i>178.9</i>	<i>175.9</i>	<i>172.9</i>	<i>177.7</i>	<i>171.4</i>	<i>168.8</i>	<i>167.2</i>	
<i>Weighted Avg. Basic Shares</i>	<i>122.8</i>	<i>117.3</i>	<i>109.3</i>	<i>105.0</i>	<i>102.3</i>	<i>99.5</i>	<i>104.0</i>	<i>97.8</i>	<i>95.0</i>	<i>93.4</i>	
<i>Weighted Avg. Diluted Shares</i>	<i>123.5</i>	<i>118.4</i>	<i>110.1</i>	<i>105.5</i>	<i>102.6</i>	<i>99.7</i>	<i>104.4</i>	<i>97.8</i>	<i>95.0</i>	<i>93.4</i>	

# Adjusted Net Trading Income Reconciliation



## Operating Segments

Adjusted Net Trading Income Reconciliation (\$M)	Total										
	1Q 2021	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022	3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023
Trading income, net	\$813	\$385	\$394	\$513	\$522	\$396	\$397	\$313	\$413	\$306	\$316
Commissions, net and technology services	192	143	136	144	155	136	121	118	121	110	110
Brokerage, exchange, clearance fees and payment for order flow, net	(259)	(171)	(159)	(157)	(150)	(157)	(169)	(143)	(146)	(122)	(123)
Interest and dividends, net	(17)	(15)	(17)	(15)	(22)	(18)	(18)	(14)	(15)	(15)	(5)
<b>Adjusted Net Trading Income</b>	<b>\$728</b>	<b>\$342</b>	<b>\$354</b>	<b>\$486</b>	<b>\$505</b>	<b>\$357</b>	<b>\$331</b>	<b>\$274</b>	<b>\$373</b>	<b>\$279</b>	<b>\$298</b>

Adjusted Net Trading Income Reconciliation (\$M)	Market Making										
	1Q 2021	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022	3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023
Trading income, net	\$801	\$381	\$389	\$508	\$516	\$390	\$392	\$309	\$408	\$302	\$311
Commissions, net and technology services	14	9	9	9	9	11	11	11	10	7	6
Brokerage, exchange, clearance fees and payment for order flow, net	(223)	(145)	(135)	(132)	(124)	(131)	(147)	(123)	(123)	(100)	(101)
Interest and dividends, net	(17)	(13)	(15)	(13)	(20)	(17)	(18)	(13)	(17)	(16)	(8)
<b>Adjusted Net Trading Income</b>	<b>\$575</b>	<b>\$232</b>	<b>\$249</b>	<b>\$372</b>	<b>\$382</b>	<b>\$254</b>	<b>\$238</b>	<b>\$185</b>	<b>\$278</b>	<b>\$193</b>	<b>\$208</b>

Adjusted Net Trading Income Reconciliation (\$M)	Execution Services										
	1Q 2021	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022	3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023
Trading income, net	\$11	\$4	\$5	\$5	\$6	\$6	\$5	\$5	\$4	\$4	\$6
Commissions, net and technology services	178	134	127	135	146	125	110	107	112	103	104
Brokerage, exchange, clearance fees and payment for order flow, net	(36)	(26)	(24)	(25)	(27)	(26)	(22)	(20)	(23)	(23)	(22)
Interest and dividends, net	0	(3)	(2)	(1)	(1)	(1)	(1)	(2)	2	1	3
<b>Adjusted Net Trading Income</b>	<b>\$153</b>	<b>\$110</b>	<b>\$106</b>	<b>\$114</b>	<b>\$123</b>	<b>\$104</b>	<b>\$93</b>	<b>\$89</b>	<b>\$95</b>	<b>\$85</b>	<b>\$90</b>

