

# China Technology

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## Global fabless/IDM 3Q23 wrap: PC/SP recovery, auto/industrial mixed; Eye on Edge AI as new growth driver

As we finished week 1-4 of 3Q earnings season for major global fabless/IDM semi companies (AMD/Intel/Qualcomm/TI/Infineon/STM/MTK/OnSemi), results/guidance have been mixed on inventory level and demand recovery. Overall, SP/PC/NB (QCOM/MTK/Intel/AMD) started restocking given seasonal demand on new product launches, and server market (Intel/AMD) has shown signs of normalised inventory and mild recovery into 4Q. Auto segment (TI/STM/ON) in general began to show cyclical weakness and guided cautious outlook into 4Q. Overall, we believe the worst is behind for most computing/wireless semi backed by CE recovery and new platform launches/shipment ramp-up for cloud/edge AI deployments, and macro headwinds continued to result in mixed guidance for analog/power (TI/Infineon/STM/ON) given weakened auto/industrial demand.

- **Expect 4Q23E QoQ sales growth for computing/wireless semi, margin expansion to continue for AI-related names.** Computing chip suppliers posted QoQ sales growth in 3Q23 (AMD/Intel +8%/9%), given normalized PC inventory levels, seasonal demand boost and AI chip ramp-up. For 4Q23E, they all guided continued QoQ growth backed by strength in AI demand and gradually normalized server inventory level, and GPM will further elevate due to better product mix on higher-margin data center products. Wireless names posted positive 3Q QoQ growth (Qualcomm/MTK +2%/12%) following cyclical trough and guided even stronger outlook in 4Q23E, backed by smartphone inventory restocking, seasonal demand uptick and new model launches.
- **Mixed outlook for analog/power; DOI showed signs of stabilization.** Auto/industrial names posted positive 3Q QoQ sales (TI/Infineon/STM/ON +flat/1%/2%/4%), but largely negative 4Q outlook (TI/Infineon/STM/ON -10%/-8%/-3%/-8%) given weakened auto/industrials demand. DOI began to stabilize across analog/power names, evidenced by proactive inventory burn and lowered utilization rate.
- **Edge AI serves as emerging growth driver for computing/wireless semi.** As Intel/AMD/Qualcomm/MTK/Apple announced product roadmap for AI PC/smartphone and AI-enabled devices, we believe improving edge computing power with AI capability will pave the way for application innovations and trigger the next replacement cycle for PC/NB/SP markets.
- **Other highlights:** NVDA's 3Q results on 21 Nov (Fig 2): guided +18% QoQ rev growth, vs AMD Datacenter +21% QoQ, and Intel Datacenter -5% QoQ.

### Valuation Table

Name	Ticker	Mkt Cap (US\$ mn)	Price (LC)	P/E (x) FY23E	P/E (x) FY24E	P/B (x) FY23E	ROE FY23E
NVIDIA	NVDA US	1,205,286	487.97	149.5	44.7	56.2	29.7
AMD	AMD US	192,779	119.33	38.4	25.5	3.1	6.4
Intel	INTC US	176,397	41.84	61.1	19.4	1.3	2.7
Broadcom	AVGO US	393,717	953.92	22.6	20.5	17.1	73.2
Texas Instruments	TXN US	151,730	167.1	22.5	21.0	9.2	42.8
Infineon	IFNNY US	48,071	36.81	12.9	14.2	2.6	20.5

Source: Company data, Bloomberg, CMBIGM estimates

### China Technology Sector

**Alex NG**

(852) 3900 0881

alexng@cmbi.com.hk

**Claudia LIU**

claudialiu@cmbi.com.hk

### Related Reports:

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4. UMC 3Q23: inventory correction, UTR/margin under pressure, PC & smartphone rush order-26 Oct 2023 ([link](#))
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6. TSMC 3Q23: cycle nearing the bottom; Positive on smartphone/PC supply chain -24 Oct 2023 ([link](#))
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9. Global SPE 2Q23 Wrap: China demand remains resilient; Awaiting upcycle after 2023 slowdown - 18 Sep 2023 ([link](#))

