



# First Quarter 2023 Earnings Supplement

# Performance Highlights



## 1Q 2023 Key Financials

Adj. NTI<sup>1</sup>  
\$373M

Adj. NTI/day<sup>1,2</sup>  
\$6.0M

Normalized  
Adj. EPS<sup>1</sup>  
\$0.74

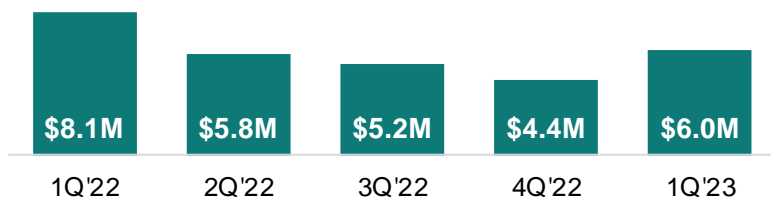
Adj. EBITDA<sup>1</sup>  
\$207M

Adj. EBITDA  
Margin<sup>1,3</sup>  
56%

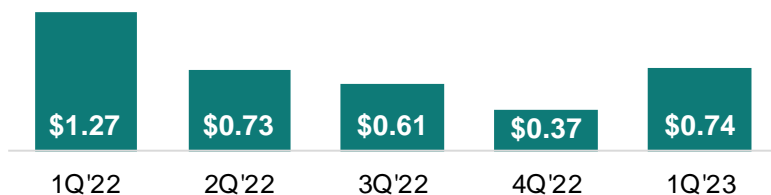
Debt to LTM  
Adj. EBITDA<sup>1</sup>  
2.5x

## Financial Trends

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



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



## Commentary & Highlights

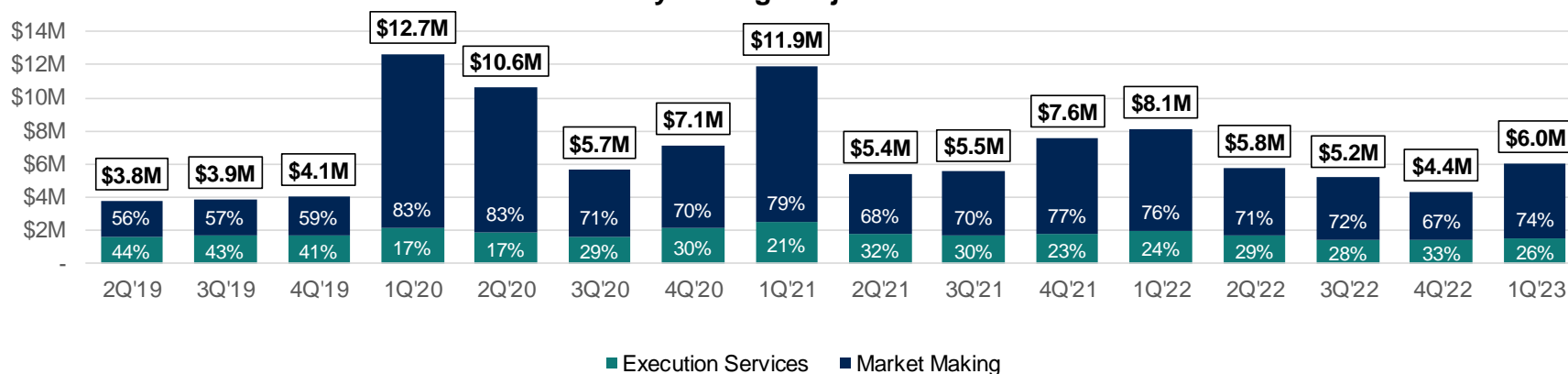
- **Market Making and Execution Services** capitalized on opportunities presented in 1Q 2023 across myriad global asset classes
- **Growth initiatives** generated \$658K per day of Adj. NTI<sup>1</sup> in 1Q 2023 (10.9% of firmwide Adj. NTI)
  - +7% compared to FY 2022 Adj. NTI<sup>1</sup> per day of \$614K per day (10.5% of firmwide Adj. NTI)
- **Repurchased 3.9M shares for \$76M in 1Q 2023**
  - Cumulative repurchases of 36.9M shares for \$987M, representing 14.0% of shares outstanding, net of issuances<sup>4,5</sup>

