US Semiconductors and Semi Equipment

SemiBytes: ISM/PMI and Analog Earnings So Far, Semis Gamma Rentals, Crowding, Hyperscaler Capex, HDDs in HOLT

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ISM/PMI remain slightly expansionary amidst a very strong start to analog earnings season

ISM and S&P PMI were reported Friday morning, with S&P PMI coming in 54.5, half a point above the 54.0 4/23 Flash PMI and 1.5 above consensus. Importantly, the new order component was up M/M (Figure 1). We also check in on analog earnings season with companies representing about half of total industry revenue having reported (highlighted by TXN, STM, Renesas, and NXP) with all having beaten and raised (Figure 2). In aggregate, the upside to C1Q revenue/and operating income have been 2.5% and 8% respectively, with CQ2 revenue/OI guided ahead by ~8.5%/~15% respectively and full year C2026 revenue/OI increased by ~8%/~12% (Figure 4). Breaking revenue down further, Autos missed by a percent; Industrial and other each beat by MSD-LDD%; and analog ex-MCU and MCU beat by similar MSD% (Figure 3, Figure 5). We also share selected analog management commentary from earnings calls (Figure 7 - Figure 13); in all, 1) autos seems a little better than feared structurally even though the revisions were negative, and ADAS is a huge secular content growth driver and area of enthusiasm for management teams; 2) industrial strength is broad based; 3) data center is quite strong but this is thoroughly well-understood at this point; and 4) management teams feel the distribution channel is totally cured albeit none are calling out restocking quite yet.

Semis such as ADI/AMAT pose a strong 'gamma rental' opportunity

We wanted to highlight a piece recently published by Maxwell Grinacoff and our equity derivatives team - All in this together: Gamma Rentals for Q1 earnings. This gamma rental strategy is conceptually similar to our work last quarter with UBS Quant Answers earnings surprise data, but with volatility relationships among peers instead of directional beats/misses. The intuition behind gamma rentals is that because investors can read through from earlier reporters to later-reporting peers, there is a predictable volatility relationship that can be traded. For investors not interested in the volatility trade, this is still interesting as it typically helps to size stock moves of later reporters in sympathy, like the outsize move up for all analog stocks after TXN earnings.

What caught our eye was that the semis space is the single strongest large subsector where this strategy has worked during 1Q earnings season - with ADI having the best pairs of any single stock (off the moves of TXN, NXP, ON, and SWKS for example) and AMAT not far behind (with strong pairs off LRCX, KLAC, TER). This volatility surface and potential straddle strategy are made possible by the October fiscal calendar of ADI/AMAT putting their earnings a month behind peers, plus their relative long crowding and the volatility in both stocks being relatively cheap. Later in earnings, as the overall earnings calendar thins out, AVGO, MU, and NVDA pairs are some of the strongest on the board in May/June.

Crowding Update

After a record rally month in April, we revisit our UBS Quant Answers crowding factor data (where scores range from -30 on the short end to +30 on the long end). For the overall sector, sentiment has obviously become more constructive in April and YTD, with every subsector up at least slightly over the last month. LRCX, AVGO, MU, and AMD are the stocks in our coverage that appear the most long crowded, with 10 of 60 stocks at or above +24 out of +30 including most memory/storage and Compute stocks. The most short-crowded stocks include PI (-14.1), INDI (-8.7), ALAB (-8.3), and ENTG (-8.1).

In **compute**, AMD, Arm, and INTC all gained significant ground as the agentic CPU theme gained traction, while NVDA stayed constant at a well loved +25.1. **Memory/ Storage** remained steady and well-loved with STX a standout gaining a full 8 points in the last week as a reward for its strong Mar Q earnings Tuesday. There has been notable mean reversion in **analog** with ON and INDI among the biggest gainers and ADI the single biggest loser over the last month, although TXN gained ground and ALGM and SITM continue to get little attention and, at least according to our data, are exceptions to this general trend. Semicaps saw little movement but a lot of dispersion with big gainers (Q, DISCO, ENTG, Tokyo Electron) and laggards (AMAT, KLAC, ASMI, Advantest).

Hyperscaler earnings reinforce upward bias to AI capex spend

AMZN, GOOG, MSFT, and META all reported this week with commentary that reinforced a still-strong AI infrastructure spend backdrop, with capacity constraints, customer AI demand, and multi-year build plans continuing to drive upward capex revisions. Across our broader tracked hyperscaler universe, capex is now expected to reach $968B in 2027 and $1,039B in 2028, representing increases of +16%/+11% versus our prior estimates, with these four large hyperscalers comprising >80% of the updated industry view. This also extends the steady upward creep in Big 4 hyperscaler consensus capex expectations over the past two years (Figure 82). The common thread across reports was that AI demand continues to run ahead of available compute and power capacity, while management teams increasingly pointed to tangible workload growth and ROI across Azure AI, GCP and Gemini, AWS, and META's ads/recommender systems.

Beyond headline capex revisions, company-specific commentary also continues to support broadening AI infrastructure opportunities. **MSFT** framed datacenter and server capacity expansion as a significant ongoing multi-year investment, with AI demand still constrained by GPU availability, networking supplies, energy, and datacenter capacity. **GOOG** increased capex expectations as Gemini and Cloud infrastructure needs continue to scale, while also highlighting agreements to supply multiple GWs of TPU hardware for high-scale customer workloads (reflecting recent agreements with Anthropic), with most of the associated revenue expected in 2027. **AMZN** pointed to continued AWS AI capacity constraints, major Trainium commitments from Anthropic and OpenAI, and plans to deploy more than 1MM NVDA GPUs beginning in 2026. **META** raised its 2026 capex guide on higher component pricing, particularly memory, and added datacenter costs, while noting more than 1GW of internal silicon developed with AVGO alongside AMD chips and new NVDA GPU systems. Net, these updates remain incrementally positive for NVDA, AMD, AVGO, MRVL, and ALAB, with capex momentum supporting both merchant compute and custom accelerator/networking opportunities.

UBSe Capex Estimate Changes

MSFT: 2026/2027/2028 capex raised to $190B/254B/289B from $162B/200B/239B

GOOG: 2026/2027/2028 capex raised to $190B/242B/260B from $184B/203B/225B

AMZN: 2027 capex raised to $170B from $149B, while 2026 and 2028 estimates were about unchanged

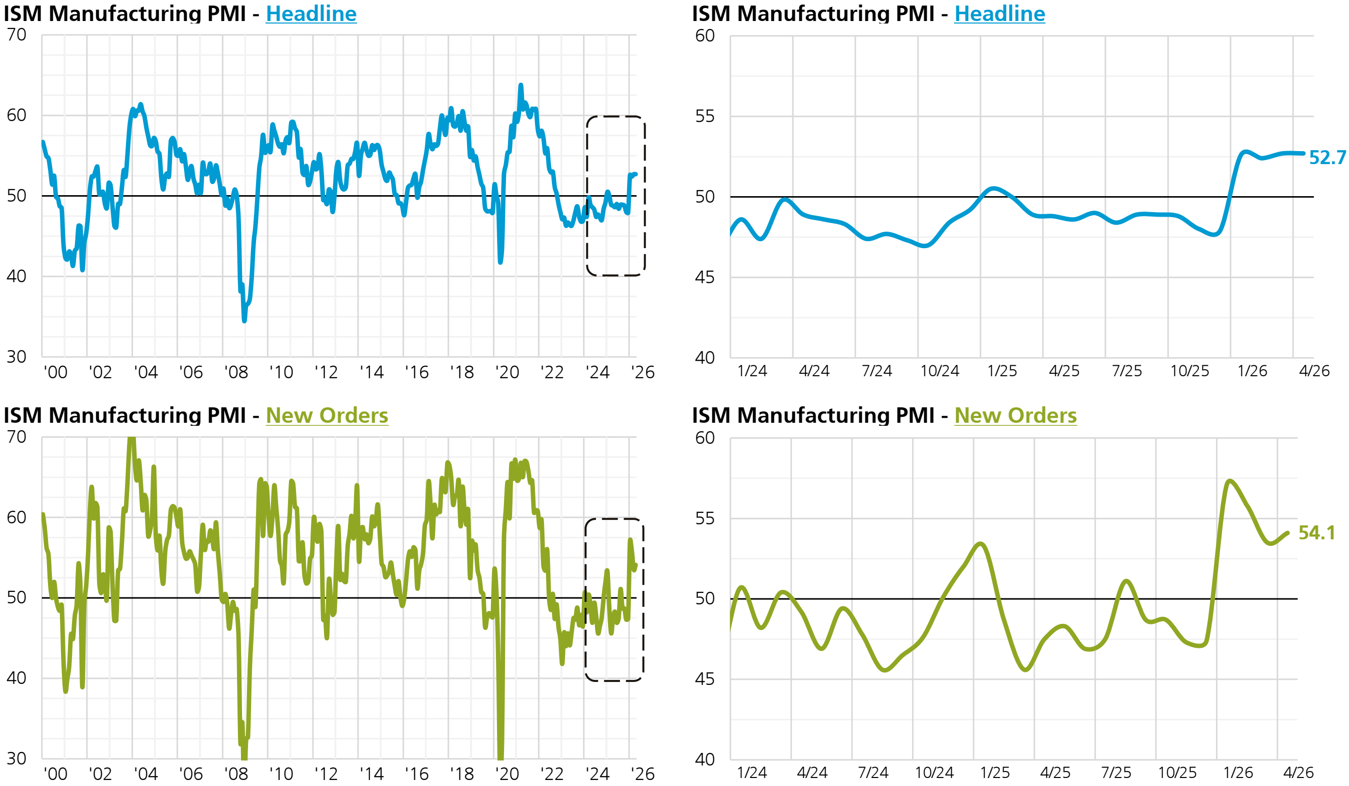
META: 2026/2027/2028 capex raised to $145B/150B/152B from $133B/137B/139B