**Figure 1: Global fabless/IDM semi: 3Q23 results and 4Q23 guidance**

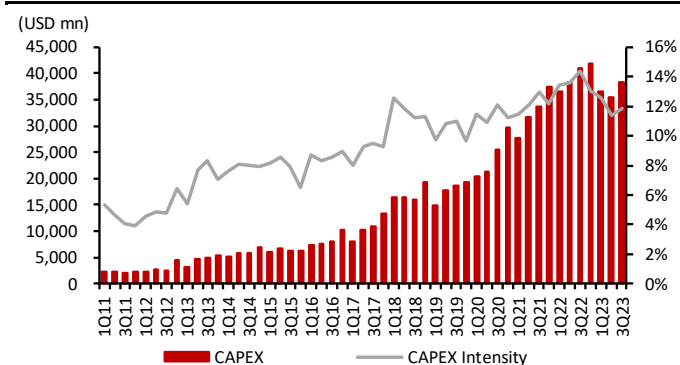
Company	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23E	FY24E	Guidance	Comment/Outlook
Revenue QoQ Growth											
NVIDIA	8%	-19%	-12%	2%	19%	88%	19%	-	-	-	* 3Q23 is guidance. To be reported
AMD	22%	11%	-15%	1%	-4%	0%	8%	up 5%	-	-	* 3Q23 QoQ: <u>DC</u> +21%, <u>Client</u> +46%, <u>Gaming</u> -5%; <u>Embedded</u> -15% * 4Q23 QoQ: <u>Data Center</u> to grow strong DD %; <u>Client</u> to increase, <u>Gaming/embedded</u> to decline DD%. * <u>Data Center</u> to grow strongly in the next couple of quarters.
Intel	-11%	-17%	0%	-8%	-17%	11%	9%	up 7%	-	-	* 3Q23: Beat with broad-based strength across all segments; <u>Computing</u> done inventory burn in 1H23; <u>DC</u> returned to profitability; <u>Edge</u> showed signs of recovery; <u>IFS</u> strong due to higher packaging revenue and IMS nanofabrication tools. * 4Q23 QoQ: <u>CCG</u> to grow QoQ on normalized inventory and return of historical purchasing cycles; <u>DCAI</u> to increase QoQ with Xeon's strength offset by PSG decline; <u>Edge</u> to recover offset by persistent network weakness.
Broadcom	5%	4%	6%	0%	-2%	2%	5%	-	-	-	* 3Q23 is guidance. To be reported
MediaTek	11%	9%	-9%	-24%	-12%	3%	12%	up 12%	-	-	* 3Q23: <u>Mobile</u> increase on inventory restocking and model launches; <u>Smart edge</u> demand for wireless/wired improved QoQ; WiFi shipments Qtr record; <u>Power IC</u> : PMIC for SP/PC performed better due to restocking demand. * 4Q23: <u>Mobile</u> grow faster than Q3, driven by Dimensity 9300 SoC; <u>Smart edge</u> : down QoQ on seasonality and cautious CE outlook; <u>Power IC</u> : Flatish QoQ revenue.
Qualcomm	4%	-2%	4%	-17%	-2%	-9%	2%	up 10%	-	-	* 3Q23 QoQ: <u>Handset</u> +4% QoQ, earlier stages of Android recovery; <u>IoT</u> -7% QoQ, soft industrial IoT; <u>Auto</u> +23% QoQ, 12th qtr of DD% YoY growth. * 4Q23 QoQ: <u>QCT handset</u> DD% growth; <u>IoT/auto</u> to decline consistent with last year. <u>QCT handset</u> boosted by normalization of Android inventory and flagship launches with Snapdragon 8 Gen 3. * CY23 <u>handset shipment</u> : Down mid-to-high single-digit % relative to CY22, improving from previous guidance.
Texas Instruments	2%	6%	1%	-11%	-6%	3%	0%	down 10%	-	-	* 3Q23: Broad weakness <u>ex-auto</u> . Weakness broadening <u>industrial</u> . <u>Personal electronics</u> up QoQ off low base. * 4Q23: Do not see significant changes in market behaviour into 4Q23E vs 3Q23.
Silergy	-2%	13%	-12%	-22%	-27%	5%	14%	up QoQ	-	-	* 3Q23: Driven by demand pull from <u>consumer electronics</u> downstream. * 4Q23: Up QoQ driven by <u>consumer electronics</u> demand recovery.
Infineon	4%	10%	15%	-5%	4%	-1%	1%	down 8%	EUR 17bn (+/- 500mn) +4% YoY	-	* 3Q23: QoQ growth for <u>automotive</u> , on share gain/content value per vehicle; Resilient performance in China EV market. * 4Q23: Strong <u>auto/MCU</u> ; Sluggish demand in <u>consumer electronics</u> , <u>communications</u> , <u>computing</u> and <u>IoT</u> .
STMicro	0%	8%	13%	2%	-4%	2%	2%	down 3%	-	-	* 3Q23: Driven by <u>automotive</u> , partially offset by lower revenues in <u>Personal Electronics</u> . * 4Q23: <u>Industrial</u> in Asia below as customers are re-assessing demands and undergoing inventory correction; May sustain to earlier next year.
ON Semi	5%	7%	5%	-4%	-7%	7%	4%	down 8%	-	-	* 3Q23: <u>Automotive/Industrial</u> achieved record revenue, driven by demand in both silicon and silicon carbide. * 4Q23: Cautious outlook due to soft tier-1 customers in Europe, inventory and rising risk of auto demand. * FY23: Lowered silicon carbide shipment target from US\$ 1bn to 800mn due to one auto OEMs demand reduction
Wolfspeed	9%	22%	-17%	14%	6%	3%	-16%	up 5%	-	-	* 3Q23: Smooth ramp of Mohawk Valley fab, offset partially by slower <u>industrial/energy</u> in China and Asian market. * 4Q23: Mohawk Valley ramp but offset by soft demand for <u>industrial/energy</u> in China and Asia markets. Very heavy demand from <u>auto customers</u> from EU, US, China and Asia. Weak outlook for <u>industrial/energy</u> markets, particularly in China and Asia.
Gross Margin											
NVIDIA	66%	43%	54%	63%	65%	71%	73%	-	-	-	* 3Q23 is guidance. To be reported
AMD	48%	46%	42%	43%	44%	50%	51%	52%	-	-	* 3Q23 YoY: driven by strong client segment and better product mix. * 4Q23: Positive impact from strong data center biz and ramp of MI300 products.
Intel	50%	36%	43%	39%	34%	40%	46%	47%	-	-	* 3Q23: Strong margin due to revenue strength and higher ASPs. Also backed on excellent execution of spending, efforts on dealing with under-loadings and re-sell of previously reversed inventories. * 4Q23: up QoQ.