# Key Financial Metrics



(\$M)	Annual			Quarterly					Comparison		
	FY	FY	FY	FY 2022				FY 2023	1Q 2023 v		YTD'23 v
	2020	2021	2022	1Q	2Q	3Q	4Q	1Q	4Q'22	1Q'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>\$505</b>	<b>\$357</b>	<b>\$331</b>	<b>\$274</b>	<b>\$373</b>	<b>+ 38%</b>	<b>- 26%</b>	<b>+ 3%</b>
<i>Daily Average Adj. NTI<sup>1,2</sup></i>	<i>\$9.0</i>	<i>\$7.6</i>	<i>\$5.8</i>	<i>\$8.1</i>	<i>\$5.8</i>	<i>\$5.2</i>	<i>\$4.4</i>	<i>\$6.0</i>			
Market Making Adj. NTI <sup>1</sup>	\$1,782	\$1,428	\$1,058	\$382	\$254	\$238	\$185	\$278	+ 53%	- 27%	+ 6%
<i>Market Making Daily Average Adj. NTI<sup>1</sup></i>	<i>\$7.0</i>	<i>\$5.7</i>	<i>\$4.2</i>	<i>\$6.2</i>	<i>\$4.1</i>	<i>\$3.7</i>	<i>\$2.9</i>	<i>\$4.5</i>			
Execution Services Adj. NTI <sup>1,2</sup>	\$489	\$482	\$409	\$123	\$104	\$93	\$89	\$95	+ 8%	- 23%	- 6%
<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>\$2.0</i>	<i>\$1.7</i>	<i>\$1.5</i>	<i>\$1.4</i>	<i>\$1.5</i>			
Adjusted Cash Operating Expenses <sup>1,3</sup>	\$623	\$609	\$609	\$161	\$148	\$150	\$149	\$166	+ 11%	+ 3%	+ 9%
Total Adjusted Operating Expenses <sup>1,3</sup>	\$690	\$677	\$675	\$179	\$164	\$167	\$165	\$181	+ 10%	+ 1%	+ 7%
<b>Adjusted EBITDA<sup>1,3</sup></b>	<b>\$1,648</b>	<b>\$1,301</b>	<b>\$859</b>	<b>\$344</b>	<b>\$209</b>	<b>\$181</b>	<b>\$125</b>	<b>\$207</b>	<b>+ 65%</b>	<b>- 40%</b>	<b>- 3%</b>
<i>Adjusted EBITDA Margin<sup>1,4</sup></i>	<i>73%</i>	<i>68%</i>	<i>59%</i>	<i>68%</i>	<i>59%</i>	<i>55%</i>	<i>46%</i>	<i>56%</i>	<i>+ 10 pts</i>	<i>- 12 pts</i>	<i>- 3 pts</i>
Long-Term Debt (at end of period)	\$1,670	\$1,630	\$1,824	\$1,829	\$1,826	\$1,824	\$1,824	\$1,808	- 1%	- 1%	- 1%
<i>Debt / LTM Adjusted EBITDA<sup>1</sup></i>	<i>1.0x</i>	<i>1.3x</i>	<i>2.1x</i>	<i>1.7x</i>	<i>1.7x</i>	<i>1.7x</i>	<i>2.1x</i>	<i>2.5x</i>	<i>+ 18%</i>	<i>+ 48%</i>	<i>+ 18%</i>
<b>Normalized Adjusted EPS<sup>1,3</sup></b>	<b>\$5.76</b>	<b>\$4.57</b>	<b>\$3.00</b>	<b>\$1.27</b>	<b>\$0.73</b>	<b>\$0.61</b>	<b>\$0.37</b>	<b>\$0.74</b>	<b>+ 101%</b>	<b>- 41%</b>	<b>- 1%</b>