UBS HOLT on HDD stocks: the market appears to view these as outliers

We continue to be asked why we have been relatively cautious (and admittedly wrong) on HDD stocks. Following another set of strong earnings (STX and WDC can manage outcomes as they both know exactly what they will ship w/in 12mos), we thought it might be interesting to get UBS HOLT's view on these stocks relative to other segments of the broader AI/semis/hardware vertical. HOLT's methodology normalizes for accounting differences and, separately from our own fundamental forecasts, provides a good lens into what the market has priced into our stocks. We constructed scenarios for STX and WDC as well as some other peers across our coverage landscape in which we imputed IBES consensus forecasts for the stocks for 2026-2028, used a normalized discount rate (1.7%, typical for growth stocks), and looked for what 2029+ growth rate would have to be in order to produce a warranted valuation in line with current trading levels per HOLT's methodology. This gave us an imputed ~13% long-term growth rate currently being implied by the market for both STX and WDC - in effect investors believe they may have some LT fade in CFROI but no downcycle. This contrasts greatly with NVDA (with 7% implied 2029-30 CFROI) and especially with memory stocks like MU (where this methodology implies -13% in 2029-2030, in effect a steep downcycle following this upcycle). This does not make sense to us and we continue to advocate owning MU (or a host of other stocks we like) over the HDD complex.

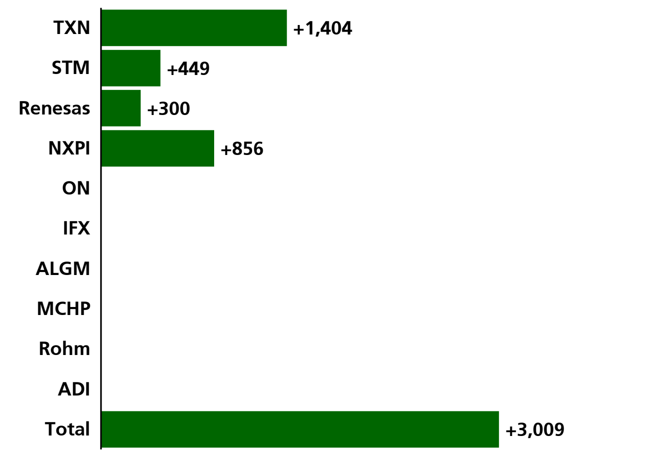
ISM/PMI AND ANALOG EARNINGS SEASON SO FAR

Figure 1: ISM Manufacturing PMI - headline and new orders



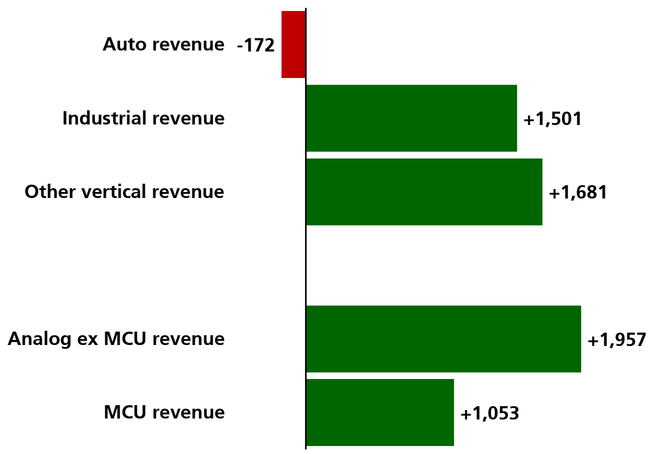
Source: Factset, UBS research

Figure 2: C2026E Earnings Revisions by Company



Source: UBS research, Company reports, Visible Alpha, FactSet.

Figure 3: C2026E Earnings Revisions by vertical and product



Source: UBS research, Company reports, Visible Alpha, FactSet.

Figure 4: Analog Semiconductors 1Q26 Earnings Season Revisions - Revenue, GM, OI

	C1Q26 results			C2Q26 estimates			CY26 estimates			CY27 estimates		
Calendar Year, USD $MM	Estimate	Beat/Miss	Reported	Old	Change	New	Old	Change	New	Old	Change	New
Total Revenue												
TXN	4,565	+260	4,825	4,956	+394	5,350	20,195	+1,404	21,599	23,786	+1,005	24,791
STM	3,084	+11	3,095	3,223	+227	3,450	14,047	+449	14,497	15,463	+1,319	16,783
Renesas	2,392	+20	2,411	2,381	+65	2,446	9,603	+300	9,903	9,926	+793	10,719
NXPI	3,146	+35	3,181	3,251	+200	3,451	13,605	+856	14,461	15,314	+1,212	16,525
ON	1,481		1,481	1,542		1,542	6,256		6,256	7,154		7,154
IFX	4,475		4,475	4,803		4,803	19,205		19,205	21,380		21,380
ALGM	238		238	254		254	1,029		1,029	1,284		1,284
MCHP	1,269		1,269	1,382		1,382	5,657		5,657	7,008		7,008
Rohm	733		733	775		775	3,148		3,148	3,369		3,369
ADI	3,547		3,547	3,621		3,621	14,709		14,709	16,569		16,569
Total	**24,929**	**+326**	**25,255**	**26,187**	**+886**	**27,074**	**107,454**	**+3,009**	**110,463**	**121,252**	**+4,329**	**125,580**
revision - early reporters		**+2.5%**			**+6.4%**			**+5.2%**			**+6.7%**	
revision - total sector		**+1.3%**			**+3.4%**			**+2.8%**			**+3.6%**	
Auto revenue	9,965	-69	9,896	10,480	+99	10,579	42,860	-172	42,687	48,093	-307	47,786
Industrial revenue	9,158	+231	9,389	9,586	+450	10,036	38,984	+1,501	40,485	45,246	+1,913	47,159
Other vertical revenue	5,806	+164	5,970	6,122	+337	6,459	25,610	+1,681	27,291	27,913	+2,722	30,635
Analog ex MCU revenue	19,383	+216	19,599	20,388	+484	20,872	83,426	+1,957	85,383	93,797	+2,748	96,545
MCU revenue	5,546	+110	5,656	5,799	+403	6,202	24,028	+1,053	25,081	27,455	+1,581	29,035
Gross Margin (Non-GAAP)												
TXN	56.4%	+193 bp	58.3%	57.9%	+247 bp	60.3%	58.3%	+250 bp	60.8%	61.6%	+219 bp	63.8%
STM	34.1%	+1 bp	34.1%	34.7%	+75 bp	35.4%	35.8%	+78 bp	36.6%	38.2%	+399 bp	42.2%
Renesas	58.8%	+45 bp	59.3%	58.6%	-37 bp	58.3%	59.0%	-6 bp	58.9%	58.7%	-30 bp	58.4%
NXPI	57.0%	+3 bp	57.1%	57.5%	+50 bp	58.0%	57.7%	+41 bp	58.1%	59.1%	+13 bp	59.3%
ON	38.5%		38.5%	38.5%		38.5%	39.5%		39.5%	42.9%		42.9%
IFX	42.7%		42.7%	42.3%		42.3%	43.0%		43.0%	44.8%		44.8%
ALGM	50.9%		50.9%	51.9%		51.9%	52.2%		52.2%	54.9%		54.9%
MCHP	61.5%		61.5%	63.0%		63.0%	63.3%		63.3%	65.8%		65.8%
Rohm	20.0%		20.0%	22.9%		22.9%	23.7%		23.7%	19.8%		19.8%
ADI	72.2%		72.2%	72.1%		72.1%	72.3%		72.3%	73.9%		73.9%
Total	**51.8%**	**+50 bp**	**52.3%**	**52.2%**	**+60 bp**	**52.8%**	**52.6%**	**+70 bp**	**53.3%**	**54.7%**	**+90 bp**	**55.6%**
Operating Income (Non-GAAP)												
TXN	1,551	+274	1,825	1,829	+388	2,217	7,687	+1,452	9,139	10,466	+1,192	11,658
STM	192	-21	171	237	+93	330	1,496	+11	1,508	2,491	+684	3,175
Renesas	777	+24	801	754	+12	766	3,094	+137	3,231	3,373	+302	3,675
NXPI	1,045	+7	1,052	1,132	+82	1,214	4,851	+365	5,216	6,023	+419	6,442
ON	275		275	301		301	1,290		1,290	1,837		1,837
IFX	975		975	975		975	3,900		3,900	5,178		5,178
ALGM	40		40	52		52	216		216	379		379
MCHP	383		383	465		465	1,959		1,959	2,892		2,892
Rohm	(19)		(19)	38		38	153		153	333		333
ADI	1,722		1,722	1,755		1,755	7,202		7,202	8,612		8,612
Total	**6,941**	**+284**	**7,225**	**7,537**	**+575**	**8,112**	**31,847**	**+1,966**	**33,813**	**41,583**	**+2,597**	**44,181**
revision - early reporters		**+8.0%**			**+14.5%**			**+11.5%**			**+11.6%**	
revision - total sector		**+4.1%**			**+7.6%**			**+6.2%**			**+6.2%**	

Source: UBS research, Company reports, Visible Alpha, FactSet.

