

Semiconductors

Semi Week in Review

Summary

In this week's Semi Week in Review, we highlight 3Q23 earnings reports from LRCX, TSM and ASML as well as SGH Corp's FY23 10K, which was filed on Friday.

3Q23 earnings reports from LRCX, TSM and ASML point to demand for semiconductors that are driven by Artificial Intelligence. While new US export controls of shipments to China may have caused some order pull-ins and not reflect true end demand in China, Lam Research (LRCX, n/c) did report DRAM equipment shipments increased q/q driven by HBM and DDR5 DRAM. TSMC (TSM, n/c) reported strong demand for GPUs and ASICs related to AI.

Also, TSMC management believes there is stabilization in the smartphone and PC markets. Automotive revenue declined 24% q/q which management described as the start of an inventory adjustment in 2H23 following 3 years of strong growth. For CY24, demand should resume given increasing EV production and increasing functionality.

Tesla's (TSLA, NR) earnings report and comments seems to make TSMC's view on automotive fairly optimistic. Higher interest rates and inflation are making it difficult for consumers to afford a new car. We remain cautious on the Automotive market entering this earnings period.

SGH Corp's FY23 10K was filed on Friday, after the market close. Based on the filing, the top 10 customers ex-Brazil Memory, represented 60% of revenue. This is down slightly from 62% in FY22. Its top IPS customer, who we believe is Meta, represented 23% of total revenue in FY23 or \$331.5mn. This is up from 20% of total revenue in FY22 or \$279.2mn. We expect Meta to remain IPS' largest customer in FY24.

As management pointed out during our investor meetings last week, despite the largest revenue decline in the memory industry's history, SGH's Memory Solutions business remained profitable turning in 16.6% FY23 OM, up from 14% in FY22. We expect memory component average selling prices to increase during CY24. This should lift Memory Solution revenue q/q through CY24.

SGH's LED Solutions business has also worked through a down cycle as lead-times compressed and inventories were adjusted lower. OM margins declined to (1.9%) in FY23 from 12.3% in FY22. LED Solutions revenue has increased sequentially over the part 2 quarters. We continue to expect q/q revenue growth through CY24, returning the group to operating profitability.

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Related Companies:	Share Price:
INTC.O	\$34.92