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



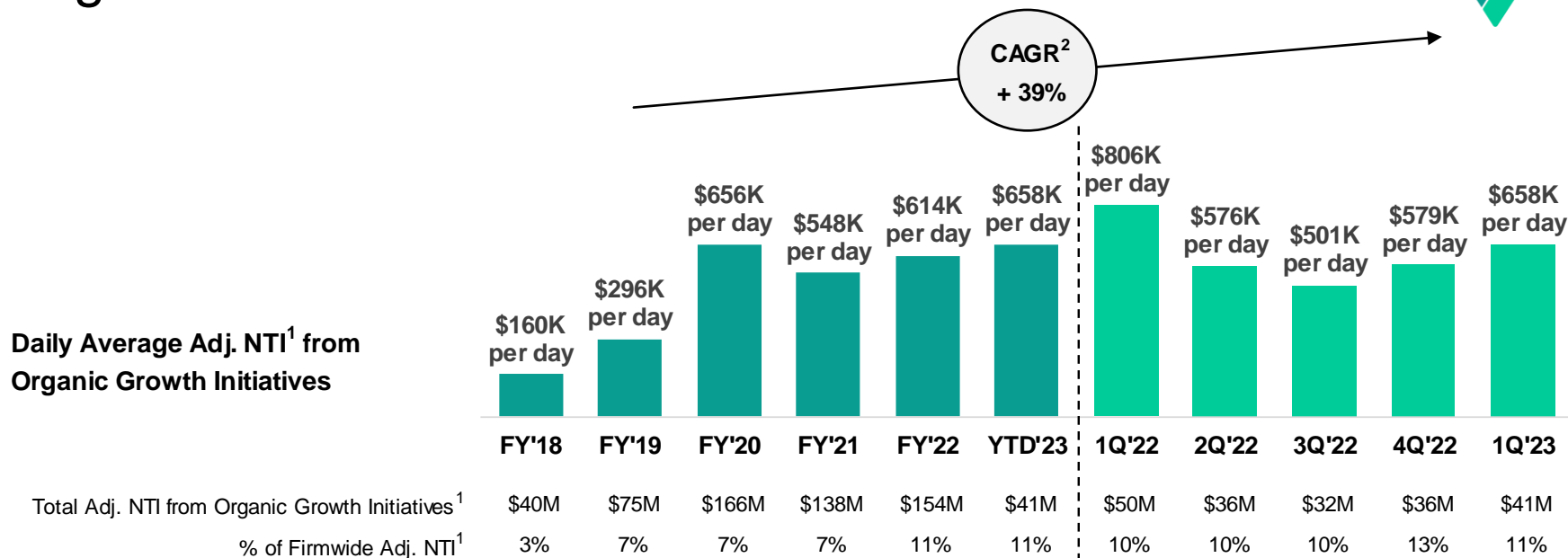
See endnotes at end of this supplement

# Major Market Metrics



	<i>Annual</i>			<i>Quarterly</i>					<i>Comparison</i>		
	FY 2020	FY 2021	FY 2022	FY 2022				FY 2023	1Q 2023 v		YTD'23 v
				1Q	2Q	3Q	4Q	1Q	4Q'22	1Q'22	FY'22
<b>Market Metrics (Average Daily)</b>											
<b>Volume Metrics</b>											
US Equity Consolidated Volume (M shares)	10,924	11,404	11,874	12,880	12,585	10,899	11,174	11,784	+ 5%	- 9%	- 1%
US Equity Consolidated Notional Volume (\$B)	\$479	\$565	\$573	\$718	\$612	\$478	\$488	\$522	+ 7%	- 27%	- 9%
IBKR Retail Equity Share Volume (M)	1,326	3,041	1,299	1,548	1,292	1,171	1,190	1,203	+ 1%	- 22%	- 7%
OCC ADV (M contracts)	30	39	41	42	39	40	43	46	+ 8%	+ 8%	+ 12%
CME FX ADV (K contracts)	861	798	989	905	950	1,096	1,000	982	- 2%	+ 8%	- 1%
Hotspot ADV FX (\$B)	\$35	\$34	\$40	\$42	\$39	\$40	\$40	\$45	+ 10%	+ 6%	+ 11%
<b>Volatility Metrics</b>											
S&P 500 Average Implied Volatility (VIX)	29.3	19.7	25.6	25.4	27.4	24.8	25.0	19.6	- 21%	- 23%	- 23%
S&P 500 Average Realized Volatility	30.4	13.0	24.0	21.4	28.6	21.3	24.8	16.7	- 32%	- 22%	- 30%
<i>Ratio: Realized Volatility / VIX</i>	104%	66%	94%	84%	104%	86%	99%	85%	- 14%	+ 1%	- 9%
S&P 500 Intraday Volatility	1.68%	0.96%	1.80%	1.83%	2.06%	1.63%	1.72%	1.40%	- 18%	- 23%	- 22%
SX5E Realized Volatility	30.1	14.8	22.7	30.8	23.0	19.1	18.3	18.2	- 0%	- 41%	- 20%
NKY Realized Volatility	24.1	18.5	20.2	25.0	19.7	18.6	17.8	14.8	- 17%	- 41%	- 27%
CVIX Realized Volatility	66.7	29.3	54.3	61.9	55.0	58.4	42.1	35.4	- 16%	- 43%	- 35%

# Organic Business Growth



- **Options Market Making:** Outstanding performance as we continue our growth in options. We are in the very early days of our expansion into options and believe the global, cross asset opportunity ahead is significant and complements our global footprint in equities, ETFs, futures, and OTC products.
- **ETF Block:** Meaningful contribution to overall firm results with one of our best quarters since 2021. This growing global business continues to onboard new clients around the world that demand our liquidity.
- **Crypto Market Making:** We remain committed to the long-term opportunity in crypto for institutional and retail channels. Our partnership with Citadel Securities, Fidelity, and Charles Schwab aims to develop a crypto ecosystem to serve the interest of global investors.

