

October 27, 2023

Rating:

NEUTRAL

Price:

\$32.52

12-Month Price Target:

\$35.00

Analysts

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Company Information - Hardware

Market Cap (M)	\$137,492
Enterprise Value (M)	\$164,437
Shares Outst (M)	4,188.0
52-Week Range	\$24.73 - \$40.07
Yield	1.54%

REV (M)	in \$		
FYE Dec	2023E	2024E	2025E
Q1 Mar	11,715.0A	14,554.5E	16,537.0E
Previous		14,509.0E	16,153.0E
Q2 Jun	12,949.0A	15,044.9E	16,948.6E
Previous		14,847.5E	16,559.7E
Q3 Sep	14,158.0A	15,878.2E	17,735.5E
Previous		13,459.1E	15,668.8E
Q4 Dec	15,103.1E	16,780.7E	18,985.8E
Previous		14,811.7E	16,400.1E
Year*	53,925.1E	62,258.3E	70,206.9E
Previous		52,934.8E	61,425.4E

Gross Margin	in %		
FYE Dec	2023E	2024E	2025E
Q1 Mar	38.4%A	46.0%E	51.0%E
Previous			52.0%E
Q2 Jun	39.8%A	48.5%E	53.0%E
Q3 Sep	45.8%A	51.0%E	54.0%E
Previous		43.0%E	
Q4 Dec	46.5%E	53.0%E	55.0%E
Previous		46.0%E	
Year*	42.9%E	48.4%E	53.3%E
Previous		42.0%E	49.1%E

EPS	in \$		
FYE Dec	2023E	2024E	2025E
Q1 Mar	(0.04)A	0.40E	0.69E
Previous		0.33E	0.62E
Q2 Jun	0.13A	0.43E	0.73E
Previous		0.41E	0.67E
Q3 Sep	0.41A	0.52E	0.77E
Previous		0.20E	0.54E
Q4 Dec	0.44E	0.65E	0.93E
Previous		0.37E	0.67E
Year*	0.94E	1.99E	3.12E
Previous		0.65E	1.95E
P/E	34.5x	16.3x	10.4x

Pricing data provided by Thomson Reuters.

*Numbers may not add up due to rounding.

Intel Corp (INTC)

Is an Intel Core in the Hand Worth Two Gaudis in the Bush?

Intel's revenue results and guide were better than expected with upside driven almost exclusively by stronger PC mechanics. In turn, better loading helped lift GMs, which in tandem with continued opex cost controls led to unexpected earnings strength. And the meaningful upside vs. expectations in turn drove Intel's stock higher after hours.

While we indeed agree Intel's results (i.e., a Core in the Hand) were impressive, we also believe the value of the company is really predicated upon its ability to execute to its roadmap, particularly in enterprise and manufacturing (i.e., a Gaudi in the Bush).

On the roadmap front, management certainly talked to a variety of milestones that they suggest signal even better times are ahead including:

Intel's Manufacturing Process Achievements:

- Intel 4 is now in mass production, with Intel 3 expected to be manufacturing ready by year end.
- Intel has signed 2 new 18A customers with another customer expected to be added before the close of CQ4.
- Intel has released the 0.9 PDKs for 18A with availability imminent for customers.

Enterprise Product Progress:

- Intel's accelerator pipeline has doubled over the last 90 days.
- Emerald Rapids is in production and ramping. Sierra Forest, Intel's future high core count SKU is in customer validation as is Granite Rapids which will deliver 2 to 3x the performance of Intel's 4th gen Xeon.

Having said this, at the same time, questions around Intel's future have necessary proliferated in recent months given:

- QCOM's debut of its Arm processor for PCs, alongside news that both NVDA and AMD are planning their own Arm based products, creating a potentially meaningful threat to the dominance in PCs that is currently lifting Intel's financials, and
- NVDA's outlook for AI to displace traditional compute, a threat made more stark by Intel's less apparent (in our view) success in penetrating the AI market.
- TSMC's recent comments around its view of future process technology, which leave no doubt as to its opinion that it remains head and shoulders ahead of Intel.

Our view remains that it is the last factor that is most integral to Intel's future success as there will be demand for Intel's fab services and Intel will necessarily have a meaningful silicon cost or performance advantage vs. its peers, if it can get its process technology right. But, again, we continue to wait for more clarity around this point (with INTC's products based on next generation nodes still yet to ship) before we are willing to take a more definite stance on Intel's likely future success. Net, we remain NEUTRAL on INTC for now.

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INTC Derivatives

WDC/MU – Positive – The pickup in PCs Intel is seeing [fits with our checks suggesting broader strength in client/retail demand](#). We see this setup as creating even more substantial upside for memory vendors as they not only take advantage of increased demand volume, but also are seeing increased pricing (helped by supply rationalization) that is acting as a modest multiplier on the topline, while having a much more substantial positive impact on DRAM and NAND margins.

SIMO/Phison – Positive – Same as above, with the caveat that any price gains in SSD controllers are far more modest in nature than what we are seeing in memory.

