

October 26, 2023

Rating:

NEUTRAL

Price:

\$66.65

12-Month Price Target:

\$70.00 (from \$60.00)

Analysts

Matt Bryson

(617) 695-6302

matthew.bryson@wedbush.com

Company Information - Hardware

Market Cap (M)	\$13,541
Enterprise Value (M)	\$18,572
52-Week Range	\$47.47 - \$74.51
Yield	4.20%

REV (M)	in \$		
FYE Jun	2023A	2024E	2025E
Q1 Sep	2,034.5A	1,453.7A	2,043.9E
Previous		1,502.7E	2,163.1E
Q2 Dec	1,887.5A	1,562.1E	2,278.5E
Previous		1,807.6E	2,386.5E
Q3 Mar	1,835.6A	1,595.2E	2,216.1E
Previous		1,798.3E	2,251.9E
Q4 Jun	1,601.5A	1,670.2E	2,310.8E
Previous		1,915.7E	2,326.6E
Year*	7,359.1A	6,281.2E	8,849.3E
Previous		7,024.2E	9,128.1E

Gross Margin	in %		
FYE Jun	2023A	2024E	2025E
Q1 Sep	24.5%A	19.8%A	28.8%E
Previous		21.0%E	26.9%E
Q2 Dec	21.5%A	21.9%E	29.5%E
Previous		23.0%E	29.0%E
Q3 Mar	19.3%A	23.8%E	28.9%E
Previous		29.3%E	29.3%E
Q4 Jun	19.5%A	26.5%E	30.3%E
Previous		25.5%E	30.9%E
Year*	21.4%A	23.1%E	29.4%E
Previous		23.5%E	29.1%E

EPS	in \$		
FYE Jun	2023A	2024E	2025E
Q1 Sep	0.48A	(0.22)A	1.03E
Previous		(0.27)E	0.78E
Q2 Dec	0.16A	(0.06)E	1.41E
Previous		0.13E	1.28E
Q3 Mar	(0.28)A	0.17E	1.26E
Previous		0.16E	1.14E
Q4 Jun	(0.18)A	0.38E	1.54E
Previous		0.36E	1.40E
Year*	0.19A	0.26E	5.24E
Previous		0.39E	4.61E
P/E	NM	NM	12.7x

Pricing data provided by Thomson Reuters.

*Numbers may not add up due to rounding.

Seagate Technology Holdings PLC (STX)

FQ1'24 Review - An Improving Industry Outlook with HAMR on the Horizon

STX results were somewhat below consensus, albeit in-line with the company's revised guide. The primary deltas vs. our model were lighter legacy HDD and systems revenues.

Forecasts in turn were also somewhat below prior Street estimates. In part the difference is tied to STX's outlook for systems sales to remain subdued vs. prior typical revenue levels. In part, however, we believe Seagate management is setting the company up to exceed estimates following a string of quarters where STX has underperformed or guided forward quarters lower.

Specifically, we continue to believe STX nearline volumes are set to rebound in CQ4 helped by a large CSP purchase order that we think should yield incremental units beyond the additional 500K units we have modeled Q/Q. In addition, we would expect some bump in certain legacy businesses areas (e.g., an end of year lift in retail - as we've seen in other segments - and enterprise HDDs - as businesses spend their remaining IT budget), which currently neither our model (nor STX's guidance) anticipates.

Moreover, we believe in the intermediate to longer-term, STX's leadership in HAMR will create incremental value for STX (and its shareholders). And while we are somewhat more cautious around the timing of HAMR's ramp vs. STX's outlook, we still believe management's positive commentary around product development and customer engagement should be viewed in a positive light.

Our only significant reservation regarding STX as an investment is tied to valuation. Specifically, while we believe: 1) the industry will recover (and that new longer-term data growth estimates if anything are overly conservative), and 2) that STX's leadership with HAMR will yield both share and margin benefits, we also see the timing around both these shifts as taking place in FY'25 and potentially even towards the end of the STX's fiscal year. As such, the benefits of these shifts are beyond the 12 - 24 month time frame we tend to use to value companies, leaving STX trading at multiples well above what we typically use to value commodity technology companies.

Net, we are retaining our NEUTRAL outlook on the name as STX's high valuation and the timing of larger improvements moderate our enthusiasm for the company's potential technology advantage and what we believe will be a likely recovery for the HDD industry.

WDC: We see limited ramifications for WDC from STX's results; we continue to believe WDC's results and outlook will be more dictated by NAND conditions and the significant improvement in that market that has occurred over the past 3 months.

Outlook & Valuation: We are maintaining our NEUTRAL rating, but raising our target price to \$70 (from \$60). We arrive at our target price by applying a ~18X multiple (net debt) to our current FY2025 expectations.

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FQ1 Results

Mass Capacity

- Exabytes of Mass Capacity storage increased 5% sequentially to 79.2EB from 75.2EB in FQ4. Mass capacity revenue increased 3% Q/Q to \$1.017B from \$984M reported previously in FQ4.
 - Nearline Exabytes shipped increased 2% Q/Q to 56EB (vs. decreasing 37% Q/Q to 54.7EB in FQ4). Seagate management commented on an uptick in demand for high capacity nearline products among US cloud customers driven by: 1) positive progress in US cloud inventory consumption, however, the industry continues to ship below consumption, 2) cost optimization efforts nearing a conclusion, 3) enterprise continues workload migration to the cloud.
 - STX is encouraged by constructive customer dialogue regarding its transition to a build-to-order model.
 - Other Mass Capacity shipments were 23.2EB increasing 13% Q/Q helped by improving VIA demand; FQ1 results compares with the 20.5EB reported in FQ4 that increased 18% Q/Q.
- Mass Capacity revenues represented 79% of HDD sales (from 71% in FQ4).
- Legacy capacity shipped came in at 10.4EB decreasing 34% Q/Q from 16.0EB in FQ4. Legacy revenues were \$278M, declining 31% Q/Q. The softer results reflect lower demand in mission critical, client, and consumer markets.

Systems and Flash

- Systems and Flash Revenue was \$159M, decreasing 27% Q/Q (from \$218M in FQ4).
- Seagate indicated that system sales continue to be negatively affected by cautious IT spending behavior driven by economic uncertainty.