# Adjusted Net Trading Income Reconciliation

## Organic Growth Initiatives



Adjusted Net Trading Income Reconciliation (\$M)	Organic Growth Initiatives										
	<i>Annual</i>				<i>Quarterly</i>						
	2018	2019	2020	2021	1Q 2022	2Q 2022	3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023
Trading income, net	\$36	\$65	\$241	\$144	\$53	\$41	\$42	\$44	\$58	\$39	\$44
Commissions, net and technology services	7	11	24	38	11	6	6	5	5	3	6
Brokerage, exchange, clearance fees and payment for order flow, net	(2)	(16)	(88)	(32)	(5)	(5)	(9)	(11)	(11)	(8)	(11)
Interest and dividends, net	(1)	4	(15)	(15)	(9)	(7)	(8)	(2)	(11)	(8)	(8)
<b>Adjusted Net Trading Income</b>	<b>\$40</b>	<b>\$64</b>	<b>\$162</b>	<b>\$136</b>	<b>\$50</b>	<b>\$36</b>	<b>\$31</b>	<b>\$36</b>	<b>\$41</b>	<b>\$25</b>	<b>\$31</b>

# Adjusted Operating Expense Reconciliation



Adjusted Operating Expenses Reconciliation (\$M)	Annual				Quarterly						
	FY 2020	FY 2021	FY 2022	YTD 2023	FY 2022				FY 2023		
					1Q	2Q	3Q	4Q	1Q	2Q	3Q
Employee compensation and payroll taxes	\$394	\$376	\$391	\$296	\$103	\$99	\$103	\$86	\$103	\$96	\$97
(-) Cash Compensation Adjustments <sup>1</sup>	(72)	(62)	(76)	(53)	(16)	(20)	(20)	(21)	(18)	(18)	(17)
<b>Adj. Cash Compensation</b>	<b>\$321</b>	<b>\$314</b>	<b>\$315</b>	<b>\$243</b>	<b>\$88</b>	<b>\$79</b>	<b>\$84</b>	<b>\$65</b>	<b>\$85</b>	<b>\$78</b>	<b>\$80</b>
Communications and data processing	\$214	\$212	\$220	\$171	\$56	\$56	\$53	\$55	\$57	\$57	\$57
(-) Communications & Data Processing Adjustments <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-
<b>Adj. Communications &amp; Data Processing</b>	<b>\$214</b>	<b>\$212</b>	<b>\$220</b>	<b>\$171</b>	<b>\$56</b>	<b>\$56</b>	<b>\$53</b>	<b>\$55</b>	<b>\$57</b>	<b>\$57</b>	<b>\$57</b>
Operations and administrative	\$95	\$88	\$86	\$72	\$25	\$14	\$14	\$33	\$24	\$25	\$22
(-) Operations & Administrative Adjustments <sup>3</sup>	(6)	(6)	(12)	(5)	(8)	(0)	(0)	(4)	(1)	(4)	(1)
<b>Adj. Operations &amp; Administrative</b>	<b>\$88</b>	<b>\$83</b>	<b>\$74</b>	<b>\$67</b>	<b>\$18</b>	<b>\$14</b>	<b>\$14</b>	<b>\$29</b>	<b>\$24</b>	<b>\$22</b>	<b>\$21</b>
<b>Adjusted Cash Operating Expenses</b>	<b>\$623</b>	<b>\$609</b>	<b>\$609</b>	<b>\$481</b>	<b>\$161</b>	<b>\$148</b>	<b>\$150</b>	<b>\$149</b>	<b>\$166</b>	<b>\$157</b>	<b>\$158</b>
Depreciation and amortization	\$67	\$68	\$66	\$47	\$17	\$16	\$17	\$16	\$15	\$16	\$16
<b>Total Adjusted Operating Expenses</b>	<b>\$690</b>	<b>\$677</b>	<b>\$675</b>	<b>\$528</b>	<b>\$179</b>	<b>\$164</b>	<b>\$167</b>	<b>\$165</b>	<b>\$181</b>	<b>\$173</b>	<b>\$174</b>