AMD – Positive to Mixed – AMD should see some benefit from a better PC environment (similar to INTC's upside), particularly with the consumer market seemingly strengthening. The more important commentary, however, may have been on the server side where INTC: 1) noted better than expected results for Xeon (up Q/Q) despite that growth being offset by softer Altera sales (we expect Xilinx should outperform its Intel owned FPGA peer), while 2) alluding to CPU share losses suggesting relatively better 2H results at AMD. Our question with AMD rather is does the environment in servers improve enough to match higher expectations into CQ4/CQ1, prior to the point we believe AMD both begins to benefit from the ramp of its MI300 parts, and CSP standard server requirements normalizing.

INTC Results

Q3 Results:

- For CQ3'23, INTC reported EPS of \$0.41, revenues of \$14,158M, GMs of 45.8%, and OMs of 13.6% (vs. our estimates of \$0.20, \$13,459M, 43.0%, and 7.1%; and consensus of \$0.22, \$13,545M, 42.7%, and 5.3%). EPS came in well ahead of guidance again for a profit of \$0.41. Sales results were 2% above the high end of the guidance range of \$12,900M - \$13,900M. GMs were 45.8% and also ahead of original guidance by ~279bps.
- Intel segment results:
 - **CCG**—(including desktops and notebooks) revenues came in at \$7.9B, an increase of 16% Q/Q (vs. \$6.8B in CQ2) but declining 3% Y/Y. Management commented that customer inventory levels are now healthy with strength in commercial and gaming driving ASPs higher.
 - **DCAI**—revenues were \$3.8B in CQ3 (vs. \$4.0B in CQ2), decreasing 5% Q/Q, and 9% Y/Y; sales were in-line with our expectations, but missed prior consensus estimates by 4%. Management commented on continued unit TAM softness and share loss, however, its Xeon business did increase Q/Q. ASPs hit a record high in CQ3 and benefited from: 1) a more favorable customer mix, and 2) strong adoption of newer products (INTC noted they shipped their millionth Gen 4 Xeon during the quarter) with higher core density. PSG revenues declined in the mid-teens percentage range Q/Q as FPGA products have entered a period of inventory reduction.
 - **NEX**—revenues were \$1.45B (vs. \$1.36B in CQ2), increasing 6% Q/Q, but decreasing 36% from the year ago quarter. Edge markets showed signs of recovery. Network and telco markets continued to work through elevated inventory and weak demand.

- **Mobileye**—revenues totaled \$530M in CQ3 increasing 17% Q/Q and 18% Y/Y (from \$454M in CQ2). MBLY reduced its 2023 revenue guidance by 0.6% at the mid-point, however, operating profit expectations were increased by close to 7% (or, 200+ bps of additional OM expansion to 31.6%).
- **Intel Foundry**—revenues increased 34% Q/Q and 82% Y/Y to \$311M (vs. \$232M in CQ2) driven by increased packaging revenue and higher sales of IMS tools.
- **GMs** were 45.8%, improving 599 bps Q/Q (from 39.8% in CQ2), but decreasing 9 bps from CQ3'Q22. Management noted that GMs came in 280 bps ahead of guidance due to better higher revenue and ASPs and better sell through a previously reserved inventory.
- **Free cash flow** was positive for the quarter, exceeding INTC's prior expectation of achieving this metric prior to year end.

Note: All numbers are as reported as of the initial earnings release. INTC has integrated previous AXG segment results into CCG and DCAI as of CQ1'23.

Q4 Outlook

- Management guidance for CQ4'23 is for EPS of \$0.44, sales of \$15,100M (at the mid-point of the range), and GMs of 46.5%.
 - **CCG**—We are modeling revenues of \$8.5B, or increasing 9% Q/Q. Management's outlook includes a return of historical purchasing cycles and ASPs, normal customer and channel inventory levels, and growing PC demand.
 - **DCAI**—We are modeling a 3% Q/Q increase in sales to \$3.9B. Management expects moderate Q/Q revenue growth in CQ4 driven by strength in its Xeon products offsetting declines in PSG. Management expects PSG revenues to be depressed for the next few quarters as customers work through inventory (though this category will be separated post Q4 ahead of an eventual spin-out), before returning to a more normalized run rate and growth.
 - **NEX, MBLY, and IFS** – We are forecasting revenues of \$1.5B, \$636M, and \$323M, respectively. NEX is expected to remain flattish as better demand at the edge is again offset by the need to further reduce telco/networking inventories. MBLY should lift into Q4, albeit with gains slightly more modest than previously projected. Intel did not provide more explicit targets or color around near-term expectations for IFS.
- **GMs**— Our 46.5% estimate is in-line with Intel's guidance. Management expects further loading as sales grow Q/Q (increasing 7% at the mid-point of revenue guidance) to benefit GM.
- **OMs**—We are estimating Opex of \$4.9B (up slightly Q/Q) as management continues to focus on optimizing Intel's expense structure.
- **Taxes** – Management is guiding to a tax rate of 13%.
- **Capex**—We are modeling capex spend of \$5.8B; our estimate for the year is \$24.8B.