GMs

- GMs increased ~30bps Q/Q to 19.8% vs. the 19.5% reported in FQ4'23 (as a reminder, the long-term GM target range is 30% - 33%).
- STX pointed to pricing adjustments enacted during the quarter and previous cost reduction efforts as benefitting GMs.
- However lower units led to a greater underutilization penalty with the company calling out a \$59M charge associated with underutilization during the quarter (underutilization charges were \$40M in FQ4, \$75M in FQ3, \$79M in FQ2 and \$50M in FQ1).
- Finally, STX extended the useful lives of its equipment to 3 to 10 years (from 3 to 7 years). This shift in accounting reduced COGs by \$9M, benefitting GMs by ~60 bps.

OMs

- Opex declined 4% Q/Q to \$248M (after dropping ~9% to \$258M in FQ4), reflecting the benefits of its previous cost optimization plans.
- OMs fell 68 bps Q/Q to 2.8% (vs. 3.4% reported in FQ4'23), as lighter sales weighed on operating margins despite expense reductions. (As a reminder, STX's long-term OM target range is 18% to 22%).

Cash Conversion and Free Cash Flow

- Inventories declined by \$88M (or 8%) to \$1.052B Q/Q (vs. decreasing \$60M/5% to \$1.4B Q/Q in FQ4).
- Management noted that it is making progress in its efforts to shift to a model of manufacturing to customer demand, a result that should allow for STX to run leaner (not just inventories, but also personnel and associated manufacturing costs)
- DSOs were 33 days, decreasing 2 days from 35 days in FQ4.
- Payables were \$1.5 B with DPOs decreasing 7 days to 105 days in FQ1 which compares favorably with increase of 12 days to 112 days in FQ4.

FQ2 and FY2024 Outlook

FQ2

- Seagate is forecasting revenues of \$1.55B \pm \$150M and a loss of \$-0.10 \pm \$0.20.
- This revenue outlook at the mid-point of the guide implies revenues will increase by ~7% Q/Q, due to:
 - Nearline – Seagate expects incremental revenue growth from US cloud and enterprise customers in FQ2 due to the continuation of positive demand trends exhibited in FQ1.
 - VIA – Demand in this segment is expected to be softer Q/Q offsetting a portion of nearline growth.
 - Legacy – Higher seasonal demand from the consumer market is expected to benefit this segment.
 - Non-HDD revenue – Revenue in this segment is expected to be flat Q/Q.
 - We would again note that we believe incremental nearline shipments should yield greater revenue (and potentially margin) growth than STX is projecting
- GMs for FQ2 should continue to benefit from: 1) pricing adjustments enacted during FQ1 across its portfolio, 2) previous restructuring efforts, and 3) \$20M reduction to CoGs (11M lower Q/Q) due to STX's extension of the estimated useful life of its capital equipment.
- Underutilization charges are estimated to be flat Q/Q (~\$59M).
- Opex is expected to be up slightly as some spending reduction plans conclude.
- OMs are expected to be in the mid-single-digit range.
- Interest expense is expected to decrease following STX's debt restructuring with cash interest savings totaling ~\$15M/year.
- Tax expense is forecast to be in the \$15M range.

CY'23/FY'24

- **Exabyte CAGR** – Mass capacity EB shipments over the next 3 to 5 years are expected to grow in the mid-20% range (from 35% estimate provided during Seagate's previous analyst day). Note, we don't see why data growth would deviate from historical norms once the industry moves past one-time adjustments at CSPs including a shifts in equipment utilization and useful life as well as optimization of storage capacity.
- **Nearline** – Management commented that several cloud customers have indicated that investments in standard servers and other IT hardware is expected to resume in the coming quarters.

- **VIA** – Management maintains that the key demand drivers for the VIA market (particularly in video and image applications) remain intact despite near-term economic uncertainty. With AI use cases also driving additional forward optimism for additional storage/longer term data retention.
- **China** – The pace of the economic recovery is expected to be uneven and should continue to restrain near-term demand for HDDs in that market.
- STX continues to expect that Inventory digestion should continue at CSPs at least through the end of CY'23 before seeing meaningful demand improvement.
- **24 TB nearline drives** – STX announced 24 TB CMR/28 TB SMR HDDs last week with 10 platters that are currently in qualification at cloud and enterprise customers with volume shipments to begin in the 1H'CY24.
- **HAMR** – Management also expects to begin aggressively ramping up shipments of STX's 30+ TB HAMR CRM/SMR drives in early CY'24. Additional color include: customer qualifications are going well as HAMR continues to achieve reliability and yield metrics.
- STX noted they plan on shipping ~1M HAMR drives during the 1H of 2024.
- **40+ TB HAMR CRM/SMR** – STX expects to launch a 4 TB/disc HDD in less than two years' time.
- Again, we are slightly more pessimistic around the immediate uptake of HAMR, but believe STX will eventually realize a meaningful advantage from its leadership position (through more likely in 2025 and beyond, vs 2024).
- **CapEx** – Capital expenditures are expected to decline significantly in Y/Y (from ~\$316M in FY'23) with FY'24 investments weighted more towards the 1H'FY24. Note: this decline should positively benefit cashflow, particularly as the year progresses.

Price Target & Estimates

We are maintaining our NEUTRAL rating, but increasing our target price to \$70 (from \$60). We arrive at our target price by applying a ~18X multiple (net debt) to our current FY'25 earnings outlook.

Our new 2Q24E estimates are for EPS of -\$0.06, revenues of \$1.562B, GMs of 21.9%, and OMs of 5.2% (vs. our previous estimates of \$0.13, \$1.808B, 23.0%, and 8.1%; and previous consensus estimates of -\$0.01, \$1.611B, 21.8%, and 5.9%).

Our new 2024E estimates are for EPS of \$0.26, revenues of \$6.281B, GMs of 23.1%, and OMs of 6.0% (vs. our previous estimates of \$0.39, \$7.024B, 23.5%, and 7.9%; and previous consensus estimates of \$0.65, \$6.678B, 23.2%, and 7.5%).

Our new 2025E estimates are for EPS of \$5.24, revenues of \$8.849B, GMs of 29.4%, and OMs of 16.3% (vs. our previous 2025E estimates of \$5.24, \$8,849M, 29.4%, and 16.3%; and previous consensus estimates of \$4.31, \$8,486M, 28.2%, and 15.2%).