Broadcom	76%	76%	75%	74%	76%	75%	74%	-	-	-	* 3Q23 is guidance. To be reported
MediaTek	50%	49%	49%	48%	48%	48%	47%	47%	-	-	* 3Q23: In-line with guidance. * 4Q23: expect GPM at 47%, plus or minus 1.5 ppts.
Qualcomm	58%	56%	57%	57%	55%	55%	55%	-	-	-	* 3Q23: QTL: EBT margin 66%, in-line with prev. expectations; QCT EBIT margin 26%, near the high-end of previous guidance on strength in handset and automotive revenues. * 4Q23: QTL: EBT margin 70-74%; QCT EBT margin 26-28%
Texas Instruments	70%	70%	69%	66%	65%	64%	62%	-	-	-	* 3Q23: did not give pricing as a reason for gross margin downturn, mainly due to lower revenue, higher manufacturing costs and reduced factory loadings; Depr also lowered GPM. * 3Q23: Benefited from better product mix, offsetting pricing pressure from market competition. * 4Q23 and 1H24: GPM expected to level off.
Silergy	54%	54%	52%	51%	45%	41%	43%	level off	-	-	* FY24: Overall ASP to decline, 2.5ppts -ve effects to GPM from capacity idle costs.
Infineon	43%	43%	44%	47%	47%	45%	44%	45%	-	-	* 3Q23: Improved product mix offset by higher manufacturing costs and unused capacity charges. * 4Q23: GPM guidance includes 130 bps of unused capacity charges.
STMicro	47%	47%	48%	48%	50%	49%	48%	46%	48%	-	* 3Q23: Headwinds from East Fishkill fab and factory utilization, offset by strong silicon carbide. Current UTR at 72% as silicon carbide UTR improved and silicon UTR trended lower; 3Q silicon carbide biz GPM > 40% on fully-loaded basis * 4Q23 beyond: GPM> mid-40%, Proactive lower UTR to mid to high-60% range; Silicon carbide biz GPM to perform at corporate level in Q4.
ON Semi	49%	50%	48%	49%	47%	47%	47%	45.5% to 47.5%	-	-	* 3Q23: Better materials manufacturing&150mm materials costs/yields. Lower underutilization cost (Mohawk Valley). * 4Q23: GPM 12-20%, at mid-point includes -1700 basis points of underutilization costs on ramp up at Mohawk Valley
Wolfspeed	34%	35%	36%	31%	30%	27%	13%	16%	-	-	
Days of Inventory (DOI)											
NVIDIA	100	92	146	209	163	96	-	-	-	-	-
AMD	71	68	94	106	127	141	131	-	-	-	* 3Q23: Inventory levels in PC market normalized and demand began returning to seasonal patterns. * 3Q23: Embedded products in process of inventory destocking; Continue at least into next quarter. * 4Q23: Inventory digestion at cloud players approaching end; Server CPU market to return to growth.
Intel	118	113	131	139	152	130	127	-	-	-	* 3Q23: PC market completed inventory burn in 1H23 and returned back to normal seasonal purchasing cycles. * 4Q23: Server market inventory level normalizing; drive modest sequential TAM growth. * 4Q23: FPGA business with persistent inventory correction.
Broadcom	46	50	53	55	57	60	-	-	-	-	-
MediaTek	113	104	104	114	125	107	83	-	-	-	* 3Q23: Improvements on channel inventory, esp. smartphone. Reduced inventory for 5 consecutive quarters. * 4Q23: Inventory environment to continue to improve in coming quarters.
Qualcomm	88	101	117	154	149	157	149	-	-	-	* 3Q23: Android channel inventory has normalized. * 4Q23: QCT IoT revenue forecasts reflect the on-going lower demand and elevated channel inventory.
Texas Instruments	127	125	133	157	195	207	205	-	-	-	* 3Q23: DOI down 2 days QoQ, marking the turning point. Inventory up for US\$ 179bn, less than half the increase vs. the last quarter, given lower factory starts in the third quarter. * 4Q23: Near desired level of inventory, impact from lowering factory starts will further reflect in 4Q.
Silergy	100	102	156	199	219	162	119	-	-	-	* 3Q23: DOI dropped significantly with active inventory control and CE demand pull. * Inventory digestion should continue into the near future.
Infineon	121	124	120	140	143	149	153	-	-	-	* 3Q23: Auto backlog still equals to 2x annual auto products revenue; Certain auto customers to pull inventory in next quarter to ease inventory elevation; Further inventory digestion within consumer segment.
STMicro	102	103	95	100	121	124	111	-	-	-	* 3Q23: inventory level US\$ 2.87bn compared to US\$ 2.38bn in 3Q22. DOI 114 days, down from last quarter's 126 days. * 4Q23: Further decline in inventory with target DOI in range of 100-110 days by year-end.
ON Semi	137	134	125	134	157	161	163	-	-	-	* 3Q23: 64 days of bridge inventory to support fab transition and silicon carbide ramp; total inventory days +3 days QoQ; base inventory days declined 7 days QoQ. * 3Q23: Distribution DOI down 0.8 week QoQ at 6.9 weeks; Continue to proactively manage the distribution inventory.
Wolfspeed	159	137	179	161	162	172	178	-	-	-	* 3Q23: inventory up due to raw materials/WIP to support substrate ramp, Min. growth in finished goods inventory.