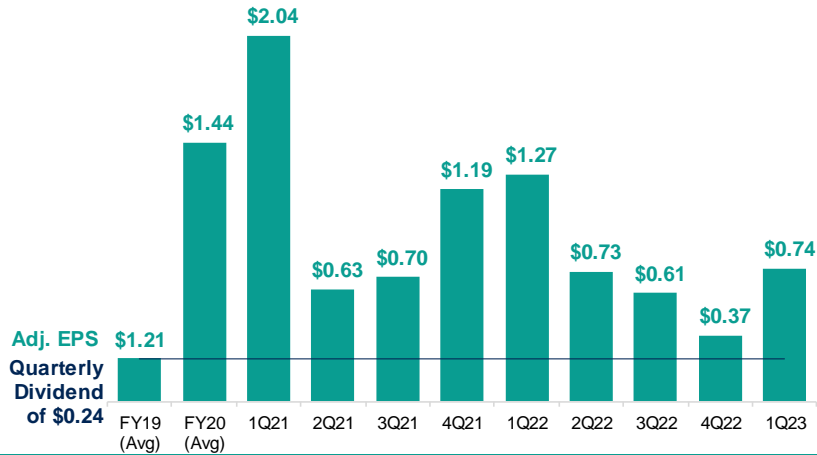
# Capital Management



Ongoing share repurchases reduced share count by 3.9M to 170.2M

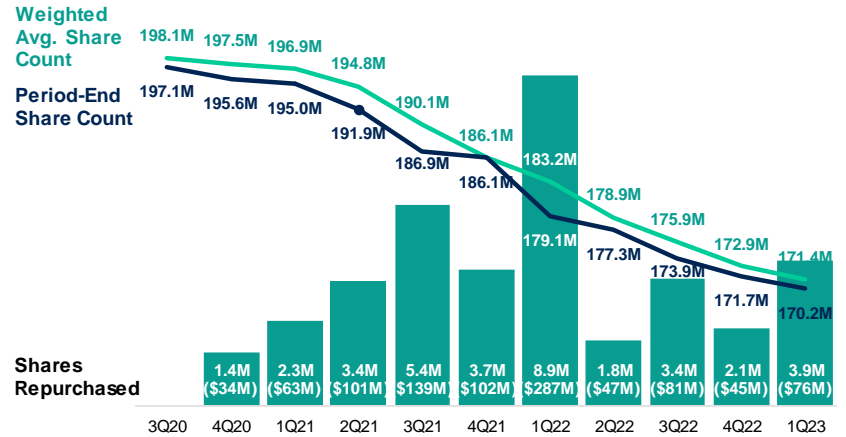
## Steady Payout in All Environments

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

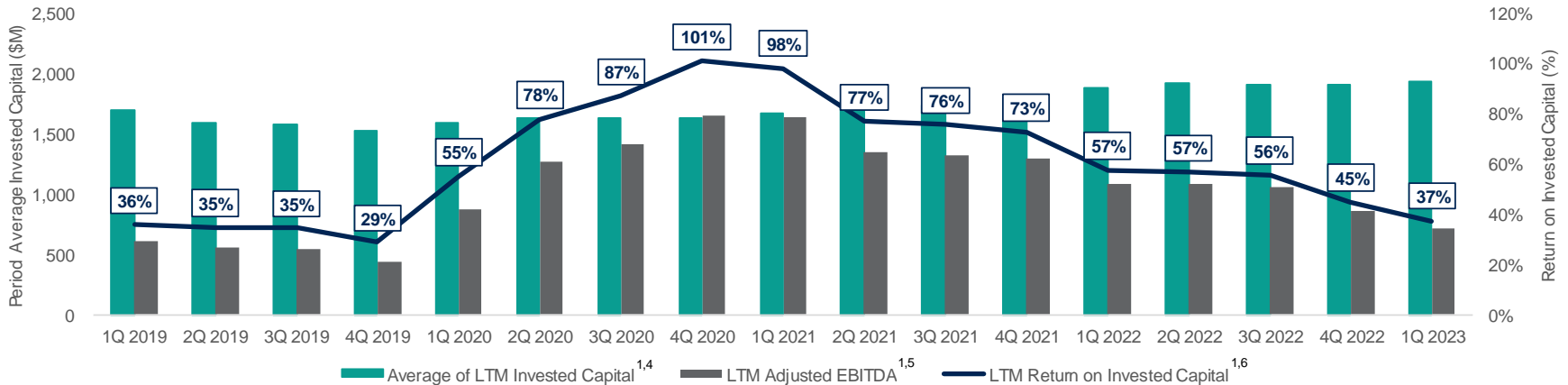


## Share Buybacks<sup>2,3</sup>

Shares outstanding and share repurchases, quarterly

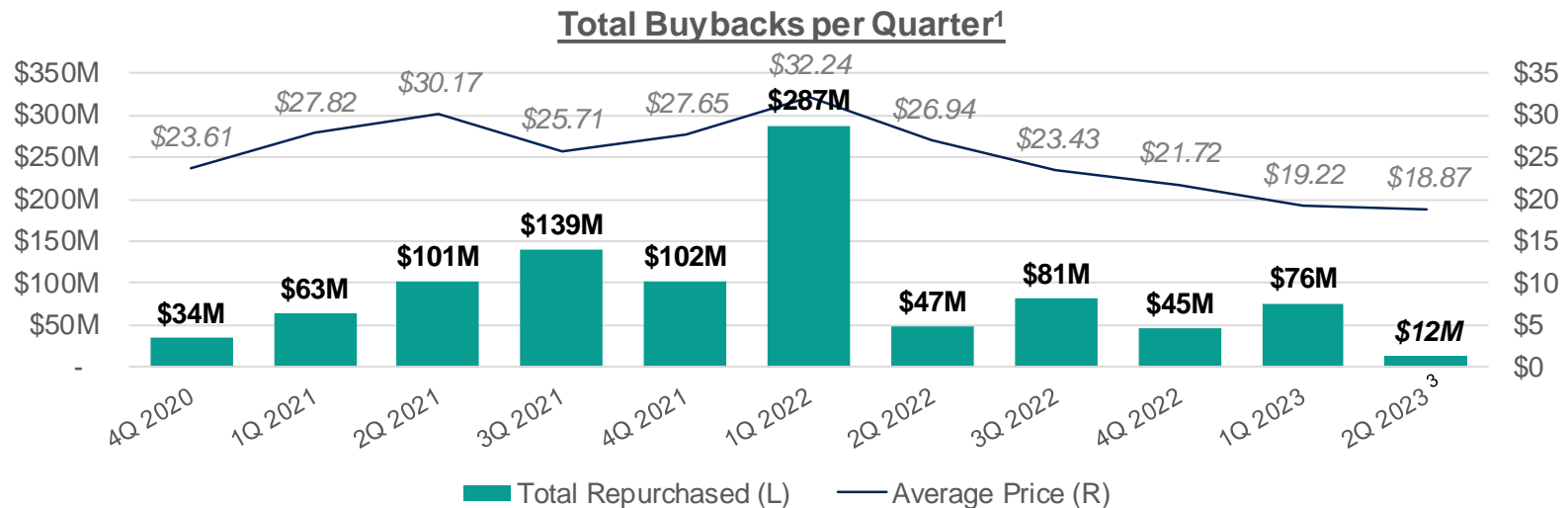
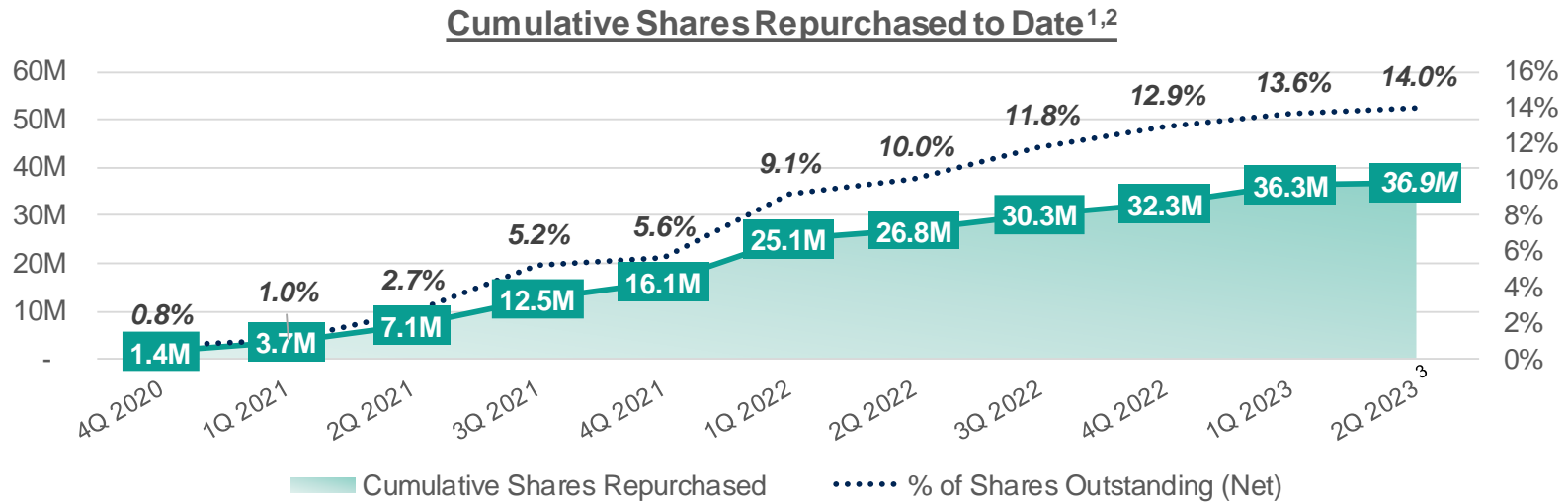