Semiconductor Industry Comp Sheet

Company Name	Ticker	Rating	10/22/2023 Price	Price Target	Upside/ Downside	Market Cap (\$M)	Enterprise Value (\$M)	Valuation											
								EV/Sales			P/E			EV/FCF			EV/EBITDA		
								CY22E	CY23E	CY24E	CY22E	CY23E	CY24E	CY22E	CY23E	CY24E	CY22E	CY23E	CY24E
Analog/MCUs																			
Microchip Technology Incorporated	MCHP-US	Buy	\$75.36	\$110.00	46%	41,021	47,345	5.5x	5.4x	5.2x	12.4x	12.3x	11.6x	14.0x	14.7x	13.9x	11.3x	11.3x	10.5x
Monolithic Power Systems, Inc.	MPWR-US	Buy	\$420.04	\$580.00	38%	20,069	19,546	10.7x	9.4x	8.0x	35.9x	32.0x	26.2x	38.3x	37.8x	25.5x	29.1x	25.0x	20.6x
ON Semiconductor Corporation	ON-US	Neutral	\$84.83	\$100.00	18%	36,607	39,195	4.7x	4.4x	4.0x	16.2x	15.0x	12.9x	45.1x	22.3x	17.7x	11.8x	10.9x	9.8x
Texas Instruments Incorporated	TXN-US	Buy	\$147.81	\$230.00	56%	134,207	137,061	7.6x	7.1x	6.5x	20.2x	19.4x	17.6x	59.2x	28.9x	24.0x	15.2x	13.8x	12.0x
SiTime Corporation	SITM-US	NR	\$107.21	NR	NR	2,381	1,801	12.3x	8.9x	7.2x	670.1x	85.1x	52.7x	NM	NM	NM	-127.3x	104.7x	41.8x
Infineon Technologies AG Sponsored ADR	IFNNY-US	NR	\$31.13	NR	NR	40,654	44,269	2.9x	2.5x	2.4x	14.0x	11.3x	11.1x	27.7x	31.9x	24.4x	8.3x	6.9x	6.6x
STMicroelectronics NV ADR RegS	STM-US	NR	\$39.77	NR	NR	36,387	36,110	2.1x	2.0x	1.9x	9.2x	9.2x	8.4x	29.3x	17.9x	14.2x	5.8x	5.7x	5.2x
Communications/DC																			
Broadcom Inc.	AVGO-US	Buy	\$853.63	\$1,000.00	17%	352,323	391,786	11.6x	10.8x	9.9x	22.2x	19.9x	18.1x	23.7x	21.7x	19.2x	18.4x	16.8x	15.5x
Lattice Semiconductor Corporation	LSCC-US	Buy	\$73.12	\$110.00	50%	10,079	10,177	13.4x	11.8x	14.1x	35.1x	29.8x	NM	37.9x	30.8x	39.0x	35.6x	27.5x	42.1x
Navitas Semiconductor Corporation	NVTS-US	Buy	\$5.59	\$12.00	115%	971	869	18.4x	7.0x	4.1x	NM	NM	46.0x	-16.2x	-19.2x	-25.1x	-22.6x	-48.8x	26.2x
Vicor Corporation	VICR-US	NR	\$51.78	NR	NR	1,684	2,130	5.1x	4.4x	3.6x	39.3x	29.0x	18.8x	35.8x	44.6x	25.5x	25.6x	18.6x	11.6x
QuickLogic Corporation	QUIK-US	NR	\$9.30	NR	NR	129	123	5.8x	4.3x	NM	116.3x	26.2x	NM	-26.8x	24.2x	NM	72.5x	22.4x	NM
Power Integrations, Inc.	POWI-US	NR	\$70.61	NR	NR	4,053	3,726	7.5x	6.2x	5.4x	43.1x	28.5x	24.3x	39.3x	24.3x	20.4x	32.5x	21.6x	20.9x
Wolfspeed Inc	WOLF-US	NR	\$31.88	NR	NR	3,993	5,320	5.7x	4.5x	3.1x	NM	NM	NM	-3.3x	-3.1x	-6.8x	-73.3x	683.3x	13.7x
Computing																			
Advanced Micro Devices, Inc.	AMD-US	Buy	\$101.81	\$200.00	96%	164,492	162,220	7.1x	5.9x	5.2x	37.0x	24.6x	19.4x	42.9x	31.0x	24.7x	24.7x	21.8x	17.0x
Ambarella, Inc.	AMBA-US	Buy	\$49.90	\$85.00	70%	1,990	1,773	7.6x	6.9x	5.1x	NM	NM	363.1x	861.9x	-63.4x	-7292.9x	-89.8x	-125.4x	44.2x
Intel Corporation	INTC-US	Sell	\$34.92	\$17.00	-51%	146,245	174,767	3.3x	3.0x	2.7x	54.9x	20.1x	14.0x	-12.7x	-67.6x	120.5x	15.9x	11.0x	8.6x
NVIDIA Corporation	NVDA-US	Buy	\$413.87	\$1,100.00	166%	1,022,259	1,029,192	19.6x	13.0x	10.7x	41.1x	25.2x	20.6x	47.4x	27.2x	21.6x	36.3x	22.7x	18.7x