Full Year Commentary, Manufacturing Updates (And Other Pertinent Points)

- **PCs**: INTC reiterated its expectations of a 270 unit PC TAM for 2023 and expects the return of a long-term PC TAM of 300+ units/year.
 - Meteor Lake (Intel 4) began shipping during CQ3 and will officially launch December 14th.
 - Arrow Lake (Intel 20A) and Lunar Lake (Intel 20A + NPU) are expected in 2024.

- Panther Lake (Intel 18A) is expected in 2025.
- **On the enterprise front**, INTC noted progress in Xeon will be partially offset by PSG declines in the near-term, but management offered a more promising outlook for 2024 and beyond.
 - Sapphire Rapids is now deployed with general availability at CSPs and is on track to surpass 2M units before the end of 2023.
 - Emerald Rapids is now in production and began shipping this month. The official launch is December 14th.
 - Sierra Forest remains on track for the 1H'24 with customers currently in the validation process.
 - Granite Rapids also remains on track for 2024, and should come out shortly after Sierra Forest is introduced. The production stepping of Granite Rapids has already taped-in and the part is in the fab now.
 - Clearwater Forest (manufactured on Intel 18A) is expected to go to market in 2025. INTC expects to achieve manufacturing readiness in 2H'24.
 - AI acceleration: INTC noted that its pipeline for accelerators has nearly doubled over the last 90 days with
- INTC reiterated its commitment to 5 nodes in 4 years and to regain transistor performance and power performance leadership by 2025.
- INTC is seeing incremental demand for its advanced packaging capabilities. With capacity corridors ramping faster for these products (vs. traditional foundry), IFS could realize incremental revenue growth from this trend.
- INTC again reiterated its plan to separate out foundry financials, with INTC planning on updating the analyst community on the foundry front during a Q1'24 event.
- Management continues to expect net capital intensity in the mid-30s as a percentage of revenue across 2023 and 2024 in aggregate, and for capex offsets to track to the high end of the previous range of 20% to 30%.
- Free cash flow is now expected to be at breakeven at the end of the year and was positive in CQ3.
- IMS Nanofabrication business (IMS) — During CQ3 INTC sold a 10% stake in IMS to TSMC, valuing IMS at ~\$4.3B
- Altera/PSG is expected to IPO over the next 2 to 3 years.

Wedbush's Price Target

We are maintaining our NEUTRAL rating and target price of \$35. We arrive at our target price by applying earnings multiple of ~13X (net \$4.29/per share debt) to our FY'25 earnings outlook of \$3.12.

Our new 4Q23E estimates are for: EPS of \$0.44, revenues of \$15,103M, GMs of 46.5%, and OMs of 14.3% (vs. our previous 4Q23E estimates of \$0.37, \$14,812M, 46.0%, and 12.0%; and previous consensus estimates of \$0.32, \$14,345M, 44.2%, and 8.2%.)

Our new 2023E estimates are for: EPS of \$0.94, revenues of \$53,925M, GMs of 42.9%, and OMs of 7.9% (vs. our previous 2023E estimates of \$0.65, \$52,935M, 42.0%, and 5.5%; and previous consensus estimates of \$0.63, \$52,535M, 41.1%, and 2.9%.)

Our new 2024E estimates are for: EPS of \$1.99, revenues of \$62,258M, GMs of 48.4%, and OMs of 15.7% (vs. our previous 2024E estimates of \$1.95, \$61,425M, 49.1%, and 15.5%; and previous consensus estimates of \$1.72, \$58,715M, 46.1%, and 12.1%).

Our new 2025E estimates are for: EPS of \$3.12, revenues of \$70,207M, GMs of 53.3%, and OMs of 22.1% (vs. our previous 2025E estimates of \$2.96, \$68,647M, 53.6%, and 21.4%; and previous consensus estimates of \$2.42, \$63,969M, 50.3%, and 17.4%).