## Superior Return on Invested Capital<sup>1,4</sup>



See endnotes at end of this supplement

# Update on Share Buybacks



See endnotes at end of this supplement

# 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	2022 1Q	2022 2Q	2022 3Q	2022 4Q	2023 1Q
Adj. Cash Compensation <sup>1</sup>	\$230	\$321	\$314	\$315	\$88	\$79	\$84	\$65	\$85
Adj. Communications & Data Processing <sup>1</sup>	209	214	212	220	56	56	53	55	57
Adj. Operations & Administrative <sup>1</sup>	103	88	83	74	18	14	14	29	24
<b>Adjusted Cash Operating Expenses<sup>1</sup></b>	<b>\$543</b>	<b>\$623</b>	<b>\$609</b>	<b>\$609</b>	<b>\$161</b>	<b>\$148</b>	<b>\$150</b>	<b>\$149</b>	<b>\$166</b>
Depreciation & Amortization	66	67	68	66	17	16	17	16	15
<b>Total Adjusted Operating Expenses<sup>1</sup></b>	<b>\$608</b>	<b>\$690</b>	<b>\$677</b>	<b>\$675</b>	<b>\$179</b>	<b>\$164</b>	<b>\$167</b>	<b>\$165</b>	<b>\$181</b>
Cash Compensation Ratio	23.6%	14.2%	16.5%	21.5%	17.4%	22.1%	25.2%	23.7%	22.8%
Total Compensation Ratio	28.8%	16.8%	19.4%	26.1%	20.1%	27.4%	30.7%	29.7%	27.0%

## Debt Structure at March 31, 2023

Debt Description (\$M)	Maturity	Effective Rate	Balance	Annual Interest
First Lien Debt - Floating <sup>3</sup>	Jan 2029	S + 3.00%	\$257	\$20
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%	\$26	\$1
<b>Total<sup>7</sup></b>		<b>5.01%</b>	<b>\$1,808</b>	<b>\$91</b>
<b>LTM Adjusted EBITDA<sup>1</sup></b>			<b>\$723</b>	
<b>Debt / LTM Adjusted EBITDA<sup>1</sup></b>				<b>2.5x</b>



# Growing Consensus Supports Phased & Limited Reforms



Except for the proposal to enhance Rule 605, there is broad opposition to Gensler's proposals.

Two joint comment letters ([NYSE/Charles Schwab/Citadel Securities](#) and [Cboe/State Street Global Advisors/T. Rowe Price/UBS/Virtu Financial](#)) urged the SEC to take a phased approach, starting with Rule 605 reform, and to suspend its auction and best execution proposals.

In addition to these joint letters, comments from dozens of other participants, including Asset Managers, Exchanges, Retail Brokers, Academics, Sellside Brokers, and Issuer groups demonstrate the growing opposition to Gensler's agenda.

**In total, the comment letters aligned with Virtu's views represent almost \$30Tr in AUM and over 300M investors**

Broad Support	Broad Opposition		
Rule 605 Reform	Auctions	Best Ex	Reg NMS
SEC should take a phased approach, start with enacting Rule 605 reform and then pause the remaining proposals until after reassessing its impact on liquidity and competition.	<p>The SEC should NOT adopt this proposal.</p> <p>Will harm retail investor execution quality.</p>	<p>The SEC should NOT adopt this proposal.</p> <p>Will undermine existing investor protections.</p>	<p>Only reduce ticks to ½ penny and only for tick-constrained symbols.</p> <p>Tiny ticks and Harmonization would hurt investors.<sup>1</sup></p>



See endnotes at end of this supplement



# GAAP Reconciliations and Other Information



# Growing Consensus Supports Phased & Limited Reforms



## Proposed Rule 605 Reform

**Broad Consensus:** Take a phased approach, start with enacting Rule 605 reform and then pause the remaining proposals until after reassessing its impact on liquidity and competition.



“The Commission Should Implement Market Structure Reforms Sequentially To Avoid Unintended Consequences that Could Harm Investors.”



“[T]he proposed changes to Rule 605 will provide enhanced execution quality disclosure that will benefit issuers and investors. NYSE believes that outcomes from those changes should be assessed before any additional changes are made that would impact routing decisions.”



“Specifically, we recommend the SEC launch their equity market structure reform agenda by first adopting proposed amendments to Rule 605, with certain modifications. ... Implementation of proposed amendments to Rule 605 as an initial step would provide regulators, market participants, and the public a strong, data-driven benchmark against which to evaluate future reforms.”



“We believe the SEC should implement the proposed changes to Rule 605 and study the data generated by the updated framework before moving forward with other highly impactful market structure changes.”



“[W]e think that the Commission should take a more gradual and incremental approach overall.”



“Consider Delaying Rulemaking to Measure Effectiveness of Changes to Rule 605.”



“If the Commission decides to adopt any of these rules, it should do so one at a time and in a sequential order that will enable an informed evaluation of how each incremental change affects the market.”



“Cboe believes that the proposed changes to the Rule 605 Reports could ultimately provide enhanced execution quality statistics to investors, and that prior to implementing wholesale changes to equity market structure, the Commission should begin by refining Rule 605 Reports as proposed to obtain more relevant data points from which to base its analysis related to potential future market enhancements.”



“Modernized Rule 605 reporting would also create a more robust data set that would inform whether additional market structure changes should be pursued. Like many other commentators, we believe updating the data in Rule 605 reports is a natural first step.”

# Growing Consensus Supports Phased & Limited Reforms



## Auction Proposal (1/2)

**Broad Consensus:** The SEC should NOT adopt this proposal; Will harm investor execution quality.



“[W]e think the proposed auction mechanism could have unintended consequences that actually increase volatility of lower liquidity stocks and reduce price improvement for retail investors.”

Morgan Stanley

“We respectfully recommend that the Commission not adopt this proposal.”



“[W]e do not support a rule that would mandate auctions for all retail orders.”

STATE STREET  
GLOBAL ADVISORS

“We recommend not moving forward with this proposal due to the risks of unintended consequences for investors.”