Figure 1: STX: Historical Multiples

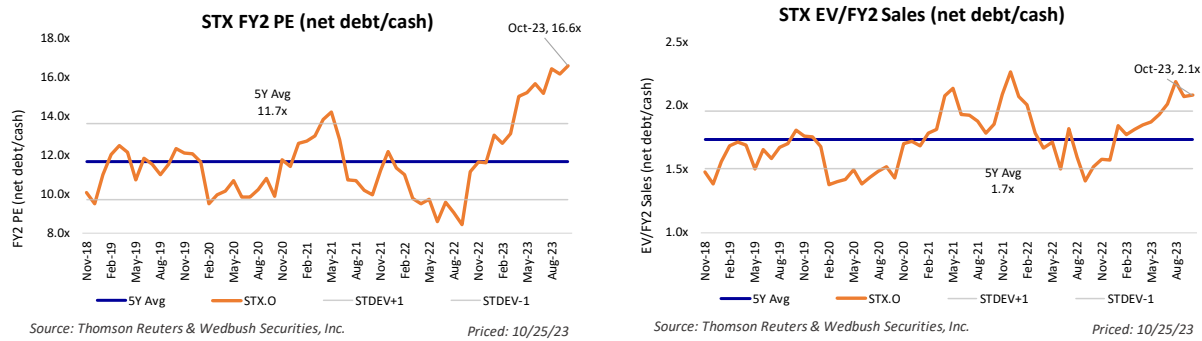


Figure 2: STX: Updated Wedbush Estimates

STX.O \$M	Outlook	Wedbush	Previous		Consensus	Wedbush	Previous		Consensus	Wedbush	Previous		Consensus
	2Q24E	2Q24E	2Q24E	%Δ	2Q24E	2024E	2024E	%Δ	2024E	2025E	2025E	%Δ	2025E
EPS	-\$0.30 - \$0.10	-\$0.06	\$0.13	-\$0.20	-\$0.01	\$0.26	\$0.39	-\$0.13	\$0.65	\$5.24	\$4.61	\$0.63	\$4.31
Revenue	\$1,400M - \$1,700M	\$1,562	\$1,808	-14%	\$1,611	\$6,281	\$7,024	-11%	\$6,678	\$8,849	\$9,128	-3%	\$8,486
GM%		21.9%	23.0%	-117bps	21.8%	23.1%	23.5%	-36bps	23.2%	29.4%	29.1%	33bps	28.2%
OM%		5.2%	8.1%	-288bps	5.9%	6.0%	7.9%	-188bps	7.5%	16.3%	16.4%	-7bps	15.2%

Source: Thomson Reuters, Company reports & Wedbush Securities, Inc. estimates

Figure 3: STX: Variance with Estimates, Q/Q%Δ & Y/Y%Δ

STX.O \$M	Outlook	Wedbush		Consensus	Var	Q/Q		Y/Y	
	1Q24E	1Q24A	1Q24E	1Q24E		4Q23A	%Δ	1Q23A	%Δ
EPS	-\$0.36 - \$0.04	-\$0.22	-\$0.27	-\$0.21	-\$0.01	-\$0.18	-\$0.04	\$0.48	-\$0.70
Revenue	\$1,400M - \$1,700M	\$1,454	\$1,503	\$1,515	-4%	\$1,602	-9%	\$2,035	-29%
GM%		19.8%	21.0%	20.2%	-40bps	19.5%	27bps	24.5%	-469bps
OM%		2.8%	3.9%	3.4%	-66bps	3.4%	-68bps	9.1%	-631bps