Figure 1: INTC: Historical Multiples

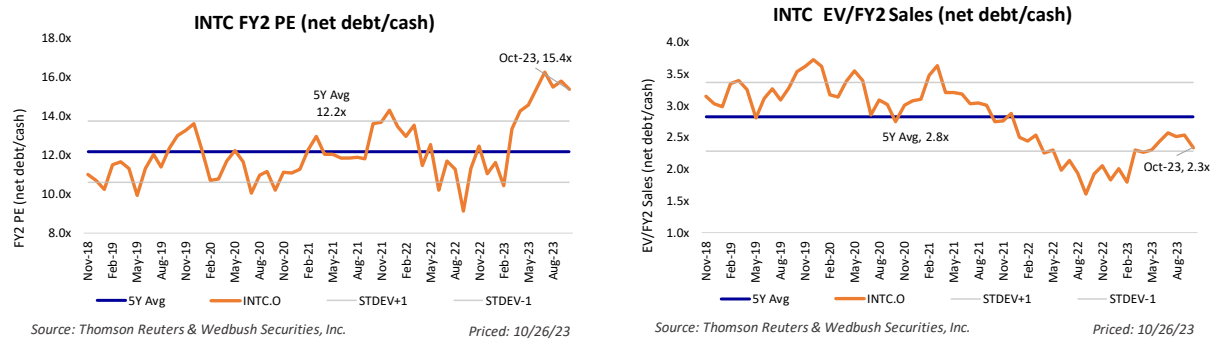


Figure 2: INTC: Updated Wedbush Estimates & Outlook

INTC \$M																	
	Outlook Dec-23	Wedbush 4Q23E	Previous 4Q23E		Consensus 4Q23E	Wedbush 2023E	Previous 2023E		Consensus 2023E	Wedbush 2024E	Previous 2024E		Consensus 2024E	Wedbush 2025E	Previous 2025E		Consensus 2025E
Non-GAAP Diluted - EPS	\$0.44	\$0.44	\$0.37	\$0.08	\$0.32	\$0.94	\$0.65	\$0.29	\$0.63	\$1.99	\$1.95	\$0.04	\$1.72	\$3.12	\$2.96	\$0.15	\$2.42
Revenue (\$M)	\$15,100	\$15,103	\$14,812	2%	\$14,345	\$53,925	\$52,935	2%	\$52,535	\$62,258	\$61,425	1%	\$58,715	\$70,207	\$68,647	2%	\$63,969
Gross Margin %	46.5%	46.5%	46.0%	50bps	44.2%	42.9%	42.0%	91bps	41.1%	48.4%	49.1%	-75bps	46.1%	53.3%	53.6%	-24bps	50.3%
Operating Margin %	14.3%	14.3%	12.0%	230bps	8.2%	7.9%	5.5%	240bps	2.9%	15.7%	15.5%	20bps	12.1%	22.1%	21.4%	71bps	17.4%
Capex		\$3,000	\$3,000	0%	\$5,325	\$22,054	\$19,301	14%	\$22,469	\$26,500	\$26,500	-17%	\$22,256	\$26,500	\$26,500	0%	\$21,656
Segment Revenues																	
CCG		8,536	8,129	5%	7,828	28,950	28,066	3%	27,793	33,268	32,063	4%	31,353	34,863	32,973	6%	32,973
DCAI		3,928	4,184	-6%	4,293	15,464	15,710	-2%	15,848	17,315	18,442	-6%	17,863	20,539	21,876	-6%	21,876
NEX		1,494	1,500	0%	1,436	5,797	5,717	1%	5,635	6,764	6,662	2%	5,999	8,104	7,981	2%	7,981
MBLY		636	632	1%	605	2,078	2,089	-1%	2,033	2,594	2,577	1%	2,678	3,372	3,350	1%	3,350
IFS		323	251	29%	254	984	842	17%	875	1,574	1,221	29%	1,189	2,586	2,006	29%	2,006
Other		186	115	62%	115	652	510	28%	510	744	460	62%	461	744	460	62%	460

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

Figure 3: INTC: Q/Q & Y/Y Comparison; Variance with Estimates

INTC \$M										
	Outlook Sep-23	Wedbush 3Q23A	Wedbush 3Q23E	Var	Consensus 3Q23E	Var	2Q23A	Q/Q %Δ	3Q22A	Y/Y %Δ
Non-GAAP Diluted - EPS	\$0.20	\$0.41	\$0.20	\$0.21	\$0.22	\$0.19	\$0.13	\$0.28	\$0.59	-\$0.18
Revenue (\$M)	\$13,400	\$14,158	\$13,459	5%	\$13,545	5%	\$12,949	9%	\$15,338	-8%
Gross Margin %	43.0%	45.8%	43.0%	279bps	42.7%	309bps	39.8%	599bps	45.9%	-9bps
Operating Margin %		13.6%	7.1%	649bps	5.3%	825bps	3.5%	1,007bps	10.8%	280bps
Capex		\$5,753	\$3,000	92%	\$5,433	6%	\$5,888	-2%	\$7,299	-21%
Segment Revenues										
CCG		7,867	7,390	6%	7,380	7%	6,780	16%	8,124	-3%
DCAI		3,814	3,804	0%	3,982	-4%	4,004	-5%	4,209	-9%
NEX		1,450	1,364	6%	1,365	6%	1,364	6%	2,266	-36%
MBLY		530	545	-3%	515	3%	454	17%	450	18%
IFS		311	241	29%	235	32%	232	34%	171	82%
Other		186	115	62%	115	62%	115	62%	67	178%