“The Auctions Proposal includes overly prescriptive elements that could potentially undermine the national market system, stifle competition, and potentially harm investors.”

Cboe

“[T]he Commission should not move forward with its proposal to mandate equity auctions...”



“[T]he SEC risks too much by solely focusing on qualified auctions, as there is no silver bullet solution to the problem it identifies.”



“Even exchanges don’t like this proposal. That should tell you something!”



“[W]ith its experimental so-called Order Competition Rule, the SEC would—for retail investors only—revert to the exchange oligopolies that Congress directed it to abolish fifty years ago.”

J.P.Morgan

“We oppose the proposed Order Competition Rule, because we believe (1) it will negatively impact security prices for our clients and (2) the potential benefits have been overestimated.”



“The result [of the OCR] is likely to be a reduction in liquidity at the NBBO, and, in many cases, widening of bid/ask spreads.”



“Schwab strongly opposes the Order Competition Proposal and recommends the Commission withdraw it in its entirety. It is a radical and unnecessary re-write of existing equity market structure based on theories supported by flawed analysis, and it threatens a host of damaging consequences for retail investors.”



“[T]here is cause for serious concern that the SEC’s market structure rule proposals may actually reverse the recent influx of younger and more diverse individuals into the stock market.”



“[T]he Commission’s auction proposal has the potential of creating a net loss for retail investors even if one accepts the Commission’s estimated benefit”

# Growing Consensus Supports Phased & Limited Reforms



## Auction Proposal (2/2)

**Broad Consensus:** Institutions will not replace lost wholesaler liquidity.



“Several of our broker counterparties provide Capital Group with access to their retail order flow. It is our experience that this flow provides limited natural matching opportunities. Retail trading is more concentrated in individual names, low prices stocks, and small cap companies than institutional order flow.”



“[M]any institutions and retail investors tend to trade different securities and at different times.”



“ [I]t is not clear that the proposed auctions would result in significant interaction between retail and institutional orders.”



“[W]e believe the Commission vastly overestimates the increased price improvement that institutional traders would receive by being able to interact directly with individual investor order flow in qualified auctions.” First, it is not likely that institutional and retail order flow would match in a meaningful way. Institutional and retail investors trade different stocks, in different sizes, at different times...”



“Outcomes [to institutional investors from OCR] would be (1) increased opportunity cost for unfilled orders as prices continue to change in a dynamic market; (2) a greater risk of information leakage during the qualified auction, ...; and (3) increased operational risk resulting from the routing of orders in response to auction messages.”



“[W]e generally agree with SEC Commissioner Hester M. Peirce that “institutional investors may not expend much effort to participate” in the new auction mechanisms created by the Order Competition Proposal. In particular, for many institutional investors, the risk of potentially revealing their identities and trade interest to even a single dealer by participating in the proposed new auction mechanisms<sup>39</sup> could materially outweigh any potential benefits of receiving the executions.”



“We question the extent to which traditional, long-only or other large “institutional” investors are likely to compete for order flow in the proposed auctions. Put simply, institutional investors are generally looking to buy or sell very significant volumes of securities and are extremely sensitive to adverse selection and heightened execution costs that could arise from information leakage about their intentions prior to the completion of their trades.”



“We document that the IEX RLP has two-sided liquidity less than 5% of the trading day, suggesting institutional traders have relatively modest interest in trading directly with retail traders”

# Growing Consensus Supports Phased & Limited Reforms



## Best Execution Proposal

**Broad Consensus:** The SEC should NOT adopt this proposal; Will undermine existing investor protections.

**Morgan Stanley** “We respectfully recommend that the Commission not adopt this proposal.”



““We ... strongly support the principle of Best Execution, but ... recommend withdrawing this proposal.”



“This rule should be rejected in its entirety.”



“The added costs and complexity of the proposed rules create the risk of making the markets inaccessible for a critical portion of the investing population. As costs rise and profits are constrained, liquidity providers may withdraw from the market.”



“Adding Another Best Execution Standard Is Unnecessary and May Diminish Execution Quality: This will have an unintended negative impact on execution quality for larger customer orders, especially institutional orders.”



“Cboe continues to support increased clarity and consistency with respect to best execution standards. However, we are not convinced an entirely new rule is necessary.”



“We strongly recommend that the Commission revise its Best Ex Proposal.”



“The Commission should not ... adopt[] a Commission-level best execution standard that duplicates existing SRO rules.”



“We have concerns with the Best Executions Proposal’s focus on price to the exclusion of other factors and what appears to be a distinct standard from that currently imposed by FINRA rules and guidance.”



“[We] support the goals of improving execution for individual investors. We are concerned, however, that the proposed rule’s prescriptive approach to best execution (i.e., the singular focus on price without adequately weighing other factors) would have the opposite effect, particularly for larger orders.”




“BIO urges the Commission to consider the potential negative effects these proposed rules can have on small, R&D-focused companies and capital formation. In this case, as in others, the SEC has not included an adequate assessment of the impact of the proposed rule on small companies and did not include an analysis of the consequences to capital formation.”


# Growing Consensus Supports Phased & Limited Reforms





## Proposed Reg NMS Changes


**Broad Consensus:** Only reduce ticks to ½ penny and only for tick-constrained symbols; Tiny ticks and harmonization would hurt investors


 “We are particularly concerned that tick sizes of less than one half of a cent per share could harm mutual funds and their investors.”


 “We suggest that the Commission adopt the reduction of tick sizes to \$0.005 and assess whether additional reductions of tick sizes are necessary in the future.”


 “[W]e believe that the Tick Size Proposal ... is unnecessarily complex and would be an extreme and costly change for investors that may also have unforeseen consequences on the market.”

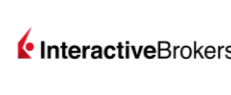
 “Based on our longstanding concerns about the consequences of excessively granular quoting tick increments on funds and their advisors, we strongly oppose applying multiple new sub-penny increments.”


 “[W]e recommend that the Commission initially reduce the quoting tick size to \$0.005 (1/2 penny) for tick-constrained stocks.”