Source: Company announcement, Bloomberg, CMBIGM

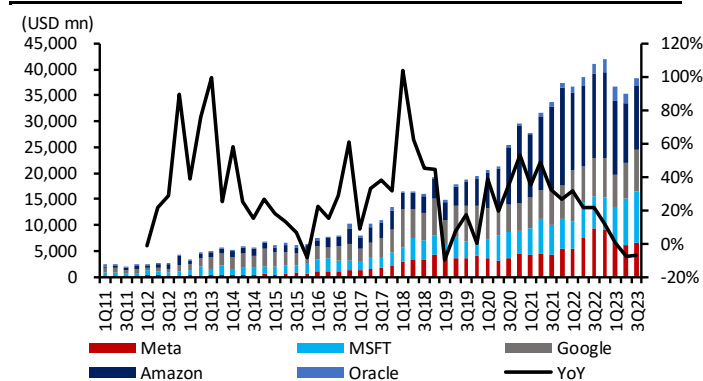
**Figure 2: NVIDIA FY3Q24E earnings and segmental consensus**

NVIDIA (NVDA US, Non-GAAP)		Consensus			
US\$ mn		FY2Q24	FY3Q24E	FY3Q23	
Revenue		13,507	16,043	5,931	19%
EPS (cent US\$)		2.70	3.35	0.58	24%
GPM		71.2%	72.5%	56.1%	1.3 ppt
YoY					
170%					
16.4 ppt					
End Market Revenue					
Datacenter		10,323	12,735	3,833	23%
Gaming		2,486	2,699	1,574	9%
Professional Visualization		379	410	200	8%
Automotive		253	267	251	5%
YoY					
232%					
71%					
105%					
6%					
End Market Revenue Mix					
Datacenter		76%	79%	65%	
Gaming		18%	17%	27%	
Professional Visualization		3%	3%	3%	
Automotive		2%	2%	4%	