Figure 5: Analog Semiconductors 1Q26 Earnings Season Revisions - End Market and Product Revenue

	C1Q26 results			C2Q26 estimates			CY26 estimates			CY27 estimates		
Calendar Year, USD $MM	Estimate	Beat/Miss	Reported	Old	Change	New	Old	Change	New	Old	Change	New
Auto Revenue												
TXN	1,464	-96	1,369	1,538	-128	1,410	6,436	-525	5,911	7,451	-818	6,633
STM	1,126	+13	1,139	1,238	+37	1,275	5,254	-230	5,023	5,719	-251	5,468
Renesas	1,082	+14	1,097	1,065	+66	1,131	4,315	+156	4,471	4,522	+190	4,712
NXPI	1,782	-0	1,782	1,836	+125	1,960	7,685	+427	8,112	8,838	+572	9,410
ON	798		798	826		826	3,369		3,369	4,026		4,026
IFX	2,131		2,131	2,357		2,357	9,185		9,185	9,917		9,917
ALGM	166		166	176		176	712		712	872		872
MCHP	228		228	249		249	1,018		1,018	1,261		1,261
Rohm	384		384	384		384	1,537		1,537	1,645		1,645
ADI	802		802	810		810	3,348		3,348	3,842		3,842
Total	**9,965**	**-69**	**9,896**	**10,480**	**+99**	**10,579**	**42,860**	**-172**	**42,687**	**48,093**	**-307**	**47,786**
revision - early reporters		**-1.3%**			**+1.8%**			**-0.7%**			**-1.2%**	
revision - total sector		**-0.7%**			**+0.9%**			**-0.4%**			**-0.6%**	
Industrial Revenue												
TXN	1,633	+231	1,864	1,780	+308	2,088	7,135	+1,161	8,296	8,896	+1,059	9,955
STM	669	+7	676	736	+109	845	3,175	+50	3,225	3,839	+60	3,899
Renesas	1,297	-27	1,271	1,304	-1	1,303	5,242	+109	5,350	5,576	+563	6,140
NXPI	608	+20	628	657	+34	691	2,705	+182	2,887	3,002	+231	3,233
ON	385		385	412		412	1,636		1,636	1,719		1,719
IFX	1,969		1,969	2,039		2,039	8,353		8,353	9,756		9,756
ALGM	72		72	78		78	317		317	412		412
MCHP	609		609	663		663	2,715		2,715	3,364		3,364
Rohm	99		99	99		99	396		396	424		424
ADI	1,817		1,817	1,819		1,819	7,309		7,309	8,257		8,257
Total	**9,158**	**+231**	**9,389**	**9,586**	**+450**	**10,036**	**38,984**	**+1,501**	**40,485**	**45,246**	**+1,913**	**47,159**
revision - early reporters		**+5.5%**			**+10.1%**			**+8.2%**			**+9.0%**	
revision - total sector		**+2.5%**			**+4.7%**			**+3.8%**			**+4.2%**	
Implied all other revenue												
TXN	1,467	+124	1,592	1,638	+214	1,852	6,624	+769	7,393	7,439	+763	8,202
STM	1,289	-8	1,281	1,248	+82	1,330	5,619	+630	6,249	5,905	+1,510	7,415
Renesas	12	+32	44	12	-1	11	46	+35	81	(173)	+40	(133)
NXPI	755	+16	771	759	+41	800	3,214	+247	3,462	3,473	+409	3,882
ON	298		298	304		304	1,250		1,250	1,409		1,409
IFX	375		375	407		407	1,667		1,667	1,706		1,706
ALGM	-		-	-		-	-		-	-		-
MCHP	431		431	470		470	1,923		1,923	2,383		2,383
Rohm	250		250	292		292	1,215		1,215	1,300		1,300
ADI	927		927	992		992	4,052		4,052	4,470		4,470
Total	**5,806**	**+164**	**5,970**	**6,122**	**+337**	**6,459**	**25,610**	**+1,681**	**27,291**	**27,913**	**+2,722**	**30,635**
revision - early reporters		**+4.7%**			**+9.2%**			**+10.8%**			**+16.4%**	
revision - total sector		**+2.8%**			**+5.5%**			**+6.6%**			**+9.8%**	
Analog (ex MCU) Revenue												
TXN	3,877	+225	4,102	4,226	+336	4,562	17,200	+1,186	18,386	20,071	+801	20,873
STM	2,156	-36	2,120	2,249	+50	2,298	9,706	+175	9,881	10,471	+773	11,244
Renesas	1,360	+4	1,363	1,350	-34	1,316	5,437	+31	5,468	5,542	+373	5,915
NXPI	2,076	+23	2,099	2,146	+132	2,278	8,979	+565	9,544	10,107	+800	10,907
ON	1,481		1,481	1,542		1,542	6,256		6,256	7,154		7,154
IFX	3,490		3,490	3,746		3,746	14,980		14,980	16,676		16,676
ALGM	238		238	254		254	1,029		1,029	1,284		1,284
MCHP	618		618	679		679	2,791		2,791	3,454		3,454
Rohm	682		682	721		721	2,928		2,928	3,133		3,133
ADI	3,405		3,405	3,476		3,476	14,121		14,121	15,906		15,906
Total	**19,383**	**+216**	**19,599**	**20,388**	**+484**	**20,872**	**83,426**	**+1,957**	**85,383**	**93,797**	**+2,748**	**96,545**
revision - early reporters		**+2.3%**			**+4.9%**			**+4.7%**			**+5.9%**	
revision - total sector		**+1.1%**			**+2.4%**			**+2.3%**			**+2.9%**	
MCU revenue												
TXN	688	+35	723	730	+58	788	2,995	+219	3,213	3,715	+203	3,918
STM	928	+48	975	974	+178	1,152	4,342	+274	4,616	4,993	+546	5,539
Renesas	1,032	+16	1,048	1,031	+99	1,130	4,166	+269	4,435	4,384	+419	4,804
NXPI	1,070	+12	1,082	1,105	+68	1,173	4,626	+291	4,917	5,207	+412	5,619
IFX	984		984	1,057		1,057	4,225		4,225	4,704		4,704
MCHP	651		651	703		703	2,866		2,866	3,554		3,554
Rohm	51		51	54		54	220		220	236		236
ADI	142		142	145		145	588		588	663		663
Total	**5,546**	**+110**	**5,656**	**5,799**	**+403**	**6,202**	**24,028**	**+1,053**	**25,081**	**27,455**	**+1,581**	**29,035**
revision - early reporters		**+3.0%**			**+10.5%**			**+6.5%**			**+8.6%**	
revision - total sector		**+2.0%**			**+6.9%**			**+4.4%**			**+5.8%**	

Source: UBS research, Company reports, Visible Alpha, FactSet.