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

Income Statement and Other Selected Financials

Intel Corp (INTC)																
\$M	2023E				2024E				2025E				2022A	2023E	2024E	2025E
Period End Date	Mar-23	Jul-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25	Dec-22	Dec-23	Dec-24	Dec-25
Non-GAAP Diluted - EPS	(\$0.04)	\$0.13	\$0.41	\$0.44	\$0.40	\$0.43	\$0.52	\$0.65	\$0.69	\$0.73	\$0.77	\$0.93	\$1.84	\$0.94	\$1.99	\$3.12
Revenue (\$M)	11,715	12,949	14,158	15,103	14,555	15,045	15,878	16,781	16,537	16,949	17,736	18,986	63,054	53,925	62,258	70,207
Gross Margin %	38.4%	39.8%	45.8%	46.5%	46.0%	48.5%	51.0%	53.0%	51.0%	53.0%	54.0%	55.0%	47.3%	42.9%	48.4%	53.3%
Operating Margin %	-2.5%	3.5%	13.6%	14.3%	13.5%	14.0%	16.0%	19.0%	20.5%	21.5%	21.5%	24.5%	12.6%	7.9%	15.7%	22.1%
SEGMENT REVENUES													2022A	2023E	2024E	2025E
	1Q23A	2Q23A	3Q23A	4Q23E	1Q24E	2Q24E	3Q24E	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	2022A	2023E	2024E	2025E
Net Revenue - Non GAAP	11,715	12,949	14,158	15,103	14,555	15,045	15,878	16,781	16,537	16,949	17,736	18,986	63,054	53,925	62,258	70,207
CCG	5,767	6,780	7,867	8,536	7,853	8,010	8,490	8,915	8,558	8,558	8,663	9,083	31,708	28,950	33,268	34,863
DCAI	3,718	4,004	3,814	3,928	4,007	4,207	4,418	4,683	4,589	4,819	5,300	5,830	19,196	15,464	17,315	20,539
NEX	1,489	1,364	1,450	1,494	1,523	1,630	1,744	1,866	1,866	1,969	2,077	2,191	8,873	5,797	6,764	8,104
AXG	0	0	0	0	0	0	0	0	0	0	0	0	837	0	0	0
MBLY	458	454	530	636	636	634	632	691	827	825	822	898	1,869	2,078	2,594	3,372
IFS	118	232	311	323	349	377	407	440	510	592	687	797	895	984	1,574	2,586
Other	165	115	186	186	186	186	186	186	186	186	186	186	196	652	744	744
Segments Q/Q % Δ																
Net Revenue - Non GAAP	-17%	11%	9%	7%	-4%	3%	6%	6%	-1%	2%	5%	7%				
CCG	-13%	18%	16%	+9%	-8%	+2%	+6%	+5%	-4%	+0%	+1%	+5%				
DCAI	-14%	8%	-5%	+3%	+2%	+5%	+5%	+6%	-2%	+5%	+10%	+10%				
NEX	-28%	-8%	6%	+3%	+2%	+7%	+7%	+7%	+0%	+6%	+6%	+6%				
AXG				+0%	+0%	+0%	+0%	+0%	+0%	+0%	+0%	+0%				
MBLY	-19%	-1%	17%	+20%	+0%	-0%	-0%	+9%	+20%	-0%	-0%	+9%				
IFS	-63%	97%	34%	+4%	+8%	+8%	+8%	+8%	+16%	+16%	+16%	+16%				
Other	450%	-30%	62%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
INCOME STATEMENT - NON-GAAP (\$M)													2022A	2023E	2024E	2025E
Net revenue	11,715	12,949	14,158	15,103	14,555	15,045	15,878	16,781	16,537	16,949	17,736	18,986	63,054	53,925	62,258	70,207
COGS	7,221	7,795	7,675	8,080	7,859	7,974	8,098	8,223	8,103	7,966	8,158	8,544	33,260	30,771	32,154	32,771
GPS	4,494	5,154	6,483	7,023	6,695	7,071	7,780	8,558	8,434	8,983	9,577	10,442	29,794	23,154	30,105	37,436
GM%	38.4%	39.8%	45.8%	46.5%	46.0%	47.0%	49.0%	51.0%	51.0%	53.0%	54.0%	55.0%	47.3%	42.9%	48.4%	53.3%
R&D and MG&A	4,788	4,698	4,559	4,863	4,730	4,965	5,240	5,370	5,044	5,339	5,764	5,791	21,879	18,908	20,305	21,937
R&D and MG&A % revs	40.9%	36.3%	32.2%	32.2%	32.5%	33.0%	33.0%	32.0%	30.5%	31.5%	32.5%	30.5%	34.7%	35.1%	32.6%	31.2%
Other expenses	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Other % revs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Opex	4,788	4,698	4,559	4,863	4,730	4,965	5,240	5,370	5,044	5,339	5,764	5,791	21,879	18,908	20,305	21,937
Opex % revs	40.9%	36.3%	32.2%	32.2%	32.5%	33.0%	33.0%	32.0%	30.5%	31.5%	32.5%	30.5%	34.7%	35.1%	32.6%	31.2%
OP\$	(294)	456	1,924	2,160	1,965	2,106	2,541	3,188	3,390	3,644	3,813	4,652	7,915	4,246	9,800	15,499
OM%	-2.5%	3.5%	13.6%	14.3%	13.5%	14.0%	16.0%	19.0%	20.5%	21.5%	21.5%	24.5%	12.6%	7.9%	15.7%	22.1%
Non-op income (expense)	100	0	0	-	-	-	-	-	-	-	-	-	(225)	100	-	-
Pretax income	(194)	629	1,999	2,160	1,965	2,106	2,541	3,188	3,390	3,644	3,813	4,652	7,913	4,593	9,800	15,499