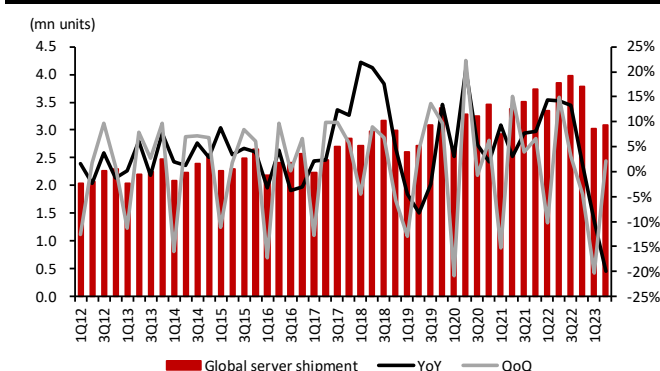
Source: Company data, Bloomberg, CMBIGM

**Figure 3: Global key cloud players CAPEX and intensity ratio**

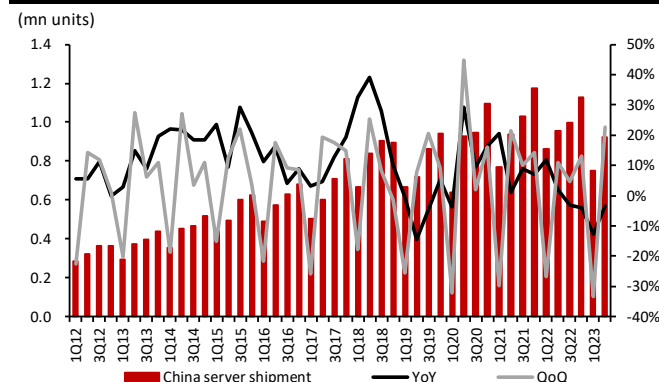
Source: Company data, Bloomberg, CMBIGM

**Figure 4: Global key cloud players CAPEX and YoY trend**

Source: Company data, Bloomberg, CMBIGM

**Figure 5: Global server shipment and growth**

Source: IDC, Bloomberg, CMBIGM

**Figure 6: China server shipment and growth**

Source: IDC, Bloomberg, CMBIGM

## Computing: 3Q23 results/guidance

Figure 7: Intel: CY3Q23 results and consensus/guidance

USD mn	4Q22	1Q23	2Q23	3Q23	4Q23E	FY22	FY23	FY24E
	12/31/2022	4/1/2023	7/1/2023	9/30/2023	12/31/2023			
Adj. Revenue	14,042	11,715	12,949	14,158	15,113	63,054	53,935	61,695
YoY	-32%	-36%	-15%	-8%	8%		-14%	14%
QoQ	-8%	-17%	11%	9%	7%			
Adj. Gross Margin (%)	43.8	38.4	39.8	45.8	46.5			
<u>Segment Revenue</u>								
Client Computing	6,644	5,767	6,780	7,867	8,461	31,772	28,875	33,083
YoY	-36%	-38%	-12%	-3%	27%		-9%	15%
QoQ	-18%	-13%	18%	16%	8%			
Datacenter and AI	4,420	3,718	4,004	3,814	4,025	19,444	15,561	17,174
YoY	-31%	-39%	-15%	-10%	-9%		-20%	10%
QoQ	4%	-16%	8%	-5%	6%			
Network and Edge	1,927	1,489	1,364	1,450	1,552	8,410	5,855	6,665
YoY	-8%	-30%	-38%	-32%	-19%		-30%	14%
QoQ	-10%	-23%	-8%	6%	7%			
Mobileye	565	458	454	530	623	1,869	2,065	2,590
YoY	59%	16%	-1%	18%	10%		10%	25%
QoQ	26%	-19%	-1%	17%	18%			
Intel Foundry Services	178	118	232	311	346	469	1,007	1,569
YoY	-27%	-24%	307%	299%	95%		115%	56%
QoQ	128%	-34%	97%	34%	11%			
All Other	308	165	115	186	178	1,090	644	672
YoY	-70%	-38%	-48%	-37%	-42%		-41%	4%
QoQ		5%	-46%	-30%	62%			

Source: Company data, Bloomberg, CMBIGM

Figure 8: AMD: CY3Q23 results and consensus/guidance

USD mn	4Q22	1Q23	2Q23	3Q23	4Q23E	FY22	FY23	FY24E
	12/31/2022	4/1/2023	7/1/2023	9/30/2023	12/31/2023			
Revenue	5,599	5,353	5,359	5,800	6,133	23,601	22,645	26,382
YoY	16%	-9%	-18%	4%	10%		-4%	17%
QoQ	1%	-4%	0%	8%	6%			
Adj. Gross Margin (%)	51.0	50.0	50.0	51.0	51.5			
<u>Segment Revenue</u>								
Data Center	1,655	1,295	1,321	1,598	2,302	6,043	6,516	10,512
YoY	42%	0%	-11%	-1%	39%		8%	61%
QoQ	3%	-22%	2%	21%	44%			
Client	903	739	998	1,453	1,516	6,201	4,706	6,131
YoY	-51%	-65%	-54%	42%	68%		-24%	30%
QoQ	-12%	-18%	35%	46%	4%			
Gaming	1,644	1,757	1,581	1,506	1,248	6,805	6,092	5,161
YoY	-7%	-6%	-4%	-8%	-24%		-10%	-15%
QoQ	1%	7%	-10%	-5%	-17%			
Embedded	1,397	1,562	1,459	1,243	1,068	4,552	5,332	4,468
YoY	1868%	163%	16%	-5%	-24%		17%	-16%
QoQ	7%	12%	-7%	-15%	-14%			