Figure 6: Analog Industry - UBS vs Street

CYs	C1Q26e			C2Q26e			C3Q26e			C4Q26e		
USD $MM	Street	Δ	UBS	Street	Δ	UBS	Street	Δ	UBS	Street	Δ	UBS
Total Revenue												
TXN	4,825	-0	4,825	5,240	+110	5,350	5,560	+236	5,796	5,391	+237	5,628
IFX	4,471	+4	4,475	4,718	+84	4,803	5,040	+86	5,126	4,818	-17	4,801
STM	3,095		3,095	3,453	-3	3,450	3,667	+210	3,877	3,908	+167	4,075
NXPI	3,181		3,181	3,460	-9	3,451	3,661	+136	3,798	3,748	+282	4,031
ADI	3,513	+33	3,547	3,598	+23	3,621	3,694	+82	3,776	3,601	+165	3,766
Renesas	2,422	+10	2,432	2,484	+21	2,505	2,532	+42	2,574	2,572	+53	2,626
ON	1,488	-7	1,481	1,531	+11	1,542	1,619	-16	1,603	1,669	-39	1,630
MCHP	1,263	+6	1,269	1,351	+31	1,382	1,425	+66	1,491	1,453	+63	1,516
Rohm	733	-58	675	789		789	836		836	833		833
ALGM	236	+2	238	245	+8	254	258	+11	270	260	+8	268
Total	**25,227**	**-9**	**25,218**	**26,869**	**+278**	**27,147**	**28,291**	**+853**	**29,145**	**28,253**	**+918**	**29,171**
% Y/Y	2.7%	-4 bp	2.7%	6.5%	+114 bp	7.6%	5.3%	+207 bp	7.4%	-0.1%	+23 bp	0.1%
Gross Margin (Non-GAAP)												
TXN	58.0%	+30 bp	58.3%	59.5%	+88 bp	60.3%	60.2%	+190 bp	62.1%	59.8%	+232 bp	62.1%
IFX	42.1%	+62 bp	42.7%	42.9%	-60 bp	42.3%	43.8%	+13 bp	43.9%	44.1%	-113 bp	43.0%
STM	33.8%	+30 bp	34.1%	35.0%	+38 bp	35.4%	36.2%	+35 bp	36.5%	37.3%	+222 bp	39.5%
NXPI	57.1%		57.1%	58.0%	+5 bp	58.0%	58.6%	-21 bp	58.4%	59.2%	-38 bp	58.8%
ADI	72.1%	+4 bp	72.2%	71.9%	+21 bp	72.1%	72.2%	+14 bp	72.3%	71.9%	+48 bp	72.3%
Renesas	59.0%	-25 bp	58.7%	58.1%	+30 bp	58.4%	59.0%	+77 bp	59.7%	58.4%	-75 bp	57.6%
ON	38.6%	-6 bp	38.5%	38.7%	-25 bp	38.5%	40.0%	+0 bp	40.0%	41.0%	-3 bp	41.0%
MCHP	61.1%	+38 bp	61.5%	61.4%	+163 bp	63.0%	61.8%	+217 bp	64.0%	62.0%	+254 bp	64.5%
Rohm	20.1%	+172 bp	21.8%	22.9%		22.9%	26.1%		26.1%	25.4%		25.4%
ALGM	50.1%	+74 bp	50.9%	50.7%	+117 bp	51.9%	51.4%	+174 bp	53.1%	51.7%	+95 bp	52.6%
Total	**52.0%**	**+36 bp**	**52.4%**	**52.5%**	**+28 bp**	**52.8%**	**53.3%**	**+65 bp**	**53.9%**	**53.3%**	**+83 bp**	**54.1%**
Operating Income (Non-GAAP)												
TXN	1,824	+1	1,825	2,127	+90	2,217	2,345	+251	2,596	2,221	+281	2,502
IFX	797	+178	975	917	+58	975	1,087	-113	975	983	-8	975
STM	164	+7	171	282	+48	330	383	+23	406	480	+121	600
NXPI	1,052		1,052	1,203	+11	1,214	1,338	+68	1,406	1,403	+141	1,544
ADI	1,680	+42	1,722	1,719	+35	1,755	1,786	+80	1,866	1,700	+159	1,859
Renesas	579		579	516	+37	553	574	+52	626	563	+38	602
ON	281	-6	275	301	+1	301	355	-10	345	391	-22	369
MCHP	374	+9	383	425	+40	465	472	+73	545	490	+76	566
Rohm	(20)	+37	17	39	+32	71	67	+35	102	69	+33	103
ALGM	37	+3	40	45	+7	52	52	+11	63	53	+7	61
Total	**6,769**	**+270**	**7,039**	**7,573**	**+358**	**7,931**	**8,460**	**+470**	**8,930**	**8,353**	**+826**	**9,180**
% Y/Y	3.9%	+414 bp	8.0%	11.9%	+80 bp	12.7%	11.7%	+88 bp	12.6%	-1.3%	+406 bp	2.8%

CYs	CY26e			CY27e			CY28e			CY29e		
USD $MM	Street	Δ	UBS	Street	Δ	UBS	Street	Δ	UBS	Street	Δ	UBS
Total Revenue												
TXN	21,016	+583	21,599	23,176	+1,615	24,791	25,379	+1,639	27,017	29,001	-393	28,607
IFX	19,102	+103	19,205	21,657	-277	21,380	24,598	-1,165	23,433	27,675	-2,381	25,294
STM	14,097	+399	14,497	16,233	+550	16,783	17,909	+394	18,302	19,655	+73	19,727
NXPI	14,035	+426	14,461	15,593	+933	16,525	16,941	+1,261	18,202	19,879		19,879
ADI	14,302	+407	14,709	15,733	+836	16,569	17,218	+865	18,083	18,409	+619	19,028
Renesas	10,000	+137	10,136	10,947	+53	11,000	11,825	-250	11,575	11,809	+406	12,215
ON	6,307	-51	6,256	6,960	+194	7,154	7,656	+518	8,174	9,180	-77	9,102
MCHP	5,468	+189	5,657	6,427	+581	7,008	7,214	+956	8,170	8,740	+248	8,988
Rohm	3,188	-31	3,157	3,333	-4	3,329	3,543	-63	3,480	3,671	-32	3,639
ALGM	998	+31	1,029	1,173	+110	1,284	1,384	+147	1,531	1,651	+33	1,684
Total	**108,513**	**+2,192**	**110,705**	**121,231**	**+4,590**	**125,821**	**133,667**	**+4,301**	**137,968**	**149,668**	**-1,505**	**148,163**
% Y/Y	16.0%	+234 bp	18.3%	11.7%	+193 bp	13.7%	10.3%	-60 bp	9.7%	12.0%	-458 bp	7.4%
Gross Margin (Non-GAAP)												
TXN	59.4%	+141 bp	60.8%	60.7%	+312 bp	63.8%	61.4%	+426 bp	65.7%	61.7%	+512 bp	66.8%
IFX	43.7%	-70 bp	43.0%	46.0%	-117 bp	44.8%	47.2%	-218 bp	45.0%	45.8%	-223 bp	43.6%
STM	35.8%	+79 bp	36.6%	39.2%	+301 bp	42.2%	42.0%	+357 bp	45.5%	44.4%	+155 bp	46.0%
NXPI	58.3%	-19 bp	58.1%	59.5%	-27 bp	59.3%	60.1%	+36 bp	60.5%	61.2%	-0 bp	61.2%
ADI	72.0%	+24 bp	72.3%	72.5%	+146 bp	73.9%	73.1%	+193 bp	75.0%	74.4%	+72 bp	75.2%
Renesas	58.7%	-4 bp	58.6%	59.8%	-2 bp	59.8%	60.4%	+39 bp	60.8%	58.9%	+291 bp	61.8%
ON	39.6%	-9 bp	39.5%	43.2%	-21 bp	42.9%	45.6%	+45 bp	46.0%	48.3%	+19 bp	48.5%
MCHP	61.2%	+216 bp	63.3%	63.1%	+270 bp	65.8%	65.6%	+119 bp	66.8%	66.8%	+13 bp	66.9%
Rohm	24.4%	+495 bp	29.3%	27.6%	+420 bp	31.8%	28.3%	+333 bp	31.7%	27.5%	+428 bp	31.8%
ALGM	51.0%	+114 bp	52.2%	53.0%	+191 bp	54.9%	55.4%	+91 bp	56.3%	56.9%	+15 bp	57.0%
Total	**52.9%**	**+61 bp**	**53.5%**	**54.6%**	**+145 bp**	**56.1%**	**55.8%**	**+174 bp**	**57.6%**	**56.4%**	**+153 bp**	**57.9%**
Operating Income (Non-GAAP)												
TXN	8,517	+622	9,139	9,862	+1,796	11,658	10,932	+2,493	13,425	12,601	+2,020	14,621
IFX	3,863	+36	3,900	5,149	+30	5,178	6,493	-599	5,894	7,811	-1,495	6,316
STM	1,304	+204	1,508	2,535	+640	3,175	3,397	+956	4,353	4,587	+342	4,929
NXPI	4,996	+220	5,216	5,864	+578	6,442	6,573	+916	7,489	8,475		8,475
ADI	6,827	+375	7,202	7,688	+924	8,612	8,645	+1,010	9,654	9,581	+585	10,166
Renesas	2,211	+149	2,360	2,661	+204	2,865	3,081	+187	3,268	3,178	+538	3,716
ON	1,328	-38	1,290	1,790	+47	1,837	2,200	+283	2,483	3,113	-20	3,093
MCHP	1,737	+221	1,959	2,363	+528	2,892	2,961	+686	3,647	3,939	+168	4,107
Rohm	184	+56	240	323	+22	344	438	-58	381	492	-82	411
ALGM	188	+27	216	288	+91	379	427	+104	531	603	+24	626
Total	**31,155**	**+1,873**	**33,028**	**38,522**	**+4,860**	**43,382**	**45,147**	**+5,979**	**51,126**	**54,380**	**+2,080**	**56,460**
% Y/Y	32.7%	+798 bp	40.7%	23.6%	+770 bp	31.3%	17.2%	+65 bp	17.8%	20.5%	-1,002 bp	10.4%

Source: UBS research, Company reports, Visible Alpha, FactSet.