Provision (benefit) for taxes	(25)	82	260	281	255	274	330	414	441	474	496	605	320	597	1,274	2,015
Tax Rate%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	4.0%	13.0%	13.0%	13.0%
Net income	(169)	547	1,739	1,879	1,709	1,832	2,210	2,774	2,949	3,170	3,317	4,047	7,593	3,996	8,526	13,484
EPS - Diluted (Non GAAP)	(\$0.04)	\$0.13	\$0.41	\$0.44	\$0.40	\$0.43	\$0.52	\$0.65	\$0.69	\$0.73	\$0.77	\$0.93	\$1.84	\$0.94	\$1.99	\$3.12
S/O - Diluted (Non GAAP)	4,154	4,196	4,229	4,241	4,254	4,266	4,278	4,291	4,303	4,315	4,328	4,341	4,116	4,205	4,272	4,322
Net income (GAAP)	(2,758)	1,481	297	437	267	390	768	1,332	1,507	1,728	1,875	2,605	8,014	(543)	2,758	7,716
EPS - Diluted (GAAP)	(\$0.66)	\$0.35	\$0.07	\$0.10	\$0.06	\$0.09	\$0.18	\$0.31	\$0.35	\$0.40	\$0.43	\$0.60	\$1.95	(\$0.14)	\$0.64	\$1.78
Dividend/shr	\$0.365	\$0.125	\$0.125	\$0.125	\$0.125	\$0.125	\$0.125	\$0.125	\$0.125	\$0.125	\$0.125	\$0.125	\$1.460	\$0.740	\$0.500	\$0.500
Dividend payout%	-897.2%	95.9%	30.4%	28.2%	31.1%	29.1%	24.2%	19.3%	18.2%	17.0%	16.3%	13.4%	79.3%	78.4%	25.1%	16.0%
Other																
Capex	(7,413)	(5,888)	(5,753)	(5,753)	(6,625)	(6,625)	(6,625)	(6,625)	(6,625)	(6,625)	(6,625)	(6,625)	(24,844)	(24,807)	(26,500)	(26,500)
D&A	1,901	1,832	2,020	2,190	2,327	2,556	2,790	3,027	3,267	3,509	3,751	5,071	11,128	7,943	10,700	15,597
D&A % PPE	9.4%	8.5%	8.9%	9.4%	9.9%	10.4%	10.9%	11.4%	11.9%	12.4%	12.9%	17.0%	17.6%	9.8%	11.4%	14.2%
Net Cash (Debt)	(16,170)	(18,896)	(18,149)	(17,532)	(19,379)	(21,307)	(22,534)	(22,751)	(21,674)	(20,144)	(18,374)	(13,561)	(7,801)	(17,532)	(22,751)	(13,561)
BALANCE SHEET (\$M)													2022A	2023E	2024E	2025E
	1Q23A	2Q23A	3Q23A	4Q23E	1Q24E	2Q24E	3Q24E	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	2022A	2023E	2024E	2025E
#days	90	93	91	90	90	90	90	90	90	90	90	90	370	364	361	361
Cash and cash equivalents	8,232	8,349	7,621	8,238	6,391	4,463	3,236	3,019	4,096	5,626	7,396	12,209	11,144	8,238	3,019	12,209
Short-term investments	19,302	15,908	17,409	17,409	17,409	17,409	17,409	17,409	17,409	17,409	17,409	17,409	17,194	17,409	17,409	17,409
Trading assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accounts receivable (WC)	3,847	2,996	2,843	3,033	2,923	3,021	3,188	3,370	3,321	3,403	3,561	3,812	4,133	3,033	3,370	3,812
Inventories (WC)	12,993	11,984	11,466	12,071	11,742	11,912	12,098	12,284	12,106	11,901	12,188	12,764	13,224	12,071	12,284	12,764
Other current assets	3,940	4,119	4,472	-	-	-	-	-	-	-	-	-	4,712	-	-	-
Total current assets	48,314	43,356	43,811	28,680	26,722	24,893	23,834	23,798	24,825	26,438	28,366	33,431	50,407	28,680	23,798	33,431
Property, plant and equipment, net	85,734	90,945	93,352	94,162	98,460	102,529	106,364	109,962	113,320	116,436	119,311	120,865	80,860	94,162	109,962	120,865
Equity investments	6,029	5,893	5,700	5,700	5,700	5,700	5,700	5,700	5,700	5,700	5,700	5,700	5,912	5,700	5,700	5,700
Other long-term investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Goodwill	27,591	27,591	27,591	27,591	27,591	27,591	27,591	27,591	27,591	27,591	27,591	27,591	27,591	27,591	27,591	27,591
Identified intangible assets, net	5,567	5,173	4,970	4,970	4,970	4,970	4,970	4,970	4,970	4,970	4,970	4,970	6,018	4,970	4,970	4,970
Other long-term assets	12,068	12,671	13,413	13,413	13,413	13,413	13,413	13,413	13,413	13,413	13,413	13,413	11,315	13,413	13,413	13,413
Total assets	185,303	185,629	188,837	174,516	176,856	179,096	181,872	185,434	189,819	194,548	199,351	205,969	182,103	174,516	185,434	205,969
Current liabilities:																
Short-term debt	1,437	2,711	2,288													