 “We do not see a clear retail investor benefit to the Commission’s proposed smaller tick sizes. ... All of these potential outcomes could harm retail investors.”

 “Nasdaq suggests a simpler approach of adding one tick size below one penny – at \$0.005 – to help tick-constrained securities trade more naturally.”

 “We strongly believe that an increment of \$0.005 for tick-constrained securities is a prudent starting point that will prevent the negative consequences highlighted above.”

 “[W]e believe the proposed tick-size increments are too small for most stocks and will lead to substantially increased fragmentation of liquidity over several price levels. We fear the result will be that the NBBO, which the Chairman has already lamented may not be very meaningful, will simply become less meaningful still.”

 “[S]ub-penny quoting decreases the incentives for displayed liquidity by lowering the economic cost for stepping ahead of displayed orders. Simultaneous changes in tick size and access fees may further alter the stability of the NBBO in unpredictable ways.”

 “BlackRock recommends that the Commission eliminate its proposed amendments to Rule 612 [for] ... tick harmonization.”

# GAAP Balance Sheet



Assets (\$M)	3/31/2023
Cash and cash equivalents	\$769
Cash and securities segregated under regulations and other	40
Securities borrowed	1,458
Securities purchased under agreements to resell	713
Receivables from broker-dealers and clearing organizations	1,166
Receivables from customers	109
Trading assets, at fair value	5,438
Property, equipment and capitalized software, net	93
Operating lease right-of-use assets	187
Goodwill	1,149
Intangibles (net of accumulated amortization)	305
Deferred taxes	141
Other assets	292
<b>Total Assets</b>	<b>\$11,861</b>

Liabilities and Equity (\$M)	3/31/2023
Short-term borrowings, net	\$121
Securities loaned	1,028
Securities sold under agreements to repurchase	1,007
Payables to broker-dealers and clearing organizations	259
Payables to customers	108
Trading liabilities, at fair value	5,115
Tax receivable agreement obligations	239
Accounts payable and accrued expenses and other liabilities	333
Deferred tax liabilities	0
Operating lease liabilities	237
Long-term borrowings, net	1,779
<b>Total Liabilities</b>	<b>\$10,226</b>
Equity	1,635
<b>Total Liabilities and Equity</b>	<b>\$11,861</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
<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>
(-) Cash reserved for operations, taxes payable, and other accrued and unpaid liabilities <sup>2</sup>	(77)	(338)	(418)	(246)	(180)	(319)	(206)	(173)	(171)	(195)	(102)
<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>\$1,985</b>	<b>\$1,955</b>



# GAAP Income Statement



Income Statement (\$mm)	Annual				
	FY 2018	FY 2019 <sup>1</sup>	FY 2020	FY 2021	FY 2022
Trading income, net	\$1,267	\$912	\$2,493	\$2,105	\$1,629
Commissions, net and technology services	184	499	601	614	530
Interest and dividends income	88	109	62	75	159
Other, net	340	(2)	83	16	47
<b>Total Revenues</b>	<b>\$1,879</b>	<b>\$1,517</b>	<b>\$3,239</b>	<b>\$2,811</b>	<b>\$2,365</b>
Brokerage, exchange, clearance fees and payments for order flow, net	376	387	759	745	619
Communications and data processing	176	209	214	212	220
Employee compensation and payroll taxes	216	384	394	376	391
Interest and dividends expense	142	158	126	140	231
Operations and administrative	67	104	95	88	86
Depreciation and amortization	61	66	67	68	66
Amortization of purchased intangibles and acquired capitalized software	26	71	74	70	65
Termination of office leases	23	66	10	28	7
Debt issue cost related to debt refinancing and prepayment	12	41	29	7	30
Transaction fees and expenses	11	26	3	1	1
Financing interest expense	72	122	88	80	92
<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>Income (Loss) Before income taxes</b>	<b>\$696</b>	<b>\$(116)</b>	<b>\$1,383</b>	<b>\$997</b>	<b>\$557</b>
Provision for income taxes (benefit)	76	(12)	262	170	88
<b>Net Income (Loss)</b>	<b>\$620</b>	<b>\$(104)</b>	<b>\$1,121</b>	<b>\$827</b>	<b>\$468</b>

	Quarterly				FY 2023 1Q
	FY 2022				
	1Q	2Q	3Q	4Q	
	\$522	\$396	\$397	\$313	\$412
	155	136	121	118	121
	21	31	44	64	73
	3	42	(1)	3	4
	<b>\$701</b>	<b>\$605</b>	<b>\$561</b>	<b>\$498</b>	<b>\$610</b>
	150	157	169	143	146
	56	56	53	55	57
	103	99	103	86	103
	43	49	62	78	88
	25	14	14	33	24
	17	16	17	16	15
	16	16	16	16	16
	1	1	0	5	0
	26	1	1	1	2
	0	1	0	0	0
	21	22	23	25	24
	<b>\$460</b>	<b>\$431</b>	<b>\$459</b>	<b>\$458</b>	<b>\$476</b>
	<b>\$242</b>	<b>\$174</b>	<b>\$102</b>	<b>\$40</b>	<b>\$135</b>
	42	25	22	0	25
	<b>\$200</b>	<b>\$149</b>	<b>\$80</b>	<b>\$40</b>	<b>\$110</b>

# Adjusted EBITDA & Normalized Adjusted EPS



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

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

# Share Count Roll Forward



<i>(M shares)</i>	4Q 2020	2021 Total	1Q 2022	2Q 2022	3Q 2022	4Q 2022	2022 Total	1Q 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>197.1</b>
Shares Repurchased	- 1.44	- 14.71	- 8.90	- 1.76	- 3.44	- 2.23	- 16.34	- 4.91	- 37.39
Net Shares Issued	- 0.05	+ 5.16	+ 1.90	- 0.00	+ 0.00	+ 0.08	+ 1.97	+ 3.40	+ 10.49
<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>170.2</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>13.6%</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>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>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>	