# Disclaimer



## Cautionary Statement Regarding Forward Looking Statements

This presentation may contain “forward-looking statements” made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Statements regarding Virtu Financial, Inc.’s (“Virtu’s”, the “Company’s” or “our”) business that are not historical facts are forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results, and will not necessarily be accurate indications of the times at, or by which, such performance or results will be achieved. The Company assumes no obligation to update forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting forward-looking information, and if the Company does update one or more forward-looking statements, no inference should be drawn that the Company will make additional updates with respect thereto or with respect to other forward-looking statements. Forward-looking statements are based on information available at the time and/or management’s good faith belief with respect to future events, and is subject to risks and uncertainties, some or all of which are not predictable or within Virtu’s control, that could cause actual performance or results to differ materially from those expressed in the statements. Those risks and uncertainties include, without limitation: fluctuations in trading volume and volatilities in the markets in which we operate; the ability of our trading counterparties and various clearing houses to perform their obligations to us; the performance and reliability of our customized trading platform; the risk of material trading losses from our market making activities; swings in valuations in securities or other instruments in which we hold positions; increasing competition and consolidation in our industry; the risk that cash flow from our operations and other available sources of liquidity will not be sufficient to fund our various ongoing obligations, including operating expenses, short term funding requirements, margin requirements, capital expenditures, debt service and dividend payments; potential consequences of recent SEC proposals focused on equity markets which may, if adopted, result in reduced overall and off-exchange trading volumes and market making opportunities, impose additional or heightened regulatory obligations on market makers and other market participants, and generally increase the implicit and explicit cost as well as the complexity of the U.S. equities eco-system for all participants; regulatory and legal uncertainties and other potential changes associated with our industry, particularly in light of increased attention from media, regulators and lawmakers to market structure and related issues including but not limited to the retail trading environment, wholesale market making and off exchange trading more generally and payment for order flow arrangements; potential adverse results from legal or regulatory proceedings; our ability to remain technologically competitive and to ensure that the technology we utilize is not vulnerable to security risks, hacking and cyber-attacks; risks associated with third party software and technology infrastructure; risks relating to the COVID-19 pandemic, including the possible effects of the economic conditions worldwide resulting from the COVID-19 pandemic and governmental and other responses thereto. For a discussion of the risks and uncertainties which could cause actual results to differ from those contained in forward-looking statements, see Virtu’s Securities and Exchange Commission filings, including but not limited to Virtu’s Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K filed with the SEC.

## GAAP and Non-GAAP Results

This presentation includes or may include certain non-GAAP financial measures, including Adjusted EPS, Normalized Adjusted EPS, Adjusted Net Trading Income, Normalized Adjusted Net Income, Normalized Adjusted Pre-Tax Income, EBITDA, Adjusted EBITDA, EBITDA Margin, Adjusted EBITDA Margin, Trading Capital, Invested Capital, Adjusted Operating Expense and Adjusted Compensation Expense. Non-GAAP financial measures should be considered only as supplemental to, and not as superior to, financial measures prepared in accordance with GAAP. Other companies may use similarly titled non-GAAP financial measures that are calculated differently from the way we calculate such measures. Accordingly, our non-GAAP financial measures may not be comparable to similar measures used by other companies. We caution investors not to place undue reliance on such non-GAAP measures, but instead to consider them with the most directly comparable GAAP measure. Non-GAAP financial measures have limitations as analytical tools, and should not be considered in isolation, or as a substitute for our results as reported under GAAP. A reconciliation of non-GAAP measures to the most directly comparable financial measure prepared in accordance with GAAP is included at the end of this presentation.

# End Notes



These notes refer to metrics and/or defined terms presented on:

## Slide 2 Performance Highlights

1. This reflects a non-GAAP measure. Please refer to slides at the end of this presentation for reconciliation to the equivalent GAAP measure. Prior period reconciliations available <https://ir.virtu.com/financials-and-filings/quarterly-results/default.aspx>.
2. 3Q 2023 Adj. Net Trading Income per day calculated using 63 trading days.
3. Adj. EBITDA Margin is calculated as Adjusted EBITDA divided by Adjusted Net Trading Income.
4. Shares repurchased calculated on a settlement date basis.
5. Percentage of shares repurchased, net of issuances, is calculated compared to shares outstanding on 9/30/2020 (Share Repurchase Program was inception in November 2020).

## Slide 3 Key Financial Metrics

1. This reflects a non-GAAP measure. Please refer to slides at the end of this presentation for reconciliation to the equivalent GAAP measure. Prior period reconciliations available <https://ir.virtu.com/financials-and-filings/quarterly-results/default.aspx>.
2. Includes MatchNow revenues prior to sale in July 2020.
3. YTD'23 v FY'22 comparison for Adjusted Cash Operating Expenses, Total Adjusted Operating Expenses, Adjusted EBITDA, and Normalized Adjusted EPS calculated using quarterly averages.
4. Adjusted EBITDA Margin is calculated as Adjusted EBITDA divided by Adjusted Net Trading Income.