Source: Company data, Bloomberg, CMBIGM

Figure 9: NVIDIA: CY3Q23 results and consensus/guidance

USD mn	4Q23	1Q24	2Q24	3Q24E	4Q24E	FY23	FY24	FY25E
	2023/1/29	2023/4/30	2023/7/30	2023/10/30	2024/1/30			
Revenue	6,051	7,192	13,507	16,043	17,771	26,970	54,513	81,780
YoY	-21%	-13%	102%	170%	194%		102%	50%
QoQ	2%	19%	88%	19%	11%			
Adjusted Gross Margin (%)	66.1	66.8	71.2	72.5	72.7			
<u>End Market Revenue</u>								
Data Center	3,616	4,284	10,323	12,735	14,273	15,005	41,615	65,943
YoY	11%	14%	171%	232%	295%		177%	58%
QoQ	-6%	18%	141%	23%	12%			
Gaming	1,831	2,240	2,486	2,699	2,743	9,067	10,168	11,208
YoY	-46%	-38%	22%	71%	50%		12%	10%
QoQ	16%	22%	11%	9%	2%			
Professional Visualization	226	295	379	410	422	1,544	1,505	1,798
YoY	-65%	-53%	-24%	105%	87%		-3%	19%
QoQ	13%	31%	28%	8%	3%			
Automotive	294	296	253	267	283	903	1,099	1,374
YoY	135%	114%	15%	6%	-4%		22%	25%
QoQ	17%	1%	-15%	5%	6%			
OEM & Other	84	77	66	75	76	455	295	324
YoY	-56%	-51%	-53%	3%	-9%		-35%	10%
QoQ	15%	-8%	-14%	14%	2%			

Source: Company data, Bloomberg, CMBIGM

## Wireless: 3Q23 results/guidance

Figure 10: Qualcomm: CY3Q23 results and consensus/guidance

	1Q23	2Q23	3Q23	4Q23	1Q24E		FY22	FY23	FY24E
USD mn	12/25/2022	3/26/2023	6/25/2023	9/24/2023	12/24/2023				
Adjusted Revenue	9,456	9,268	8,442	8,665	9,527		44,178	35,831	37,861
YoY	-12%	-17%	-23%	-24%	1%			-18.9%	5.7%
QoQ	-17%	-2%	-9%	3%	10%				
Adjusted Gross Margin (%)	58.0	55.2	55.2	55.8	55.9				
<b>Segment Revenue</b>									
CDMA Technologies (QCT)	7,892	7,942	7,174	7,374	8,055		37,677	30,382	31,946
YoY	-11%	-17%	-24%	-26%	2%			-19%	5%
QoQ	-20%	1%	-10%	3%	9%				
Handsets	5,754	6,105	5,255	5,456	6,243		25,027	22,570	24,191
YoY	-4%	-3%	-15%	-17%	8%			-10%	7%
QoQ	-12%	6%	-14%	4%	14%				
IoT	1,682	1,390	1,485	1,383	1,262		6,948	5,940	5,554
YoY	14%	-19%	-19%	-28%	-25%			-15%	-6%
QoQ	-12%	-17%	7%	-7%	-9%				
Automotive	456	447	434	535	512		1,372	1,872	2,264
YoY	78%	32%	24%	25%	12%			36%	21%
QoQ	7%	-2%	-3%	23%	-4%				
Technology Licensing (QTL)	1,524	1,290	1,230	1,262	1,414		6,358	5,306	5,434
YoY	-16%	-18%	-19%	-12%	-7%			-17%	2%
QoQ	6%	-15%	-5%	3%	12%				

Source: Company data, Bloomberg, CMBIGM

Figure 11: MediaTek: CY3Q23 results and consensus/guidance

	4Q22	1Q23	2Q23	3Q23	4Q23E		FY22	FY23	FY24E
USD mn	12/31/2022	3/31/2023	6/30/2023	9/30/2023	12/31/2023				
Adjusted Basic EPS	11.62	10.64	10.07	11.64	12.95		81.80	43.96	53.09
YoY	-38%	-49%	-55%	-40%	11%			-46%	21%
Revenue	108,194	95,652	98,135	110,098	123,791		569,256	412,079	497,027
YoY	-16%	-33%	-37%	-23%	14%			-28%	21%
QoQ	-24%	-12%	3%	12%	12%				
Gross Margin (%)	48.3	48.0	47.5	47.4	47.3				
<b>Segment Revenue</b>									
Mobile Phone	55,179	44,000	45,142	53,948	68,895		304,820	198,269	279,992
YoY	-18%	-42%	-46%	-31%	25%			-35%	41%
QoQ	-29%	-20%	3%	20%	28%				
Smart Edge Platforms	45,442	44,956	46,123	48,443			202,306	184,964	
YoY	36%	-19%	-22%	-10%				-9%	
QoQ	-16%	-1%	3%	5%					
Power IC	7,574	6,696	6,869	7,707			42,832	28,846	
YoY	-16%	-41%	-45%	-23%				-33%	
QoQ	-24%	-12%	3%	12%					