Figure 7: Analog Management Commentary - Auto Vertical

Date	Company	Comment
4/22/26	**TI**	Regarding automotive, you're right that Q1 was – it's always the same in Q1 in China. China was – the overall quarter was flat sequentially, but China was down. The rest of the world was up. I want to see automotive and see how it develops in Q2. It's too soon to call it.
4/22/26	**TI**	Auto has been steady at an elevated level for some time. It didn't really have that steep correction that we saw on the other end markets. So, I think as Haviv called it out, these markets have been – in the past, have been transitioning out of phase. I don't think it's unrealistic to assume that could happen again.
4/23/26	**STM**	in Automotive, we confirm that 2026 will be a growth for ADAS, for sensor, of course, and also with the boost of the acquisition of MEMS from NXP and for silicon carbide.
4/23/26	**Mobileye**	As I noted on the January call, we've been seeing consistent positive revisions from our customers throughout 2025, and that continued in the first quarter of the year.
4/23/26	**Mobileye**	A bit more granularity on the volume is that the forecast assume the current SMP production forecast of our top 10 customers, which is currently minus 3.5% year-on-year. It also assumes that the run rate of China OEM volume in the second half of 2026 comes down meaningfully from the first half levels.
4/28/26	**NXP**	During the quarter, the growth was driven primarily by accelerating customer software-defined vehicle programs, improved electrification trends, and continued momentum in radar and connectivity. Together, the auto accelerated growth drivers contributed nearly 90% of the year-over-year growth.
4/28/26	**NXP**	a backdrop of constant news of SAAR being down and maybe people getting confused about what does it mean for us in auto business. And I'll say, out of the bat, while SAAR gives you how many vehicles are produced, it says nothing about semiconductor content per vehicle. Now in this environment, at auto business, NXP is performing well. And you can see from the print, in Q1, it grew 10% after you account for the sensor business and Q2 guide implies a high-teens year-over-year growth on the same basis. So you can see that clearly, the momentum is improving. And so that tells you already that this is not necessarily a story about unit growth.
4/28/26	**NXP**	I acknowledge the headlines from China, right? I think it's been very public that the production in China was weak, primarily driven by the weakness on internal consumption and some of the headlines that the Chinese OEMs are focusing more on export to overcome some of the challenges that are happening with the domestic market. But I think the contradiction is that – and I continue to say it is that production volatility is very small compared to content growth. And China is no different than the rest of the world. And I tell you for us, China grew year-on-year in Q1. I mean it wasn't necessarily massive, but it grew and it continues to grow into Q2. And so I think that is the story, and if the story doesn't change, content growth overcomes unit volatility.

Source: UBS research, Company reports, AlphaSense

Figure 8: Analog Management Commentary - Auto Vertical - ADAS

Date	Company	Comment
4/23/26	**STM**	in Automotive, we confirm that 2026 will be a growth for ADAS, for sensor, of course, and also with the boost of the acquisition of MEMS from NXP and for silicon carbide.
4/23/26	**Mobileye**	As a result of higher volume and revenue in Q1, we have raised our 2026 outlook towards the high end of our original guidance, leading the outlook for the remaining three quarters essentially unchanged. The geopolitical and economic environment remains volatile, but based on our visibility for Q2, we believe there is sufficient conservative -- conservatism baked into the second half.
4/23/26	**Mobileye**	Diving deeper into the drivers of our business, our ADAS business is very strong, with very high margins and cash generation. Design wins over the last several years have secured our position with our main customers over the long-term. India looks like a meaningful growth opportunity and our focus over the last couple of years on supporting Chinese OEMs on their export ambitions is paying dividends.
4/23/26	**Mobileye**	We had assumed shipments of approximately 10 million EyeQ units in the quarter, including some recovery of safety stocks at customers which had ended 2025 at the very low-level. The upside in the quarter was the combination of higher share and higher ADAS treatment rates at core Western customers and more meaningfully from robust Chinese OEMs volume from the export market, a segment where we have higher share than we do on Chinese OEMs' vehicles sold domestically.
4/23/26	**Mobileye**	As I noted on the January call, we've been seeing consistent positive revisions from our customers throughout 2025, and that continued in the first quarter of the year.
4/23/26	**Mobileye**	A bit more granularity on the volume is that the forecast assume the current SMP production forecast of our top 10 customers, which is currently minus 3.5% year-on-year. It also assumes that the run rate of China OEM volume in the second half of 2026 comes down meaningfully from the first half levels.
4/28/26	**NXP**	China is moving fast to automation to Level 3, Level 4 ADAS. So that also requires more redundancy, better security, better safety. And so this is where I think innovation and MCUs and MPUs is going to be key to actually win in the market. So we are quite excited about the transformative move that the Chinese are making in architectures and the speed in which we're doing it because we have the right roadmap for them.

Source: UBS research, Company reports, AlphaSense

Figure 9: Analog Management Commentary - Industrial Vertical

Date	Company	Comment
4/22/26	**TI**	I will say that the industrial signal was a little bit broader this time. So, I would say, all sectors, all geographies grew sequentially, and it continued to accelerate through the quarter. So, if you think about January, February, and then you always want to see how the exit from the lunar or the Chinese New Year break is going to look like. But it continued in March. So, just a continuation. I would say, it's now a five or six month of continued growth in industrial. We want to keep watching it, but I would say that what guides our forecast into the second quarter.
4/22/26	**TI**	The encouragement I will have on industrial this time is that I see it at a broader application. So, all of them, not only the data center-related energy infrastructure or power delivery, not only aerospace and defense, and we know the geopolitical tensions in the market is establishing new peaks every quarter. I saw it across all sectors in industrial and also across all customers in terms of regions, but also the size of customers. It's the first quarter where we saw the broad market, as we call it, the tail starting to wake up again after a long hibernation period
4/28/26	**NXP**	Industrial was strong with notable strength in factory automation, data centers and energy storage.

Source: UBS research, Company reports, AlphaSense

Figure 10: Analog Management Commentary - Data Center Vertical

Date	Company	Comment
4/22/26	**TI**	I will just add that our application-specific sockets are seeing momentum as well on the design-in phase right now, and I do expect that they'll kick in more in the second half of the year and into 2027. So, my bar for the team and my expectations are high here.
4/23/26	**Maxlinear**	Infrastructure is now our largest revenue category, growing 136% year-over-year in Q1, driven by robust production ramps in optical data center-oriented platforms. We see this momentum continuing to build as hyperscale customers rapidly scale AI-centric architectures.
4/23/26	**Maxlinear**	Looking at Q2 by end market, we expect to see growth from all four of our business segments, with particular strength in infrastructure, driven by data center optical interconnects.
4/23/26	**STM**	We confirm our data centers revenue expectation to be nicely above $500 million for 2026 and well above $1 billion for 2027. In a major development, we expanded our strategic engagement with Amazon Web Services
4/23/26	**STM**	Well, in data center, it is clear that here we are seeing a really strong growth in term of demand, acceleration, including a cloud optical interconnect, both for our PIC100, for our BiCMOS, but I repeat for our general-purpose microcontroller and Analog and Power/Discrete as well.
4/23/26	**STM**	I really confirm that 2026 will show a significant breakthrough in our revenue linked to AI data center.
4/28/26	**NXP**	I'll start by maybe explaining what is our exposure to data center because that could be confusing. So off the bat, right, I would say we're not claiming exposure to the data plane. So no GPUs, no accelerators, no high-speed AI connectivity. So our domain is in the control plane. So the way to think about it, as data center scales, the constraints are not just compute and memory. They're also power, cooling, uptime, secure controls. And I think this is where NXP plays.

Source: UBS research, Company reports, AlphaSense

Figure 11: Analog Management Commentary - Consumer Vertical

Date	Company	Comment
4/23/26	**STM**	In Personal Electronics, okay, as we have already seen in Q1, our engaged customer programs in sensor and analog will be, let's say, a contributor of the growth, but not a big one in H2 because a change of profile in the introduction, okay, of the new device.
4/28/26	**NXP**	Mobile is expected to be up in the low-single digit percent range year-over-year and down in the low-double digit percent range on a sequential basis.
4/28/26	**NXP**	if you look at our customers on the consumer side, they are very well funded customers that they have the ability to actually go get the supply they need

Source: UBS research, Company reports, AlphaSense

Figure 12: Analog Management Commentary - Telecom Vertical

Date	Company	Comment
4/23/26	**Maxlinear**	wireless infrastructure momentum is improving as carriers increased investments in 5G RAN access and backhaul to support cloud connected and edge AI functionality. Our Sierra single-chip radio SOCs are now deployed with multiple North American operators, with expanding opportunities as 5G networks continue to evolve.
4/28/26	**NXP**	With Communications Infrastructure, revenue was $380 million, up 21% year-on-year, and at the high end of our guidance. Growth was driven by digital networking exposure to data center and continued ramps of our UCODE RFID product.

Source: UBS research, Company reports, AlphaSense

Figure 13: Analog / Semi Distributor Management Commentary

Date	Company	Comment
4/23/26	**STM**	During the first quarter, inventory on our balance sheet increased slightly and we continued to work down inventories in distribution. They are now normalized.
4/28/26	**NXP**	In Q1, we went to 11 weeks. And if you remember, our guide of Q1 last quarter already reflected the one-week increase in our inventory. And it was primarily to actually service what it was a much stronger demand environment… Now Q2 guide is based on inventory channel staying flat, staying at 11 weeks. So we intend to stay in our long-term target, which is 11 weeks.
4/28/26	**NXP**	The visibility on our backlog and the distributors' backlog has improved significantly. And that's what gives us the confidence that we have going into the second half of the year that the demand is strong.