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%	13,773.8	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	\$93.67	\$155.00	65%	151.3	147.5	\$2.70	\$4.25	\$5.13	-	\$22,609	\$26,916	\$29,637	-	33.8x	21.5x	17.8x	-	6.5x	5.5x	5.0x	-
AXTI	AXT Inc	O	\$2.08	\$6.00	188%	0.1	0.2	(\$0.38)	(\$0.01)	\$0.40	-	\$76	\$106	\$137	-	-6.0x	-227.2x	5.7x	-	1.3x	0.9x	0.7x	-
DBD	Diebold Nixdorf Inc	N	\$18.54	\$20.00	8%	0.7	1.8	\$1.36	\$4.02	-	-	\$3,787	\$3,857	-	-	23.9x	8.1x	-	-	0.7x	0.7x	-	-
GFS	Globalfoundries Inc	O	\$52.06	\$70.00	34%	28.8	28.8	\$2.19	\$3.39	-	-	\$7,501	\$8,766	-	-	23.7x	15.3x	-	-	3.8x	3.3x	-	-
INTC	Intel Corp	N	\$32.52	\$35.00	8%	136.2	164.4	\$0.94	\$1.99	\$3.12	-	\$53,925	\$62,258	\$70,207	-	40.7x	19.3x	12.3x	-	3.0x	2.6x	2.3x	-
MU	Micron Technology Inc	O	\$64.53	\$80.00	24%	70.9	74.6	(\$4.45)	(\$0.86)	\$11.44	-	\$15,540	\$20,886	\$37,891	-	-15.3x	-79.0x	5.9x	-	4.8x	3.6x	2.0x	-
NTAP	NetApp Inc	N	\$71.43	\$75.00	5%	14.9	14.3	\$5.59	\$5.73	\$6.16	-	\$6,362	\$6,145	\$6,385	-	12.3x	12.0x	11.1x	-	2.3x	2.3x	2.2x	-
NVDA	NVIDIA Corp	O	\$403.26	\$600.00	49%	996.1	989.7	\$3.33	\$10.62	\$15.04	\$17.14	\$26,974	\$53,580	\$74,195	\$88,950	120.3x	37.7x	26.6x	23.4x	36.7x	18.5x	13.3x	11.1x
PSTG	Pure Storage Inc	O	\$32.56	\$45.00	38%	10.2	9.0	\$1.42	\$1.45	\$1.80	-	\$2,753	\$2,973	\$3,522	-	20.4x	20.0x	16.1x	-	3.3x	3.0x	2.6x	-
SIMO	Silicon Motion Technology Corp	O	\$51.98	\$85.00	64%	1.7	1.5	\$1.94	\$4.37	\$5.30	-	\$606	\$778	\$828	-	22.9x	10.2x	8.4x	-	2.4x	1.9x	1.8x	-
SMCI	Super Micro Computer Inc	N	\$239.46	\$250.00	4%	12.7	12.5	\$11.82	\$16.08	\$18.61	-	\$7,123	\$10,011	\$12,176	-	20.0x	14.7x	12.7x	-	1.8x	1.3x	1.0x	-
STX	Seagate Technology Holdings PLC	N	\$65.84	\$70.00	6%	13.7	18.3	\$0.19	\$0.26	\$5.24	-	\$7,359	\$6,281	\$8,849	-	469.8x	343.3x	17.0x	-	2.5x	3.0x	2.1x	-
2303	United Microelectronics Corp	O	\$46.80	\$57.00	22%	585.3	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	\$38.26	\$60.00	57%	12.4	18.3	(\$1.86)	(\$2.85)	\$10.40	-	\$12,318	\$12,629	\$20,313	-	-29.0x	-18.9x	5.2x	-	1.4x	1.4x	0.9x	-
MEAN								MEAN EPS EST				MEAN REV EST \$M				MEAN P/E				MEAN EV/SALES			
TICKER	COMPANY NAME	REC	PRICES	MEAN TP\$	UP/DNSIDE %	MKT CAP\$B	EV\$B	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%	13,773.8	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	\$93.67	\$136.44	46%	151.3	147.5	\$2.76	\$4.17	\$5.33	\$6.73	\$22,786	\$27,546	\$32,118	\$35,256	33.1x	21.9x	17.1x	13.6x	6.5x	5.3x	4.6x	4.2x
AXTI	AXT Inc	N	\$2.08	\$4.46	114%	0.1	0.2	(\$0.45)	(\$0.12)	\$0.32	-	\$76	\$99	\$137	-	-5.0x	-18.9x	7.1x	-	1.3x	1.0x	0.7x	-
DBD	Diebold Nixdorf Inc	N	\$18.54	\$22.50	21%	0.7	1.8	\$1.16	\$3.81	-	-	\$3,768	\$3,855	-	-	28.1x	8.5x	-	-	0.7x	0.7x	-	-
GFS	Globalfoundries Inc	O	\$52.06	\$71.64	38%	28.8	28.8	\$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	\$32.52	\$35.57	9%	136.2	164.4	\$0.63	\$1.72	\$2.42	\$3.39	\$52,535	\$58,715	\$63,969	\$70,081	61.5x	22.4x	15.9x	11.3x	3.1x	2.7x	2.5x	2.3x
MU	Micron Technology Inc	N	\$64.53	\$78.09	21%	70.9	74.6	(\$4.45)	(\$1.61)	\$5.35	\$7.75	\$15,540	\$20,932	\$30,460	\$33,174	-15.3x	-42.1x	12.7x	8.8x	4.8x	3.6x	2.4x	2.2x
NTAP	NetApp Inc	N	\$71.43	\$80.90	13%	14.9	14.3	\$5.59	\$5.73	\$6.16	\$6.82	\$6,362	\$6,143	\$6,413	\$6,808	12.3x	12.0x	11.1x	10.1x	2.3x	2.3x	2.2x	2.1x
NVDA	NVIDIA Corp	O	\$403.26	\$628.13	56%	996.1	989.7	\$3.34	\$10.85	\$17.11	\$20.08	\$26,974	\$54,882	\$82,738	\$96,798	120.0x	36.9x	23.4x	20.0x	36.7x	18.0x	12.0x	10.2x
PSTG	Pure Storage Inc	O	\$32.56	\$44.00	35%	10.2	9.0	\$1.41	\$1.40	\$1.67	\$1.46	\$2,753	\$2,959	\$3,405	\$3,837	20.5x	20.7x	17.4x	19.8x	3.3x	3.1x	2.7x	2.4x
SIMO	Silicon Motion Technology Corp	N	\$51.98	\$76.00	46%	1.7	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	\$239.46	\$354.33	48%	12.7	12.5	\$11.81	\$16.97	\$18.58	\$15.69	\$7,123	\$10,100	\$11,362	\$12,276	20.0x	13.9x	12.7x	15.1x	1.8x	1.2x	1.1x	1.0x
STX	Seagate Technology Holdings PLC	N	\$65.84	\$67.17	2%	13.7	18.3	\$0.19	\$0.62	\$4.37	\$5.74	\$7,384	\$6,598	\$8,465	\$8,870	469.8x	143.2x	20.4x	15.6x	2.5x	2.8x	2.2x	2.1x
2303	United Microelectronics Corp	N	\$46.80	\$54.36	16%	585.3	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	\$38.26	\$47.42	24%	12.4	18.3	(\$3.59)	(\$4.07)	\$3.81	\$5.89	\$12,318	\$12,094	\$16,056	\$19,156	-15.0x	-13.3x	14.2x	9.2x	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 NT\$