Source: Company data, Bloomberg, CMBIGM

Figure 12: Broadcom: CY3Q23 results and consensus/guidance

	1Q23	2Q23	3Q23	4Q23E	1Q24E		FY22	FY23	FY24E
USD mn	1/29/2023	4/30/2023	7/30/2023	10/30/2023	1/30/2024				
Adjusted Diluted EPS	10.33	10.32	10.54	10.97	11.07		37.64	42.16	45.89
YoY	23%	14%	8%	5%	7%			12%	9%
Revenue	8,915	8,733	8,876	9,278	9,404		33,203	35,802	38,639
YoY	16%	8%	5%	4%	5%			8%	8%
QoQ	0%	-2%	2%	5%	1%				
Adjusted Gross Margin (%)	73.8	75.6	75.1	74.3	74.5				
<b>Segment Revenue</b>									
Semiconductor Solutions	7,107	6,808	6,941	7,266	7,427		25,818	28,122	30,247
YoY	21%	9%	5%	2%	5%			9%	8%
QoQ	0%	-4%	2%	5%	2%				
Infrastructure Software	1,808	1,925	1,935	1,944	1,961		7,385	7,612	8,361
YoY	-1%	3%	5%	6%	8%			3%	10%
QoQ	-2%	6%	1%	0%	1%				

Source: Company data, Bloomberg, CMBIGM

## Auto/Industrial: 3Q23 results/guidance

Figure 13: Infineon: CY3Q23 results and consensus/guidance

EUR mn	1Q23	2Q23	3Q23	4Q23	1Q24E	FY22	FY23	FY24E
Revenue	3,951	4,119	4,089	4,149	3,800	14,218	16,308	16,692
YoY	0.3%	0.2%	0.1%	0.0%	-3.8%		14.7%	2.4%
QoQ	-4.6%	4.3%	-0.7%	1.5%	-8.4%			
Gross Margin (%)	47.2	46.6	44.5	45.5	43.8			
Automotive	1,872	2,079	2,129	2,162	2,111	6,516	8,242	8,926
YoY	35%	39%	25%	12%	13%		26%	8%
QoQ	-3%	11%	2%	2%	-2%			
Industrial Power Control	500	558	565	582	549	1,790	2,205	2,333
YoY	31%	30%	30%	7%	10%		23%	6%
QoQ	-8%	12%	1%	3%	-6%			
Power & Sensor Systems	1,043	926	917	912	916	4,070	3,798	3,756
YoY	9%	0%	-10%	-22%	-12%		-7%	-1%
QoQ	-11%	-11%	-1%	-1%	0%			
Connected Security Solution	531	550	474	490	484	1,823	2,045	2,010
YoY	24%	23%	4%	0%	-9%		12%	-2%
QoQ	8%	4%	-14%	3%	-1%			

Source: Company data, Bloomberg, CMBIGM

Figure 14: Texas Instr: CY3Q23 results and consensus/guidance

USD mn	4Q22	1Q23	2Q23	3Q23	4Q23E	FY22	FY23	FY24E
Revenue	4,670	4,379	4,531	4,532	4,106	20,028	17,548	17,733
YoY	12.9%	-3.4%	-10.7%	-13.1%	-13.5%		-12%	1%
QoQ	-10.9%	-6.2%	3.5%	0.0%	-9.4%			
Gross Margin (%)	66.1	65.4	64.2	62.1	60.1			
Analog	3,558	3,289	3,278	3,353	3,059	15,359	12,979	13,199
YoY	-5%	-14%	-18%	-16%	-14%		-15%	2%
QoQ	-11%	-8%	0%	2%	-9%			
Embedded Processing	837	832	894	890	832	3,261	3,448	3,539
YoY	10%	6%	9%	8%	-1%		6%	3%
QoQ	2%	-1%	7%	0%	-7%			
Other Semiconductors	275	258	359	289	231	1,408	1,137	1,098
YoY	-11%	-16%	-10%	-32%	-16%		-19%	-3%
QoQ	-36%	-6%	39%	-19%	-20%			

Source: Company data, Bloomberg, CMBIGM

Figure 15: OnSemi: CY3Q23 results and consensus/guidance

USD mn	4Q22	1Q23	2Q23	3Q23	4Q23E	FY22	FY23	FY24E
Revenue	2,104	1,960	2,094	2,181	2,004	8,326	8,238	8,077
YoY	14%	1%	0%	-1%	-5%		-1%	-2%
QoQ	-4.1%	-6.8%	6.9%	4.1%	-8.1%			
Adjusted Gross Margin (%)	48.4	46.8	47.4	47.3	46.5			
Automotive	989	980	1,062	1,158	1,089	3,366	4,289	4,577
YoY	54%	36%	35%	33%	10%		27%	7%
QoQ	13%	-1%	8%	9%	-6%			
Industrial	552	568	609	616	563	2,292	2,356	2,310
YoY	6%	4%	5%	0%	2%		3%	-2%
QoQ	-10%	3%	7%	1%	-9%			
Other	563	412	423	407	354	2,668	1,596	1,312
YoY	-18%	-40%	-41%	-42%	-37%		-40%	-18%
QoQ	-20%	-27%	3%	-4%	-13%			