Source: UBS research, Company reports, AlphaSense

SENTIMENT/INVESTOR POSITIONING

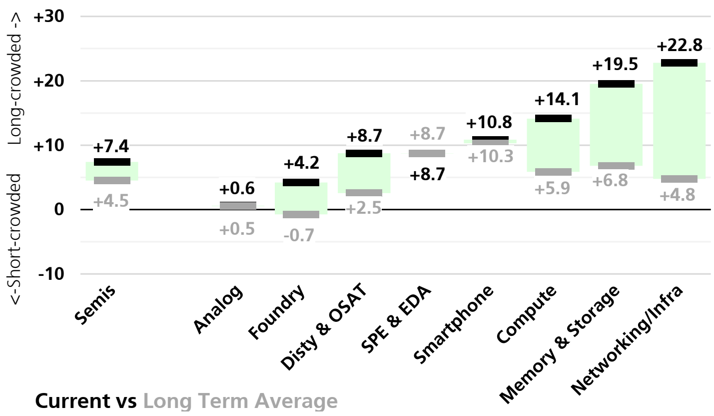
Figure 14: Crowding Dashboard

Group	Stock	Crowding	9 year average	Standard deviation	1-month change	1-quarter change	1-year change	52 week Trend
Subsectors	**Semis**	**+7.4**	+4.5	±1.8	+1.3	+1.5	+6.2	
Subsectors	**Compute**	**+14.1**	+5.9	±5.0	+2.9	+1.6	+9.5	
Subsectors	**Smartphone**	**+10.8**	+10.3	±5.2	+1.3	+2.9	+0.4	
Subsectors	**Networking/Infra**	**+22.8**	+4.8	±7.7	+1.4	-1.9	+2.5	
Subsectors	**Foundry**	**+4.2**	-0.7	±4.5	+0.7	-2.3	+9.1	
Subsectors	**Memory & Storage**	**+19.5**	+6.8	±5.3	+1.8	+0.5	+20.7	
Subsectors	**Analog**	**+0.6**	+0.5	±2.7	+1.2	+1.2	+3.8	
Subsectors	**SPE & EDA**	**+8.7**	+8.7	±2.6	+0.4	+1.8	+1.7	
Subsectors	**Disty & OSAT**	**+8.7**	+2.5	±3.3	+1.4	+8.1	+13.0	
Compute	AMD	**+26.4**	+0.6	±12.0	+6.4	+0.6	+16.4	
Compute	ARM	**+2.4**	-4.4	±4.8	+3.0	+9.5	+8.7	
Compute	Intel	**+24.9**	+10.6	±8.7	+5.4	+4.5	+26.4	
Compute	Lattice*	**-8.2**	+3.6	±8.0	-0.2	-5.2	-5.3	
Compute	Nvidia	**+25.1**	+12.0	±12.5	-0.0	-1.4	+1.5	
Smartphone	Mediatek*	**+7.7**	+6.9	±8.7	+2.3	+2.7	-9.5	
Smartphone	Qualcomm	**+20.4**	+19.5	±6.8	+3.3	+11.1	-5.6	
Smartphone	Qorvo	**+13.7**	+6.2	±8.7	0	0	+8.6	
Smartphone	Skyworks	**+1.5**	+8.6	±7.6	-0.4	-2.2	+8.0	
Network.	Astera Labs*	**-8.3**	-0.8	±7.0	+1.0	+0.9	-9.4	
Network.	Broadcom	**+26.5**	+8.8	±9.3	+0.5	-1.0	+10.1	
Network.	Marvell	**+19.1**	+4.2	±10.2	+2.3	-2.9	-5.0	
Network.	MACOM*	**-12.3**	-4.3	±7.4	+0.1	-2.5	-13.8	
Network.	Semtech	**+5.2**	+3.9	±7.8	+6.1	+6.6	+7.8	
Foundry	GloFo	**+3.9**	-4.4	±8.4	-3.0	-12.4	+20.3	
Foundry	Hua Hong*	**-10.9**	-9.3	±3.7	-1.6	-1.5	+4.9	
Foundry	SMIC*	**+3.9**	-6.4	±8.0	+2.3	+0.2	+5.5	
Foundry	TSMC*	**+9.6**	+12.8	±8.6	-0.1	+0.5	-5.4	
Foundry	UMC*	**-0.5**	-1.7	±8.4	+3.5	+2.3	+16.1	
Foundry	Vanguard*	**-8.0**	-4.2	±5.1	+3.1	-5.9	+2.7	
Memory & Storage	Micron	**+26.4**	+13.6	±9.9	-0.1	-0.5	+31.2	
Memory & Storage	Nanya Tech*	**-1.4**	-0.3	±5.0	-0.8	-3.4	+9.2	
Memory & Storage	Samsung*	**+19.6**	+14.0	±4.6	+0.5	-0.8	+12.6	
Memory & Storage	Sandisk*	**+24.4**	+15.5	±8.9	+1.3	+0.4	+17.7	
Memory & Storage	SK Hynix*	**+19.8**	+7.9	±6.4	+0.4	-0.4	+12.8	
Memory & Storage	Seagate	**+23.8**	-0.4	±8.3	+10.0	+8.9	+29.5	
Memory & Storage	Western Digital	**+24.1**	+5.1	±10.6	+1.1	-0.2	+31.6	

Group	Stock	Crowding	9 year average	Standard deviation	1-month change	1-quarter change	1-year change	52 week Trend
Analog	Analog Devices	**+21.3**	+7.9	±9.6	-5.4	-1.1	+7.9	
Analog	Allegro	**-7.5**	+1.4	±5.9	-2.6	+0.6	+2.7	
Analog	Ambiq	**-5.1**	-5.8	±2.2	+2.9	+0.4	-5.1	
Analog	ams AG*	**+0.5**	-6.1	±8.1	+2.1	+7.1	+0.9	
Analog	indie	**-8.7**	-6.3	±5.1	+7.6	+3.8	-2.6	
Analog	Infineon*	**+7.4**	+2.8	±9.3	-0.7	-1.2	-5.6	
Analog	Impinj	**-14.1**	-4.5	±5.1	+0.3	-1.2	-2.2	
Analog	Microchip	**+4.5**	-1.0	±9.7	+1.1	-2.2	+13.5	
Analog	Melexis*	**-3.4**	-4.9	±5.6	-1.1	+0.4	+9.0	
Analog	NXP*	**+4.2**	+15.2	±9.6	+2.6	-4.8	+9.5	
Analog	ON Semi	**+2.3**	+0.1	±9.1	+12.0	+11.5	+10.9	
Analog	Renesas*	**+3.2**	-0.9	±8.8	-4.4	-1.6	+5.5	
Analog	SiTime	**-4.2**	-3.6	±5.1	-0.2	+0.2	+9.6	
Analog	STMicro*	**-0.8**	-3.3	±3.5	-0.3	+0.6	+0.8	
Analog	Texas Inst	**+9.4**	+6.7	±8.2	+3.3	+5.1	-1.4	
SPE & EDA	Advantest*	**+9.1**	-3.3	±7.7	-2.0	-0.1	+9.1	
SPE & EDA	Applied Materials	**+16.9**	+20.7	±5.7	-3.8	+0.6	+4.6	
SPE & EDA	ASM Intl*	**+8.4**	+7.8	±7.9	-2.6	-0.6	-8.4	
SPE & EDA	ASML*	**+9.7**	+3.6	±6.3	-0.2	+2.0	+7.4	
SPE & EDA	Cadence*	**-6.7**	+16.6	±8.3	-1.5	-1.5	-13.3	
SPE & EDA	DISCO*	**+2.8**	-1.9	±7.2	+3.9	+4.3	+5.9	
SPE & EDA	Entegris	**-8.1**	-1.2	±8.5	+3.9	+3.3	+3.2	
SPE & EDA	KLA	**+2.5**	+11.8	±8.6	-2.6	+1.8	-12.8	
SPE & EDA	Lam Research	**+27.0**	+18.1	±6.2	+0.4	-0.4	+2.6	
SPE & EDA	Qnity	**+6.4**	+3.8	±2.8	+9.9	+3.6	+6.4	
SPE & EDA	Synopsys*	**+5.0**	+14.3	±9.3	-3.0	+7.5	+10.5	
SPE & EDA	Teradyne	**+25.4**	+11.8	±7.3	+0.7	+0.3	+7.2	
SPE & EDA	Tokyo Electron*	**+15.1**	+6.5	±5.9	+2.7	+2.8	+6.4	
Disty & OSAT	Amkor*	**+15.7**	+1.4	±5.6	+6.0	+24.5	+19.8	
Disty & OSAT	Arrow*	**+12.1**	+6.6	±6.5	+2.5	+16.0	+12.4	
Disty & OSAT	ASE*	**+0.0**	+0.0	±4.9	-5.1	-1.6	+5.9	
Disty & OSAT	Avnet*	**+11.4**	+5.4	±5.7	+2.1	+1.4	+16.1	
Disty & OSAT	WPG*	**+4.4**	-1.9	±4.0	+1.3	+0.2	+11.1	