Source: Thomson Reuters, Company reports & Wedbush Securities, Inc. estimates

Income Statement and Other Selected Financials

Seagate Technology (STX)															
2023A													2024E		
Fiscal year ending June 30	1Q23A	2Q23A	3Q23A	4Q23A	1Q24A	2Q24E	3Q24E	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	2023A	2024E	2025E
SM	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Jun-23	Jun-24	Jun-25
EPS - Non_GAAP	\$0.48	\$0.16	\$0.28	\$0.18	\$0.22	\$0.06	\$0.17	\$0.38	\$1.03	\$1.41	\$1.26	\$1.54	\$0.19	\$0.26	\$5.24
Revenue	2,035	1,887	1,836	1,602	1,454	1,562	1,595	1,670	2,044	2,279	2,216	2,311	7,359	6,281	8,849
GM%	24.5%	21.5%	19.3%	19.5%	19.8%	21.9%	23.8%	26.5%	28.8%	29.5%	28.9%	30.3%	21.4%	23.1%	29.4%
OM%	9.1%	5.9%	4.0%	3.4%	2.8%	5.2%	6.6%	9.1%	14.6%	16.8%	15.8%	17.8%	5.8%	6.0%	16.3%
OPERATING METRICS															
	1Q23A	2Q23A	3Q23A	4Q23A	1Q24A	2Q24E	3Q24E	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	2023A	2024E	2025E
HDD Revenue	\$1,772	\$1,663	\$1,580	\$1,384	\$1,295	\$1,402	\$1,435	\$1,500	\$1,864	\$2,099	\$2,036	\$2,131	\$6,398	\$5,632	\$8,129
HDD Cost	1,339	1,314	1,289	1,125	1,046	1,101	1,096	1,101	1,320	1,471	1,441	1,475	5,067	4,343	5,707
HDD GM	24.4%	21.0%	18.4%	18.7%	19.2%	21.5%	23.7%	26.6%	29.2%	29.9%	29.2%	30.8%	20.8%	22.9%	29.8%
Total units	15.6 m	15.4 m	14.5 m	14.3 m	12.0 m	12.4 m	12.5 m	12.8 m	15.7 m	17.1 m	16.4 m	16.8 m	59.7 m	49.6 m	66.0 m
ASP	\$97.01	\$93.20	\$91.41	\$81.79	\$95.04	\$100.17	\$102.42	\$103.92	\$107.12	\$112.19	\$113.31	\$116.40	\$107.13	\$113.55	\$123.25
Y/Y Trends															
Revenue	-38%	-41%	-38%	-43%	-27%	-16%	-9%	8%	44%	50%	42%	42%	-40%	-12%	44%
INCOME STATEMENT															
	1Q23A	2Q23A	3Q23A	4Q23A	1Q24A	2Q24E	3Q24E	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	2023A	2024E	2025E
Revenue	2,035	1,887	1,836	1,602	1,454	1,562	1,595	1,670	2,044	2,279	2,216	2,311	7,359	6,281	8,849
Cost of goods sold	1,553	1,641	1,541	1,298	1,305	1,360	1,355	1,368	1,595	1,745	1,716	1,749	6,033	5,387	6,805
Gross margin	482	246	295	313	149	202	240	303	449	534	500	562	1,336	894	2,045
Selling, general, and administrative	129	125	123	114	105	120	125	130	130	130	130	130	491	480	520
Research and development	234	200	191	172	171	180	180	190	190	190	190	190	797	721	760
Other	12	81	320	(8)	2	-	-	-	-	-	-	-	405	2	-
Total Operating Expense	375	406	634	278	278	300	305	320	320	320	320	320	1,693	1,203	1,280
Operating Income	107	(160)	(339)	35	(129)	(98)	(65)	(17)	129	214	180	242	(357)	(309)	765
Interest and Other Income	(80)	122	(85)	(111)	(18)	(80)	(80)	(80)	(80)	(80)	(80)	(80)	(154)	(258)	(320)
Income before Taxes	27	(38)	(424)	(76)	(147)	(178)	(145)	(97)	49	134	100	162	(511)	(567)	445
Income Tax Expense	(2)	(5)	33	7	37	15	(10)	(7)	3	9	7	11	33	35	31
Net Income	29	(33)	(457)	(83)	(184)	(193)	(135)	(91)	46	124	93	150	(544)	(602)	414
Income per Share (Diluted)	\$0.14	-\$0.16	-\$2.21	-\$0.40	-\$0.89	-\$0.92	-\$0.64	-\$0.43	\$0.21	\$0.56	\$0.42	\$0.68	-\$2.63	-\$2.88	\$1.86
Average Shares Outstanding (Diluted)	210	206	207	207	208	209	210	211	222	222	222	222	208	210	222
Non-GAAP cost of goods sold	1,536	1,482	1,481	1,289	1,166	1,221	1,216	1,228	1,455	1,606	1,576	1,610	5,788	4,830	6,247
Non-GAAP gross margin	498	405	355	313	288	342	380	442	588	673	640	701	1,571	1,451	2,602
GM%	24.5%	21.5%	19.3%	19.5%	19.8%	21.9%	23.8%	26.5%	28.8%	29.5%	28.9%	30.3%	21.4%	23.1%	29.4%
Non-GAAP operating expense	314	294	282	258	248	260	275	290	290	290	290	290	1,148	1,073	1,160
Non-GAAP operating income	184	111	73	55	40	82	105	152	298	383	350	411	423	378	1,442
OM%	9.1%	5.9%	4.0%	3.4%	2.8%	5.2%	6.6%	9.1%	14.6%	16.8%	15.8%	17.8%	5.8%	6.0%	16.3%
Total non-GAAP charges	72	67	92	37	167	179	169	169	169	169	169	169	268	685	677
Non-GAAP net income	101	34	(58)	(37)	(46)	(13)	35	79	215	294	263	320	40	54	1,091
Non-GAAP Income per Share (Diluted)	\$0.48	\$0.16	-\$0.28	-\$0.18	-\$0.22	-\$0.06	\$0.17	\$0.38	\$1.03	\$1.41	\$1.26	\$1.54	\$0.19	\$0.26	\$5.24
Non-GAAP Average Shares Outstanding (Diluted)	210	207	207	207	208	208	208	208	208	208	208	208	208	208	208
BALANCE SHEET															
	1Q23A	2Q23A	3Q23A	4Q23A	1Q24A	2Q24E	3Q24E	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	2023A	2024E	2025E
Cash and cash equivalents	761	770	766	786	795	519	242	8	(127)	(193)	(288)	(329)	786	8	(329)
Accounts receivable, net	1,098	840	994	621	521	600	600	700	700	800	900	1,000	621	700	1,000
Inventories	1,606	1,194	1,200	1,140	1,052	1,000	1,100	1,100	1,200	1,200	1,200	1,200	1,140	1,100	1,200
Other current assets	275	277	637	358	268	300	300	300	300	300	300	300	358	300	300
Total current assets	3,740	3,081	3,597	2,905	2,636	2,419	2,242	2,108	2,073	2,107	2,112	2,171	2,905	2,108	2,171
Non-current assets:															
Property, plant and equipment, net	2,196	2,122	1,753	1,706	1,652	1,638	1,610	1,584	1,595	1,615	1,633	1,654	1,706	1,584	1,654
Investment in debt security	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Goodwill	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,237
Other intangible assets, net	5	3	1	-	-	-	-	-	-	-	-	-	-	-	-
Other non-current assets	1,433	1,424	1,379	1,708	1,671	1,671	1,671	1,671	1,671	1,671	1,671	1,671	1,708	1,671	1,671
Total assets	8,611	7,867	7,967	7,556	7,196	6,965	6,761	6,600	6,576	6,630	6,653	6,734	7,556	6,600	6,734
Current liabilities:															
Accounts payable	1,712	1,085	1,697	1,603	1,511	1,511	1,511	1,511	1,511	1,511	1,511	1,511	1,603	1,511	1,511
Accrued expenses	790	1,004	824	926	962	962	962	962	962	962	962	962	926	962	962
Current portion of long-term debt	636	636	1,118	63	-	-	-	-	-	-	-	-	63	-	-
Total current liabilities	3,138	2,725	3,639	2,592	2,473	2,473	2,473	2,473	2,473	2,473	2,473	2,473	2,592	2,473	2,473
Non-current liabilities:															
Long-term debt	5,613	5,393	4,840	5,388	5,666	5,666	5,666	5,666	5,666	5,666	5,666	5,666	5,388	5,666	5,666
Other liabilities	211	219	492	775	759	759	759	759	759	759	759	759	775	759	759
Total liabilities	8,962	8,337	8,971	8,755	8,898	8,898	8,898	8,898	8,898	8,898	8,898	8,898	8,755	8,898	8,898
Net Debt	5,488	5,259	5,192	4,665	4,871	5,147	5,424	5,658	5,793	5,859	5,954	5,995	4,665	5,658	5,995
CASH FLOW															
	1Q23A	2Q23A	3Q23A	4Q23A	1Q24A	2Q24E	3Q24E	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	2023A	2024E	2025E
CASH FLOW (3 MONTHS)															
Net cash provided by operating activities	245	251	228	218	127	(69)	(84)	(40)	92	170	139	196	942	(65)	598
Net cash used in investing activities	(133)	(77)	(42)	469	(70)	(62)	(48)	(50)	(82)	(91)	(89)	(92)	217	(230)	(354)
Net cash used in financing activities	34	(165)	(190)	(667)	(49)	(145)	(145)	(145)	(145)	(145)	(145)	(145)	(988)	(484)	(580)
Net change in cash and cash equivalents	146	9	(4)	20	9	(276)	(276)	(235)	(135)	(66)	(94)	(41)	171	(779)	(336)