Source: Company data, Bloomberg, CMBIGM

Figure 16: STM: CY3Q23 results and consensus/guidance

EUR mn	4Q22	1Q23	2Q23	3Q23	4Q23E	FY22	FY23	FY24E
Revenue	4,424	4,247	4,326	4,431	4,300	16,128	17,304	17,481
YoY	24%	20%	13%	3%	-2%		7%	1%
QoQ	2%	-4%	2%	2%	-3%			
Gross Margin (%)	47.5	49.7	49.0	47.6	46.0			
Automotive & Discrete (ADG)	1,696	1,807	1,955	2,025	2,065	5,969	7,852	8,596
YoY	38%	44%	34%	30%	22%		32%	9%
QoQ	9%	7%	8%	4%	2%			
Analog, MEMS & Sensors (AM)	1,339	1,068	940	990	937	4,911	3,935	3,677
YoY	7%	-1%	-16%	-28%	-30%		-20%	-7%
QoQ	-3%	-20%	-12%	5%	-5%			
Microcontrollers & Digital ICs (M)	1,383	1,368	1,427	1,412	1,306	5,228	5,513	5,303
YoY	29%	13%	13%	3%	-6%		5%	-4%
QoQ	1%	-1%	4%	-1%	-7%			

Source: Company data, Bloomberg, CMBIGM



Figure 17: Comp table – Global Fabless/IDM semi

Figure 11: Computable												
Company	Ticker	Mkt Cap (US\$ mn)	Price (LC)	P/E (x)		P/B (x)		ROE (%)		Performance (%)		
				FY23E	FY24E	FY23E	FY24E	FY23E	FY24E	1M%	3M%	YTD
Computing												
NVIDIA	NVDA US	1,205,286	487.97	149.5	44.7	56.2	30.2	29.7	76.7	6	12	234
AMD	AMD US	192,779	119.33	45.0	31.5	3.5	3.4	6.4	8.1	12	11	84
Intel	INTC US	176,397	41.84	44.0	22.3	1.7	1.6	2.7	6.1	14	25	58
Average				79.5	32.8	20.5	11.7	12.9	30.3	11	16	125
Wireless												
Qualcomm	QCOM US	143,265	128.72	15.5	13.9	6.8	6.2	45.3	41.9	16	17	17
MediaTek	2454 TT	44,789	893.00	19.8	16.2	3.5	3.4	17.5	22.8	8	32	46
Broadcom	AVGO US	393,717	953.92	22.6	20.5	17.1	14.8	73.2	72.4	6	14	71
Skyworks	SWKS US	14,804	92.88	11.0	12.7	2.5	2.3	21.2	16.9	(3)	(10)	2
Qorvo	QRVO US	9,140	93.89	16.1	16.8	2.4	2.4	13.9	13.6	2	(3)	4
Average				17.0	16.0	6.5	5.8	34.2	33.5	6	10	28
Auto/Industrial												
Infineon	IFNNY US	48,071	36.81	12.9	14.2	2.6	2.3	20.5	16.8	9	4	22
STMicro	STM US	41,389	45.45	10.6	11.4	2.6	2.1	27.6	21.4	4	(2)	28
ON Semi	ON US	29,796	69.18	13.5	14.5	3.7	3.0	29.8	23.3	(25)	(25)	11
Wolfspeed	WOLF US	4,291	34.24	-	-	2.3	4.2	(3.1)	(28.3)	(2)	(36)	(50)
Diodes	DIOD US	3,157	68.73	14.3	21.1	1.8	1.7	-	-	(13)	(14)	(10)
Power Int.	POWI US	4,359	76.67	62.8	59.8	5.7	5.8	6.3	7.0	0	(4)	7
Texas Intr.	TXN US	137,552	151.46	21.2	22.6	8.3	7.9	41.4	35.8	(2)	(9)	(8)
ADI	ADI US	89,288	179.18	17.8	21.2	2.5	2.6	14.1	14.6	4	1	9
Marvell	MRVL US	46,470	53.86	25.3	35.1	3.0	3.0	8.8	8.1	0	(6)	45
Average				22.3	25.0	3.6	3.6	18.2	12.3	(3)	(10)	6

Source: Company data, Bloomberg, CMBIGM

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## CMB International Global Markets Limited

**Address:** 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

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