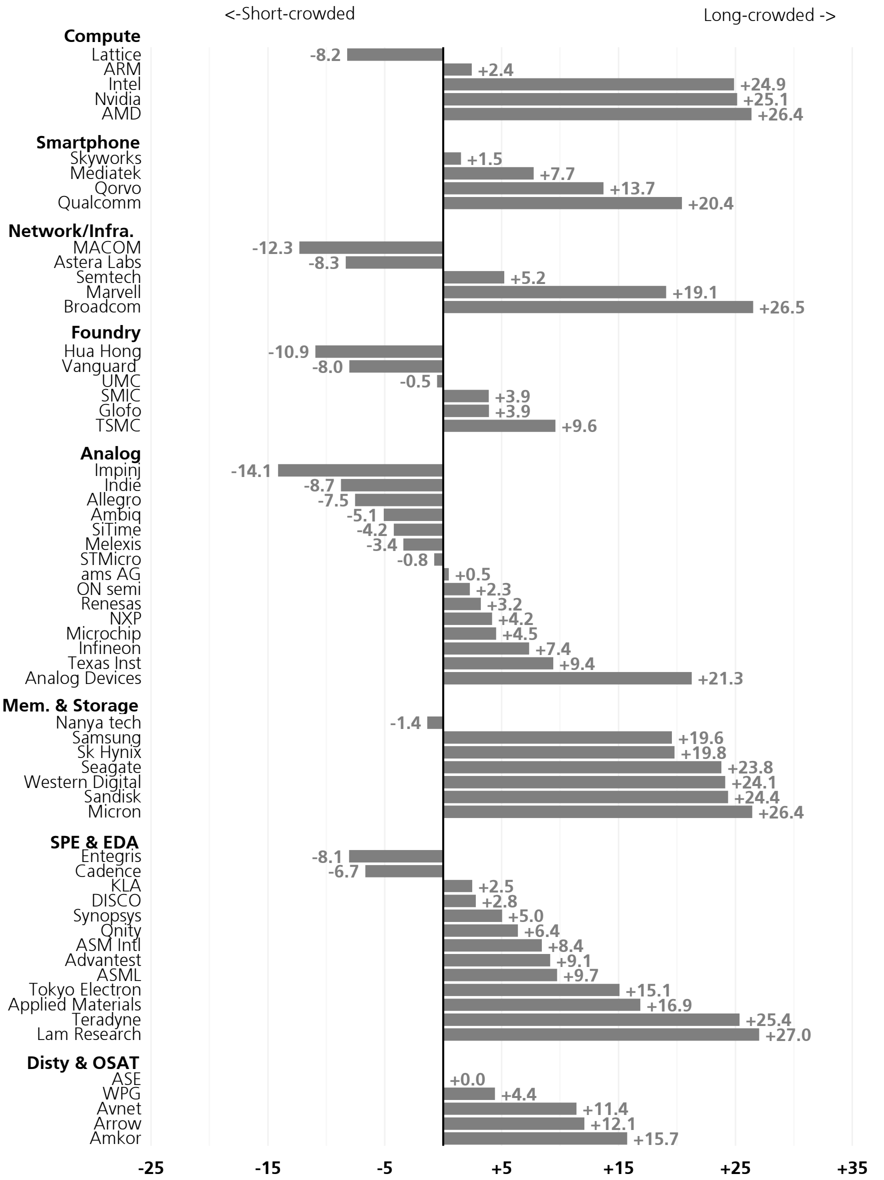
Source: UBS Quant Answers, UBS research. * Not covered or covered by UBS international semiconductor analysts. Data as of April 30 2026

Figure 15: Semiconductor Crowding Factor by subsector



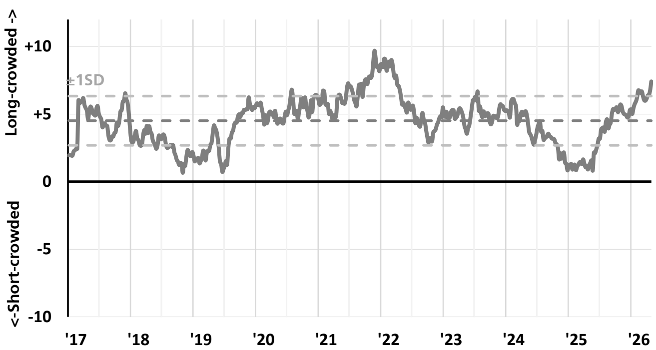
Source: UBS Quant Answers, UBS research. See above table for constituents of aggregates.Data as of April 30 2026

Figure 16: Semiconductor Stocks by Crowding Factor



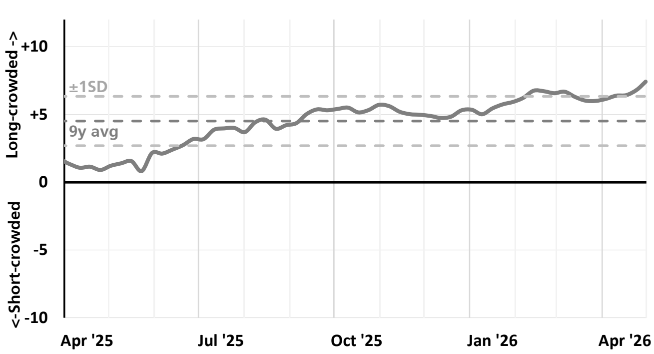
Source: UBS Quant Answers, UBS research. Data as of April 30 2026

Figure 17: Semiconductors Average Crowding Score - 9 year history



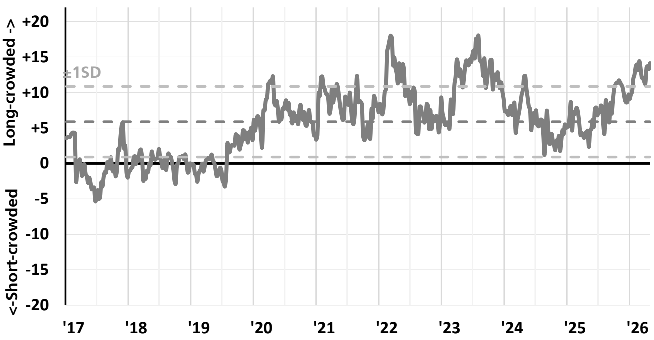
Source: UBS Quant Answers, UBS research.

Figure 18: Semiconductors Average Crowding Score - 1 year history



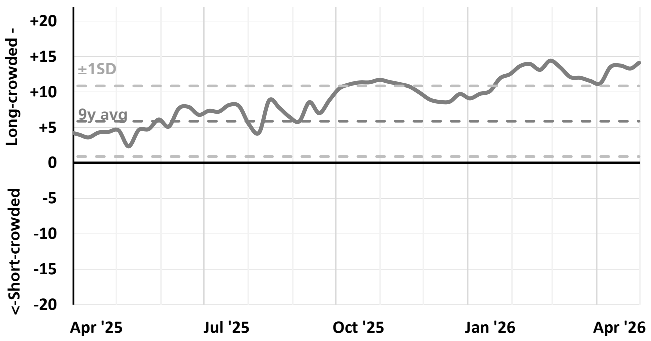
Source: UBS Quant Answers, UBS research.

Figure 19: Compute Average Crowding Score - 9 year history



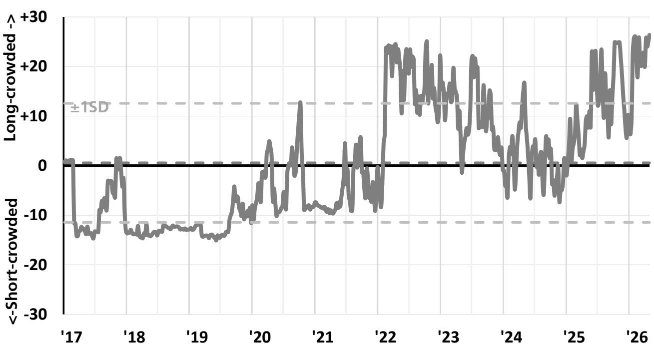
Source: UBS Quant Answers, UBS research. Compute aggregate sentiment is a simple average of AMD, ARM, INTC, LSCC, and NVDA.

Figure 20: Compute Average Crowding Score - 1 year history



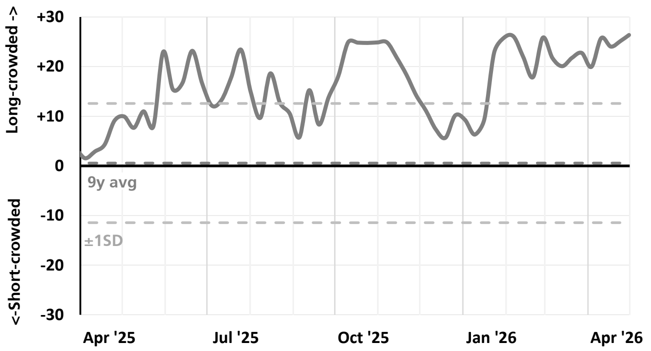
Source: UBS Quant Answers, UBS Research. Compute aggregate sentiment is a simple average of AMD, ARM, INTC, LSCC, and NVDA.