Super Micro Computer, Inc.	SMCI-US	Buy	\$248.58	\$375.00	51%	13,151	13,763	1.6x	1.2x	1.2x	17.3x	13.3x	14.1x	38.5x	35.8x	16.0x	13.8x	11.6x	12.4x
IoT																			
Synaptics Incorporated	SYNA-US	Buy	\$90.43	\$100.00	11%	3,530	3,730	3.1x	3.1x	NM	16.2x	17.5x	NM	17.6x	24.7x	NM	13.4x	14.3x	NM
IP																			
Arteris, Inc.	AIP-US	Buy	\$5.88	\$21.00	257%	212	157	2.8x	2.3x	1.7x	NM	NM	26.7x	-17.5x	-104.7x	NM	-5.2x	-6.2x	NM
ARM Holdings PLC ADR	ARM-US	Buy	\$47.87	\$85.00	78%	49,078	47,291	16.4x	13.5x	11.3x	NM	38.0x	30.5x	79.7x	46.5x	29.9x	NM	30.8x	25.0x
CEVA, Inc.	CEVA-US	Buy	\$18.18	\$35.00	93%	430	300	2.6x	2.3x	1.9x	158.6x	35.8x	21.6x	28.9x	81.2x	19.2x	NM	NM	NM
Rambus Inc.	RMBS-US	Buy	\$54.77	\$73.00	33%	5,977	5,811	10.4x	8.8x	7.3x	31.6x	25.4x	20.2x	29.1x	29.4x	25.4x	20.2x	16.2x	12.8x
Adeia Inc.	ADEA-US	NR	\$8.43	NR	NR	900	1,500	3.8x	3.6x	NM	6.5x	5.9x	NM	NM	NM	NM	5.9x	5.6x	NM
Movella Holdings Inc.	MVLA-US	NR	\$0.49	NR	NR	25	29	0.8x	0.6x	NM	NM	NM	NM	NM	NM	NM	-1.8x	-161.8x	NM
Memory/Storage																			
Marvell Technology, Inc.	MRVL-US	Buy	\$49.47	\$100.00	102%	42,683	46,853	8.4x	7.3x	6.3x	31.2x	21.9x	17.2x	47.9x	29.3x	21.6x	27.7x	20.3x	16.1x
Micron Technology, Inc.	MU-US	Buy	\$67.22	\$100.00	49%	73,810	77,876	4.5x	3.3x	2.5x	NM	105.7x	10.7x	-18.9x	119.1x	20.8x	20.1x	8.8x	5.2x
Seagate Technology Holdings PLC	STX-US	Buy	\$66.69	\$68.00	2%	13,861	18,852	2.7x	2.5x	2.2x	163.9x	26.7x	13.5x	35.2x	27.8x	18.5x	21.3x	14.2x	10.5x
SMART Global Holdings, Inc.	SGH-US	Buy	\$13.49	\$35.00	159%	675	1,141	0.8x	0.9x	NM	6.8x	9.8x	NM	NM	NM	NM	6.0x	6.9x	NM
Western Digital Corporation	WDC-US	Neutral	\$42.86	\$38.00	-11%	13,893	19,836	1.6x	1.4x	1.1x	NM	NM	8.8x	-21.1x	201.8x	16.0x	-72.3x	13.8x	6.0x
Mobile																			
Qorvo, Inc.	QRVO-US	Neutral	\$90.00	\$95.00	6%	8,812	10,170	2.8x	2.6x	2.3x	17.0x	13.0x	9.7x	17.1x	12.7x	10.1x	12.2x	10.5x	8.6x
QUALCOMM Incorporated	QCOM-US	Buy	\$108.63	\$145.00	33%	121,231	128,913	3.1x	3.6x	3.4x	9.5x	12.8x	11.5x	16.6x	14.3x	12.1x	7.3x	9.8x	9.6x
Skyworks Solutions, Inc.	SWKS-US	Buy	\$92.19	\$150.00	63%	14,694	15,726	3.0x	3.3x	3.1x	8.8x	10.7x	9.9x	11.8x	8.6x	8.7x	6.4x	7.6x	7.5x
LIDAR																			
Luminar Technologies, Inc. Class A	LAZR-US	Neutral	\$3.68	\$6.00	63%	1,079	1,676	19.9x	6.9x	2.9x	NM	NM	NM	-7.0x	-12.3x	-66.9x	-6.4x	-9.9x	-30.9x
Ouster, Inc.	OUST-US	Buy	\$4.16	\$17.50	321%	164	5	0.1x	0.0x	0.0x	NM	NM	NM	NM	NM	NM	0.0x	-0.1x	-0.1x
Innoviz Technologies Ltd.	INVZ-US	Neutral	\$1.40	\$5.00	257%	228	104	6.2x	1.3x	0.3x	NM	NM	NM	-1.1x	-1.2x	-2.3x	-0.9x	-0.9x	-2.4x

Sources: Rosenblatt Estimates, FactSet

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Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY	83	73.45	4	4.82
NEUTRAL	25	22.12	1	4.00
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