# 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
Trading income, net	\$813	\$385	\$394	\$513	\$522	\$396	\$397	\$313	\$412
Commissions, net and technology services	192	143	136	144	155	136	121	118	121
Brokerage, exchange, clearance fees and payment for order flow, net	(259)	(171)	(159)	(157)	(150)	(157)	(169)	(143)	(146)
Interest and dividends, net	(17)	(15)	(17)	(15)	(22)	(18)	(18)	(14)	(14)
<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>

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
Trading income, net	\$801	\$381	\$389	\$508	\$516	\$390	\$392	\$309	\$407
Commissions, net and technology services	14	9	9	9	9	11	11	11	10
Brokerage, exchange, clearance fees and payment for order flow, net	(223)	(145)	(135)	(132)	(124)	(131)	(147)	(123)	(123)
Interest and dividends, net	(17)	(13)	(15)	(13)	(20)	(17)	(18)	(13)	(16)
<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>

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
Trading income, net	\$11	\$4	\$5	\$5	\$6	\$6	\$5	\$5	\$4
Commissions, net and technology services	178	134	127	135	146	125	110	107	112
Brokerage, exchange, clearance fees and payment for order flow, net	(36)	(26)	(24)	(25)	(27)	(26)	(22)	(20)	(23)
Interest and dividends, net	0	(3)	(2)	(1)	(1)	(1)	(1)	(2)	2
<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>

# Adjusted Net Trading Income Reconciliation

## Organic Growth Initiatives



Adjusted Net Trading Income Reconciliation (\$M)	Organic Growth Initiatives											
	Annual			Quarterly								
	2018	2019	2020	1Q 2021	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022	3Q 2022	4Q 2022	1Q 2023
Trading income, net	\$36	\$77	\$246	\$62	\$35	\$28	\$23	\$53	\$41	\$43	\$44	\$57
Commissions, net and technology services	7	11	23	13	7	7	10	11	6	6	5	5
Brokerage, exchange, clearance fees and payment for order flow, net	(2)	(9)	(88)	(12)	(7)	(7)	(6)	(5)	(5)	(9)	(11)	(10)
Interest and dividends, net	(1)	(4)	(15)	(6)	(4)	(5)	(1)	(9)	(7)	(8)	(2)	(11)
<b>Adjusted Net Trading Income</b>	<b>\$40</b>	<b>\$75</b>	<b>\$166</b>	<b>\$57</b>	<b>\$32</b>	<b>\$23</b>	<b>\$26</b>	<b>\$50</b>	<b>\$36</b>	<b>\$32</b>	<b>\$36</b>	<b>\$41</b>

# Adjusted Operating Expense Reconciliation



Adjusted Operating Expenses Reconciliation (\$M)	Annual			Quarterly				
	FY 2020	FY 2021	FY 2022	FY 2022				FY 2023
				1Q	2Q	3Q	4Q	1Q
Employee compensation and payroll taxes	\$394	\$376	\$391	\$103	\$99	\$103	\$86	\$103
(-) Cash Compensation Adjustments <sup>1</sup>	(72)	(62)	(76)	(16)	(20)	(20)	(21)	(18)
<b>Adj. Cash Compensation</b>	<b>\$321</b>	<b>\$314</b>	<b>\$315</b>	<b>\$88</b>	<b>\$79</b>	<b>\$84</b>	<b>\$65</b>	<b>\$85</b>
Communications and data processing	\$214	\$212	\$220	\$56	\$56	\$53	\$55	\$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>\$56</b>	<b>\$56</b>	<b>\$53</b>	<b>\$55</b>	<b>\$57</b>
Operations and administrative	\$95	\$88	\$86	\$25	\$14	\$14	\$33	\$24
(-) Operations & Administrative Adjustments <sup>3</sup>	(6)	(6)	(12)	(8)	(0)	(0)	(4)	(1)
<b>Adj. Operations &amp; Administrative</b>	<b>\$88</b>	<b>\$83</b>	<b>\$74</b>	<b>\$18</b>	<b>\$14</b>	<b>\$14</b>	<b>\$29</b>	<b>\$24</b>
<b>Adjusted Cash Operating Expenses</b>	<b>\$623</b>	<b>\$609</b>	<b>\$609</b>	<b>\$161</b>	<b>\$148</b>	<b>\$150</b>	<b>\$149</b>	<b>\$166</b>
Depreciation and amortization	\$67	\$68	\$66	\$17	\$16	\$17	\$16	\$15
<b>Total Adjusted Operating Expenses</b>	<b>\$690</b>	<b>\$677</b>	<b>\$675</b>	<b>\$179</b>	<b>\$164</b>	<b>\$167</b>	<b>\$165</b>	<b>\$181</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: 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; 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; regulatory and legal uncertainties and 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. 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. 1Q 2023 Adj. Net Trading Income per day calculated using 62 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 as of 4/19/2023.
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, 62, 62, 64, 63, and 62 for FY 2020, FY 2021, FY 2022, 1Q 2022, 2Q 2022, 3Q 2022, 4Q 2022, and 1Q 2023, respectively.

## Slide 4 Major Market Metrics

Note: # of trading days used in per day calculations: 253, 252, 251, 62, 62, 64, 63, and 62 for FY 2020, FY 2021, FY 2022, 1Q 2022, 2Q 2022, 3Q 2022, 4Q 2022, and 1Q 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>.
2. Organic Growth Initiatives CAGR measures the annually-compounded rate of return of Organic Growth Initiatives Daily Average Adjusted Net Trading Income over the 4.25-year period from FY 2018 to 1Q 2023.

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



# 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).
3. Represents quarter-to-date 4/19/2023.

## Slide 8 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.

# End Notes—continued



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

## Slide 9 Growing Consensus Supports Phased & Limited Reforms

1. A minimum trading increment (1/10th penny) was suggested in the NYSE/Schwab/Citadel joint letter, but otherwise has not been widely supported.

## Slide 16 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 17 GAAP Income Statement

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

## Slide 18 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 19 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 22 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).