Note: # of trading days used in per day calculations: 253, 252, 251, 187, 62, 62, 64, 63, 62, 62, and 63 for FY 2020, FY 2021, FY 2022, YTD 2023, 1Q 2022, 2Q 2022, 3Q 2022, 4Q 2022, 1Q 2023, 2Q 2023, and 3Q 2023, respectively.

## Slide 4 Major Market Metrics

Note: # of trading days used in per day calculations: 253, 252, 251, 187, 62, 62, 64, 63, 62, 62, and 63 for FY 2020, FY 2021, FY 2022, YTD 2023, 1Q 2022, 2Q 2022, 3Q 2022, 4Q 2022, 1Q 2023, 2Q 2023, and 3Q 2023, respectively.

## Slide 5 Organic Business Growth

1. This reflects a non-GAAP measure. Please refer to slides at the end of this presentation for reconciliation to the equivalent GAAP measure. Prior period reconciliations available <https://ir.virtu.com/financials-and-filings/quarterly-results/default.aspx>.

Note: # of trading days used in per day calculations: 251, 252, 253, 252, 251, 187, 62, 62, 64, 63, 62, 62, and 63 for FY 2018, FY 2019, FY 2020, FY 2021, FY 2022, YTD 2023, 1Q 2022, 2Q 2022, 3Q 2022, 4Q 2022, 1Q 2023, 2Q 2023, and 3Q 2023, respectively.

*Note: The computation of adjusted net trading income derived from organic growth initiatives requires the application of judgment. These computations are reviewed periodically for methodological consistency and accuracy, which may result from time to time in adjustments to previously published figures.*

# End Notes—continued



These notes refer to metrics and/or defined terms presented on:

## Slide 6 Capital Management

1. This reflects a non-GAAP measure. Please refer to slides at the end of this presentation for reconciliation to the equivalent GAAP measure. Prior period reconciliations available <https://ir.virtu.com/financials-and-filings/quarterly-results/default.aspx>.
2. Weighted average fully diluted shares assumes that (1) holders of all vested and unvested non-voting common interest units in Virtu Financial (“Virtu Financial Units”) (together with corresponding shares of the Company’s Class C common stock, par value \$0.00001 per share (the “Class C Common Stock”)) have exercised their right to exchange such Virtu Financial Units for shares of Class A Common Stock on a one-for-one basis, (2) holders of all non-voting 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 as well as warrants issued in connection with the Founder Member Loan Facility (as defined in Virtu’s Annual Report on Form 10-K).
3. Shares repurchased calculated on a settlement date basis.
4. For periods post-ITG acquisition, LTM Invested Capital is calculated as the average of beginning-of-period and end-of-period Invested Capital. For periods pre-ITG acquisition, LTM Invested Capital is calculated as end-of-period Invested Capital. Invested Capital is a non-GAAP measure. Please refer to slides at the end of this presentation for reconciliation to the equivalent GAAP measure. Prior period reconciliations available <https://ir.virtu.com/financials-and-filings/quarterly-results/default.aspx>.
5. For periods pre-ITG acquisition, LTM Adjusted EBITDA includes ITG results adjusted for consistency with Virtu reporting. Adjusted EBITDA is a non-GAAP measure. Please refer to slides at the end of this presentation for reconciliation to the equivalent GAAP measure. Prior period reconciliations available <https://ir.virtu.com/financials-and-filings/quarterly-results/default.aspx>.
6. Return on Invested Capital is calculated as LTM Adjusted EBITDA divided by LTM Invested Capital.

## Slide 7 Update on Share Buybacks

1. Shares repurchased calculated on a settlement date basis.
2. Percentage of Shares Outstanding is calculated net of share issuances, and is calculated compared to shares outstanding on 9/30/2020 (Share Repurchase Program was inception in November 2020).