Source: Thomson Reuters, Company reports & Wedbush Securities, Inc. estimates

HARDWARE

TICKER	COMPANY NAME	WEDB RATING	PRICES	WEDB TP\$	UP/DNSIDE %	MKT CAP\$B	EV\$B	WEDB EPS EST				WEDB REV EST \$M				WEDB P/E				WEDB EV/SALES			
								2023E	2024E	2025E	2026E	2023E	2024E	2025E	2026E	2023E	2024E	2025E	2026E	2023E	2024E	2025E	2026E
2330	Taiwan Semiconductor Manufacturing Co Ltd	O	\$531.00	\$700.00	32%	13,769.9	13,183.0	\$31.71	\$37.68	\$47.50	-	2,150,920	2,604,200	3,065,490	-	16.0x	13.5x	10.7x	-	6.1x	5.1x	4.3x	-
AMD	Advanced Micro Devices Inc	O	\$93.85	\$155.00	65%	155.2	151.4	\$2.70	\$4.25	\$5.13	-	\$22,609	\$26,916	\$29,637	-	33.9x	21.5x	17.8x	-	6.5x	5.5x	5.0x	-
AXTI	AXT Inc	O	\$2.13	\$6.00	181%	0.1	0.2	(\$0.38)	(\$0.01)	\$0.40	-	\$76	\$106	\$137	-	-6.1x	-232.7x	5.8x	-	1.3x	1.0x	0.7x	-
DBD	Diebold Nixdorf Inc	N	\$18.37	\$20.00	9%	0.7	1.8	\$1.36	\$4.02	-	-	\$3,787	\$3,857	-	-	23.8x	8.1x	-	-	0.7x	0.7x	-	-
GFS	Globalfoundries Inc	O	\$52.19	\$70.00	34%	28.5	28.5	\$2.19	\$3.39	-	-	\$7,501	\$8,766	-	-	23.8x	15.4x	-	-	3.8x	3.3x	-	-
INTC	Intel Corp	N	\$32.38	\$35.00	8%	137.5	165.7	\$0.65	\$1.95	\$2.96	-	\$52,935	\$61,425	\$68,647	-	58.9x	19.6x	12.9x	-	3.0x	2.6x	2.3x	-
MU	Micron Technology Inc	O	\$64.61	\$80.00	24%	73.0	76.8	(\$4.45)	(\$0.86)	\$11.44	-	\$15,540	\$20,886	\$37,891	-	-15.3x	-79.1x	5.9x	-	4.8x	3.6x	2.0x	-
NTAP	NetApp Inc	N	\$71.83	\$75.00	4%	15.1	14.5	\$5.59	\$5.73	\$6.16	-	\$6,362	\$6,145	\$6,385	-	12.3x	12.0x	11.2x	-	2.3x	2.3x	2.3x	-
NVDA	NVIDIA Corp	O	\$401.71	\$600.00	49%	1031.9	1025.6	\$3.33	\$10.62	\$15.04	\$17.14	\$26,974	\$53,580	\$74,195	\$88,950	119.9x	37.6x	26.5x	23.3x	36.5x	18.4x	13.3x	11.1x
PSTG	Pure Storage Inc	O	\$32.17	\$45.00	40%	10.4	9.2	\$1.42	\$1.45	\$1.80	-	\$2,753	\$2,973	\$3,522	-	20.1x	19.7x	15.9x	-	3.2x	3.0x	2.5x	-
SIMO	Silicon Motion Technology Corp	O	\$52.11	\$85.00	63%	1.8	1.5	\$1.94	\$4.37	\$5.30	-	\$606	\$778	\$828	-	23.0x	10.2x	8.4x	-	2.4x	1.9x	1.8x	-
SMCI	Super Micro Computer Inc	N	\$237.18	\$250.00	5%	13.4	13.3	\$11.82	\$16.08	\$18.61	-	\$7,123	\$10,011	\$12,176	-	19.8x	14.6x	12.6x	-	1.7x	1.2x	1.0x	-
STX	Seagate Technology Holdings PLC	N	\$66.80	\$70.00	5%	13.9	18.6	\$0.19	\$0.26	\$5.24	-	\$7,359	\$6,281	\$8,849	-	470.2x	344.0x	17.0x	-	2.5x	2.9x	2.1x	-
2303	United Microelectronics Corp	O	\$46.80	\$57.00	22%	585.1	529.3	\$4.63	\$3.53	\$5.64	-	\$222,570	\$242,790	\$305,050	-	9.1x	12.0x	7.5x	-	2.4x	2.2x	1.7x	-
WDC	Western Digital Corp	O	\$37.75	\$60.00	59%	13.7	19.6	(\$1.86)	(\$2.85)	\$10.40	-	\$12,318	\$12,629	\$20,313	-	-28.7x	-18.7x	5.1x	-	1.4x	1.4x	0.8x	-