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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 target price by applying a multiple of ~13X to our FY2025 outlook (net debt).

Company Description

INTC designs and builds CPUs and other silicon products for data center and consumer applications.

Risks to the Attainment of Our Price Target and Rating:

Upside (Downside) Risks

The broader environment unexpectedly improves (worsens) substantially perhaps due to a resolution (escalation) to the US China trade dispute.

INTC executes (misexecutes) across a host of initiatives (from CPU process shrinks, to chip stacking, to AI silicon initiatives).

AMD's new server and PC parts fail to meet (exceed) expectations, resulting in share gains (loss) for INTC.

A bounce back in hyperscale demand for INTC products is sustained (is not sustained).

The PC market recovers (fails to recover); PC TAM grows (shrinks); and refresh cycles drive (fail to drive) growth.

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
Intel Corp	NEUTRAL	\$32.52	\$35.00
Taiwan Semiconductor	OUTPERFORM	TWD547.00	TWD700.00
Nvidia	OUTPERFORM	\$471.16	\$600.00
Advanced Micro Devices Inc	OUTPERFORM	\$117.60	\$155.00
Western Digital	OUTPERFORM	\$36.54	\$60.00
Silicon Motion Technology Corp	OUTPERFORM	\$53.79	\$85.00

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 27, 2023)	Investment Banking Relationships (as of October 27, 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.

The analysts responsible for preparing research reports do not receive compensation based on specific investment banking activity. The analysts receive compensation that is based upon various factors including WS' total revenues, a portion of which are generated by WS' investment banking activities.

Company Specific Disclosures

This information is subject to change at any time.

1. WS makes a market in the securities of Intel Corp, Taiwan Semiconductor, Advanced Micro Devices Inc, Nvidia, Silicon Motion Technology Corp 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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