# End Notes—continued



These notes refer to metrics and/or defined terms presented on:

## Slide 8 Analysis at Various Levels of ANTI

1. This reflects a non-GAAP measure. Ranges shown for illustrative purposes only and are not meant to reflect actual performance and therefore no quantitative reconciliation of illustrative daily or full year measures is provided in accordance with applicable exception under Regulation S-K. Assumes 251 trading days in a year.
2. Adjusted EBITDA calculated as illustrative Full Year ANTI specified in corresponding row *less* “Virtu management estimated” Cash Operating Expenses (see below). Adjusted EBITDA Margin calculated as Adjusted EBITDA *divided by* illustrative Full Year ANTI specified in corresponding row.
  - “Virtu management estimated” Cash Operating Expenses is equal to “estimated” Adj. Communications & Data Processing and Adj. Operations & Administrative expenses (\$317M) *plus* “estimated” Adjusted Cash Compensation of \$325M, unless the resulting compensation ratio of \$325M divided by the illustrative Full Year ANTI specified in corresponding row is below 14.0% or above 25.4%, in which instances the “estimated” Adjusted Cash Compensation is equal to the illustrative Full Year ANTI specified in corresponding row multiplied by 14.0% or 25.4%, respectively.
3. Adjusted EPS calculated as Adjusted EBITDA *less* “Virtu management estimated” Depreciation & Amortization (\$63M) *less* “Virtu management estimated” Financing Interest expense (\$99M) *less* Normalized Provision for Income Taxes (24%) *divided by* 3Q 2023 Weighted Average Fully Diluted Shares Outstanding (167M).
4. Ranges shown for illustrative purposes only and reflect Virtu management estimates and therefore no quantitative reconciliation of illustrative target available for buybacks is provided in accordance with applicable exception under Regulation S-K.

## Slide 9 Operating Expenses and Long-Term Debt

1. This reflects a non-GAAP measure. Please refer to slides at the end of this presentation for reconciliation to the equivalent GAAP measure. Prior period reconciliations available <https://ir.virtu.com/financials-and-filings/quarterly-results/default.aspx>.
2. ITG revenues and expenses included in financials beginning on March 1, 2019 close date.
3. Interest Expense includes a floor on SOFR of 0.5%.
4. Virtu entered into a fixed-for-floating interest rate swap ending February 2025.
5. Virtu entered into a fixed-for-floating interest rate swap ending October 2024.
6. 3.5 billion JPY.
7. Blended rate.

## Slide 11 GAAP Balance Sheet

1. This reflects a non-GAAP measure, and it reflects the assets bracketed above less the liabilities bracketed above. Prior period reconciliations available at <https://ir.virtu.com/financials-and-filings/quarterly-results/default.aspx>.
2. Comprises cash anticipated to be used in the operations of the business, including cash anticipated to be paid to satisfy tax and compensation liabilities, payments of debt pursuant to debt covenants, as well as dividends and other distributions to equity owners.

## Slide 12 GAAP Income Statement

1. ITG revenues and expenses included in financials beginning on March 1, 2019 close date.

# End Notes—continued



These notes refer to metrics and/or defined terms presented on:

## Slide 13 Adjusted EBITDA & Normalized Adjusted EPS

1. ITG revenues and expenses included in financials beginning on March 1, 2019 close date.
2. EBITDA Margin is calculated as EBITDA *divided by* Adjusted Net Trading Income.
3. Adj. EBITDA Margin is calculated as Adjusted EBITDA *divided by* Adjusted Net Trading Income.

## Slide 14 Share Count Roll Forward

Note: Assumes that (1) holders of all vested and unvested non-voting Virtu Financial Units (together with corresponding shares of the Company's 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 non-voting Virtu Financial Units (together with corresponding shares of the Company's Class D Common Stock) have exercised their right to exchange such Virtu Financial Units for shares of the Company's 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. Does not include diluted shares (e.g. options, warrants), and reflects shares outstanding at a prior point in time or projected to be outstanding as of a future point in time, as opposed to a weighted average over a period.

## Slide 17 Adjusted Operating Expense Reconciliation

1. Includes severance, share-based compensation, one-time compensation-related COVID-19 expenses, and one-time compensation expenses related to RFQ Hub transaction.
2. Includes connectivity early termination expenses.
3. Includes write-down of assets, reserve for legal matters, and one-time operations & administrative-related COVID-19 expenses (e.g. donations).