TICKER	COMPANY NAME	MEAN REC	PRICES	MEAN TP\$	UP/DNSIDE %	MKT CAP\$B	EV\$B	MEAN EPS EST				MEAN REV EST \$M				MEAN P/E				MEAN EV/SALES			
								2023E	2024E	2025E	2026E	2023E	2024E	2025E	2026E	2023E	2024E	2025E	2026E	2023E	2024E	2025E	2026E
2330	Taiwan Semiconductor Manufacturing Co Ltd	O	\$531.00	\$657.98	24%	13,769.9	13,183.0	\$31.62	\$37.28	\$45.82	\$45.08	\$2,150,107	\$2,603,793	\$3,090,640	\$3,247,000	16.0x	13.6x	11.1x	11.3x	6.1x	5.1x	4.3x	4.1x
AMD	Advanced Micro Devices Inc	O	\$93.85	\$136.44	45%	155.2	151.4	\$2.76	\$4.17	\$5.33	\$6.73	\$22,786	\$27,546	\$32,118	\$35,256	33.1x	21.9x	17.2x	13.6x	6.5x	5.4x	4.6x	4.2x
AXTI	AXT Inc	N	\$2.13	\$4.46	109%	0.1	0.2	(\$0.45)	(\$0.12)	\$0.32	-	\$76	\$99	\$137	-	-5.2x	-19.4x	7.3x	-	1.4x	1.0x	0.7x	-
DBD	Diebold Nixdorf Inc	N	\$18.37	\$22.50	22%	0.7	1.8	\$1.16	\$3.81	-	-	\$3,768	\$3,855	-	-	27.9x	8.5x	-	-	0.7x	0.7x	-	-
GFS	Globalfoundries Inc	O	\$52.19	\$71.64	37%	28.5	28.5	\$2.08	\$2.70	\$3.37	-	\$7,422	\$8,239	\$9,090	-	25.0x	19.3x	15.4x	-	3.9x	3.5x	3.2x	-
INTC	Intel Corp	N	\$32.38	\$38.57	10%	137.5	165.7	\$0.63	\$1.72	\$2.42	\$3.39	\$52,473	\$58,715	\$63,969	\$70,081	61.3x	22.3x	15.8x	11.3x	3.1x	2.7x	2.5x	2.3x
MU	Micron Technology Inc	N	\$64.61	\$78.49	21%	73.0	76.8	(\$4.45)	(\$1.61)	\$5.37	\$7.75	\$15,540	\$20,932	\$30,460	\$33,174	-15.3x	-42.2x	12.7x	8.8x	4.8x	3.6x	2.5x	2.3x
NTAP	NetApp Inc	N	\$71.83	\$80.90	13%	15.1	14.5	\$5.59	\$5.73	\$6.16	\$6.82	\$6,362	\$6,143	\$6,413	\$6,808	12.3x	12.0x	11.2x	10.1x	2.3x	2.3x	2.2x	2.1x
NVDA	NVIDIA Corp	O	\$401.71	\$630.06	57%	1031.9	1025.6	\$3.34	\$10.84	\$17.14	\$20.08	\$26,974	\$54,850	\$82,829	\$97,056	119.6x	36.8x	23.3x	19.9x	36.5x	18.0x	11.9x	10.2x
PSTG	Pure Storage Inc	O	\$32.17	\$44.00	37%	10.4	9.2	\$1.41	\$1.40	\$1.67	\$1.46	\$2,753	\$2,959	\$3,405	\$3,837	20.3x	20.4x	17.2x	19.5x	3.2x	3.0x	2.6x	2.3x
SIMO	Silicon Motion Technology Corp	N	\$52.11	\$76.00	46%	1.8	1.5	\$1.97	\$3.71	\$5.05	-	\$611	\$747	\$871	-	22.6x	12.0x	8.8x	-	2.4x	2.0x	1.7x	-
SMCI	Super Micro Computer Inc	N	\$237.18	\$354.33	49%	13.4	13.3	\$11.81	\$16.97	\$18.58	-	\$7,123	\$10,100	\$11,362	\$13,675	19.8x	13.8x	12.6x	-	1.7x	1.2x	1.1x	0.9x
STX	Seagate Technology Holdings PLC	N	\$66.80	\$64.28	-4%	13.9	18.6	\$0.19	\$0.65	\$4.31	\$5.39	\$7,384	\$6,678	\$8,486	\$8,940	470.2x	338.3x	20.7x	16.6x	2.5x	2.8x	2.2x	2.1x
2303	United Microelectronics Corp	N	\$46.80	\$54.36	16%	585.1	529.3	\$4.86	\$4.52	\$5.23	\$5.05	\$222,293	\$249,010	\$287,094	\$324,686	8.7x	9.4x	8.1x	8.4x	2.4x	2.1x	1.8x	1.6x
WDC	Western Digital Corp	N	\$37.75	\$47.84	27%	13.7	19.6	(\$3.59)	(\$4.07)	\$3.81	\$5.89	\$12,318	\$12,094	\$16,056	\$19,156	-14.9x	-13.1x	14.0x	9.1x	1.4x	1.4x	1.1x	0.9x

Source: Thomson Reuters & Wedbush Securities, Inc. estimates; Priced: 10/26/2023

* All numbers for 2330.TW and 2303.TW in NTS

Matt Bryson | O: 617 695 6302 | M: 617 680 0888 | matthew.bryson@wedbush.com

VALUATION

2330	We arrive at our target price by applying a PE multiple of ~14X to our FY2025 EPS estimate (plus net cash).
AMD	We arrive at our target price by applying a PE multiple of ~30X to our FY2025 EPS estimate (plus net cash).
AXTI	We arrive at our target price by applying a PE multiple of ~15X to our FY2025 EPS estimate (plus net cash).
DBD	We arrive at our target price by applying a PE multiple of ~10X to our FY2024 EPS estimate (plus net debt).
GFS	We arrive at our target price by applying a PE multiple of ~20X to our FY2024 EPS estimate (plus net cash).
INTC	We arrive at our target price by applying a multiple of ~13X to our FY2025 (net debt) outlook.
MU	We arrive at our target price by applying a PE multiple of ~7X to our FY2025 (plus net debt) outlook.
NTAP	We arrive at our target price by applying a PE multiple of ~12X to our FY2025 estimates and adding net cash.
NVDA	We arrive at our target price by applying a PE multiple of ~35X to our FY2026 EPS estimate (plus net cash).
PSTG	We arrive at our target price by applying a PE multiple of ~23X to our FY2025 estimates (plus net cash).
SIMO	We arrive at our target price by applying a PE multiple of ~12X to our FY2025 estimates + current net cash + assumed damages at least equal to the prior MXL termination fee.
SMCI	We arrive at our target price by applying a PE multiple of ~13X to our FY2025 EPS (net debt).
STX	We arrive at our target price by applying a PE multiple of ~18X to our FY2025 estimate (plus net debt).
2303	We arrive at our target price based on a multiple of ~8X PE using our FY2025 EPS estimate (net cash).
WDC	We arrive at our target price by applying a PE multiple of ~7X to our FY2025 estimate (plus net debt).

RISKS

2330	Economic deterioration and demand destruction related to the pandemic, changes to US Policy, sovereignty risk to Taiwan, risk to the supply chain, and technology risk.
AMD	AMD misexecutes, customers choose other vendors, competition increases (e.g., pricing, design), TSMC is constrained (production), the economy deteriorates.
AXTI	Demand for AXTI products fall; Tongmei fails to IPO; China/US trade risk; market share loss.
DBD	DBD works through (fails to work through) constrained liquidity needs, satisfies (fails to satisfy) debt service, demand for DBD's products rises (falls).
GFS	Economic deterioration and demand destruction related to the pandemic, changes to government policy, risk to the supply chain, and technology risk.
INTC	Upside risk: INTC executes on stated initiatives, competition misexecutes, tailwinds continue to boost revenues and GM. Downside risk: misexecution, recovery elongates
MU	MU misexecutes, future acquisitions dilute value, Chinese vendors successfully enter NAND or DRAM markets, US/China trade war.
NTAP	Upside risks: Successful product innovation (software), competitor missteps and accelerated TAM growth. Downside risks: Cloud cannibalization, normalized enterprise spend, increasing competition and misexecution.
NVDA	DC weakens; AI driven demand softens; gaming demand softens, misexecution, customers reduce spending, competition gains share, US/China tensions increase.
PSTG	Downside risks: Cloud cannibalization, normalization/decline in enterprise spend, increasing competition and misexecution.
SIMO	MXL could successfully terminate its proposed acquisition of SIMO without compensating SIMO, misexecution.
SMCI	SMCI out executes/innovates (misexecutes/fails to innovate) vs. peers, demand increases (decreases).
STX	Upside risk: STX executes on stated initiatives and particularly HAMR, pricing increases, demand increases. Downside risks: misexecutes, pricing declines, demand decreases, US/China tensions increase.
2303	Economic deterioration and demand destruction related to the pandemic, changes to US Policy, sovereignty risk to Taiwan, risk to the supply chain, and technology risk.
WDC	WDC misexecutes, customers choose other vendors, competition increases (e.g., pricing, design), the economy deteriorates.

Valuation

We arrive at our price target price by applying a target multiple of ~18X to our FY2025 EPS (net debt).

Company Description

Seagate is a manufacturer and supplier of HDDs and storage solutions for consumer and enterprise use cases.

Risks to the Attainment of Our Price Target and Rating:

- A shift in competitive dynamics tied to new technology roll-outs (HAMR by STX or MAMR by WDC/Toshiba).
- Failure to execute on the next generation of near-line drives.
- Declines in NAND pricing and greater than expected cannibalization rates of HDDs by SSDs.
- Optimization of data storage by hyperscale customers leading to lower than anticipated requirements for additional data storage.
- An unexpected increase in industry price competition (following numerous years of benign trends).
- Impairment of production assets tied to unanticipated events (e.g., the Thai Floods of 2011) leading to a shortfall in industry capacity.

Analyst Certification

I, Matt Bryson, certifies that the views expressed in this report accurately reflect my personal opinion and that I have not and will not, directly or indirectly, receive compensation or other payments in connection with my specific recommendations or views contained in this report.

Mentioned Companies

Company	Rating	Price	Target
Western Digital	OUTPERFORM	\$36.54	\$60.00
Seagate Technology Holdings PLC	NEUTRAL	\$66.65	\$70.00

Investment Rating System:

OUTPERFORM: Expect the total return of the stock to outperform relative to the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

NEUTRAL: Expect the total return of the stock to perform in-line with the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

UNDERPERFORM: Expect the total return of the stock to underperform relative to the median total return of the analyst's (or the analyst's team) coverage universe of the next 6-12 months.

The Investment Ratings are based on the expected performance of a stock (based on anticipated total return to price target) relative to the other stocks in the analyst's coverage universe (or the analyst's team coverage).*

Rating distribution (as of October 26, 2023)	Investment Banking Relationships (as of October 26, 2023)
OUTPERFORM: 60.84%	OUTPERFORM: 4.21%
NEUTRAL: 37.30%	NEUTRAL: 1.25%
UNDERPERFORM: 1.86%	UNDERPERFORM: 0.00%

The Distribution of Ratings is required by FINRA rules; however, WS' stock ratings of Outperform, Neutral, and Underperform most closely conform to Buy, Hold, and Sell, respectively. Please note, however, the definitions are not the same as WS' stock ratings are on a relative basis.

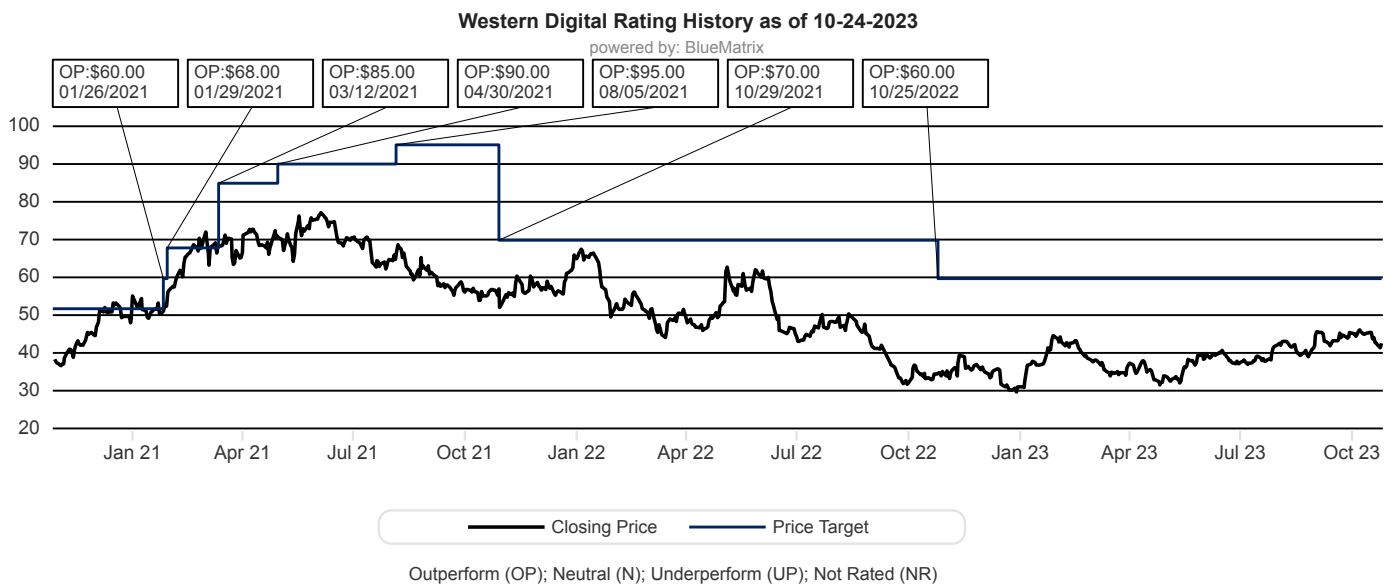
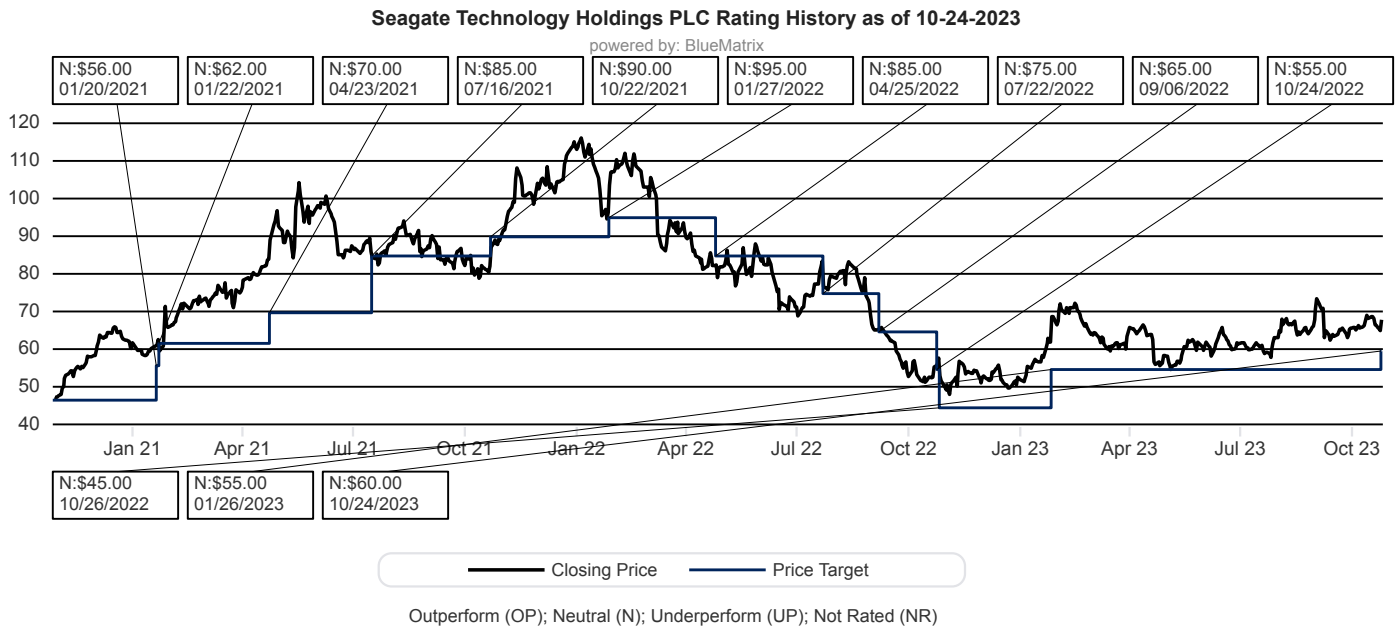
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Company Specific Disclosures

This information is subject to change at any time.

1. WS makes a market in the securities of Seagate Technology Holdings PLC and Western Digital.

Price Charts



Wedbush disclosure price charts are updated within the first fifteen days of each new calendar quarter per FINRA regulations. Price charts for companies initiated upon in the current quarter, and rating and target price changes occurring in the current quarter, will not be displayed until the following quarter. Additional information on recommended securities is available on request.

Disclosure information regarding historical ratings and price targets is available: [Research Disclosures](#)

*WS changed its rating system from (Strong Buy/ Buy/ Hold/ Sell) to (Outperform/ Neutral/ Underperform) on July 14, 2009.

Applicable disclosure information is also available upon request by contacting the Research Department at (212) 833-1375, by email to leslie.lippai@wedbush.com. You may also submit a written request to the following: Wedbush Securities, Attn: Research Department, 142 W 57th Street, New York, NY 10019.

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Equity Research			
CONSUMER AND RETAIL			TMT
Beverages/Cannabis			
Gerald Pascarelli, CFA	(646) 860-7585	gerald.pascarelli@wedbush.com	
Footware & Apparel			
Tom Nikic	(212) 938-9932	tom.nikic@wedbush.com	
Hardlines Retail			
Seth Basham	(212) 938-9954	seth.basham@wedbush.com	
Restaurants			
Nick Setyan	(213) 688-4519	nick.setyan@wedbush.com	
HEALTHCARE			FINANCIAL INSTITUTIONS GROUP
Biotechnology			
David Nierengarten, Ph.D.	(415) 274-6862	david.nierengarten@wedbush.com	
Biotechnology			
Robert Driscoll, Ph.D.	(415) 274-6863	robert.driscoll@wedbush.com	
Emerging Pharmaceuticals			
Liana Moussatos, Ph.D.	(415) 263-6626	liana.moussatos@wedbush.com	
Emerging Pharmaceuticals			
Andreas Argyrides	(212) 833-1399	andreas.argyrides@wedbush.com	
Biotechnology			
Laura Chico, Ph.D.	(212) 668-9868	laura.chico@wedbush.com	
RESEARCH MANAGEMENT			
Kevin Merritt, CFA		Kirsten Fraunces	
Director of Research		EVP, Head of Capital Markets	
kevin.merritt@wedbush.com		kirsten.fraunces@wedbush.com	
(212) 938-9949		(213) 688-4404	
COMMODITY AGRICULTURE RESEARCH			
Al Kluis			
Kluis Commodity Advisors			
info@kluiscommodityadvisors.com			
(888) 345-2855			
FIXED INCOME FUTURE & RATES RESEARCH			
Arthur Bass			
Managing Director			
Arthur.Bass@Wedbush.com			
(212) 259-6582			
CORPORATE ACCESS			
Avishai Kantor		Sophia Dao	
Vice President, Corporate Access		Associate, Corporate Access	
Avishai.Kantor@wedbush.com		Sophia.Dao@wedbush.com	
(212) 259-6589		(213) 688-4380	
TRADING			
Consumer/Financials/TMT		TMT	
Bryan Lonsinger	(212) 938-9925	bryan.lonsinger@wedbush.com	Matthew Croglio (212) 931-7071 matthew.croglio@wedbush.com
Healthcare/TMT			
Sahak Manualian	(213) 688-4533	sahak.manuelian@wedbush.com	
WEDBUSH OFFICES			
Los Angeles		San Francisco	
1000 Wilshire Boulevard		600 Montgomery Street	
Los Angeles, CA 90017		San Francisco, CA 94111	
(213) 688-8000		(415) 273-7300	
		Chicago	
		141 W. Jackson Boulevard, Suite 1710A	
		Chicago, IL 60604	
		(312) 786-1930	