Figure 21: AMD Crowding Score - 9 year history



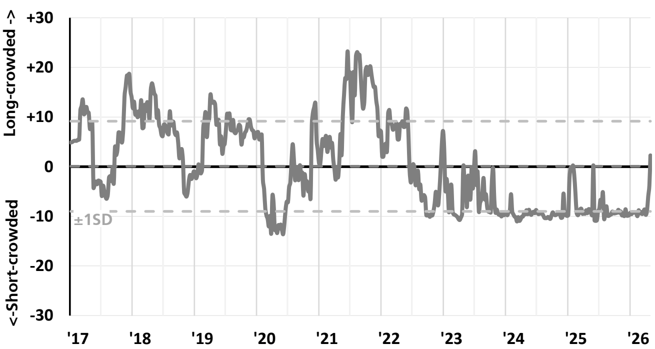
Source: UBS Quant Answers, UBS research.

Figure 22: AMD Crowding Score - 1 year history



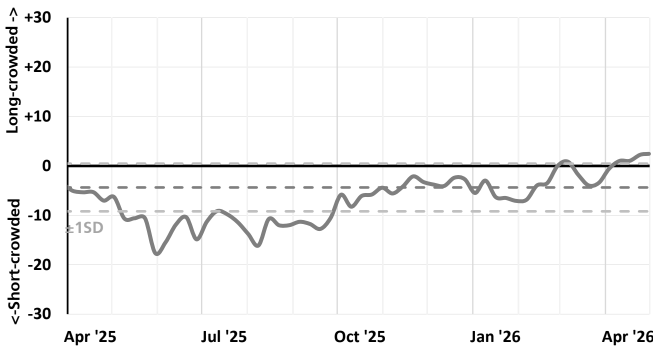
Source: UBS Quant Answers, UBS research.

Figure 23: ARM Crowding Score - LT history



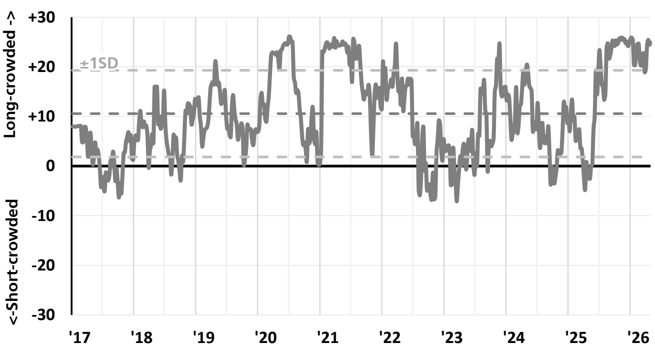
Source: UBS Quant Answers, UBS research.

Figure 24: ARM Crowding Score - 1 year history



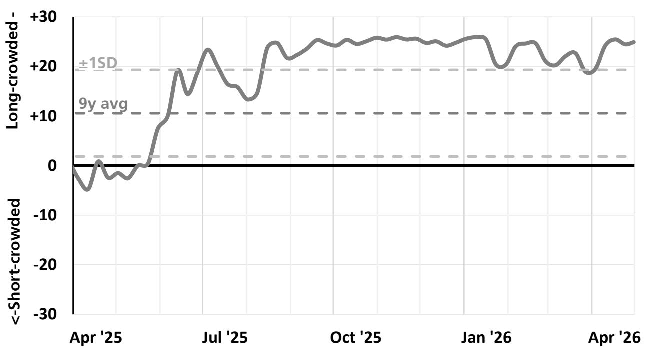
Source: UBS Quant Answers, UBS research.

Figure 25: Intel Crowding Score - 9 year history



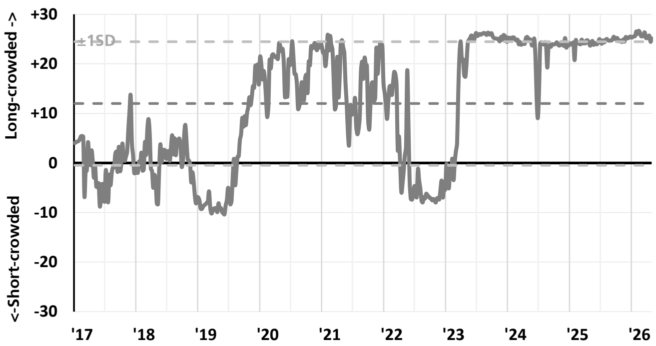
Source: UBS Quant Answers, UBS research.

Figure 26: Intel Crowding Score - 1 year history



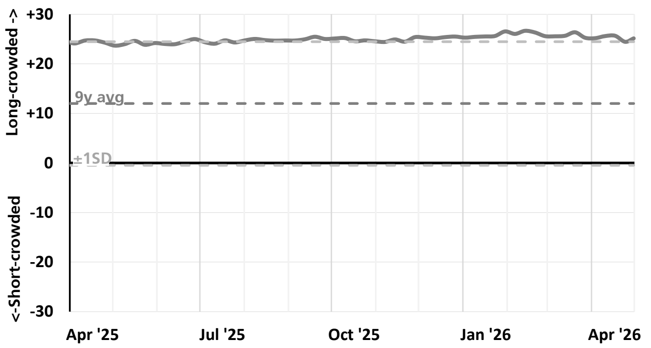
Source: UBS Quant Answers, UBS research.

Figure 27: Nvidia Crowding Score - 9 year history



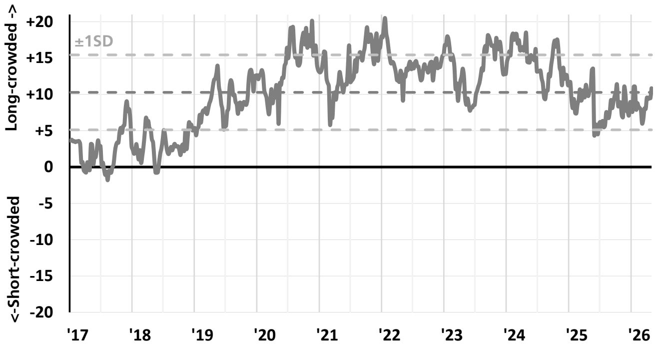
Source: UBS Quant Answers, UBS research.

Figure 28: Nvidia Crowding Score - 1 year history



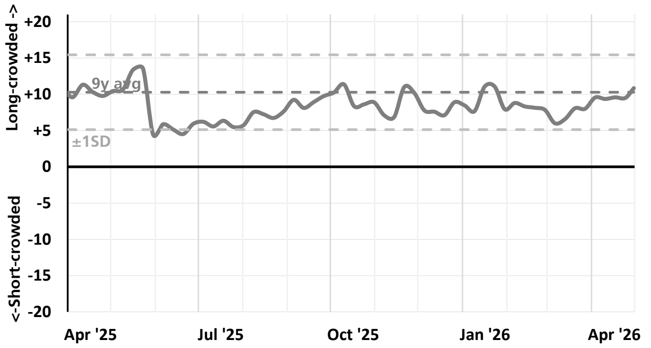
Source: UBS Quant Answers, UBS research.

Figure 29: Smartphone Average Crowding Score - 9 year history



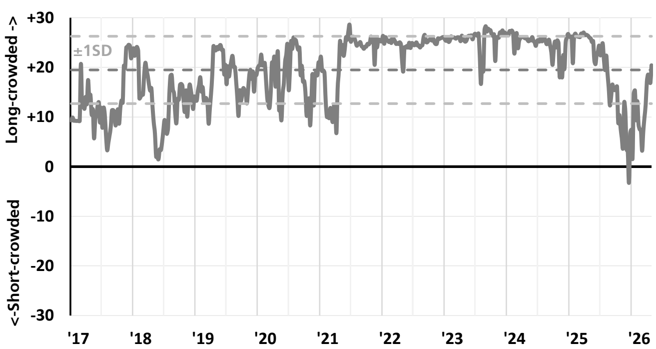
Source: UBS Quant Answers, UBS research. Smartphone aggregate sentiment is a simple average of Mediatek, QCOM, QRVO, and SWKS.

Figure 30: Smartphone Average Crowding Score - 1 year history



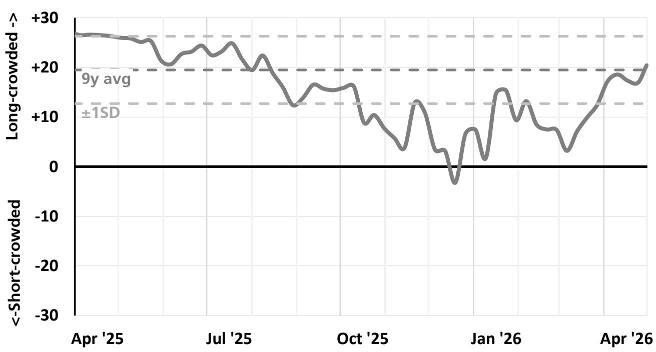
Source: UBS Quant Answers, UBS research. Smartphone aggregate sentiment is a simple average of Mediatek, QCOM, QRVO, and SWKS.

Figure 31: Qualcomm Crowding Score - 9 year history



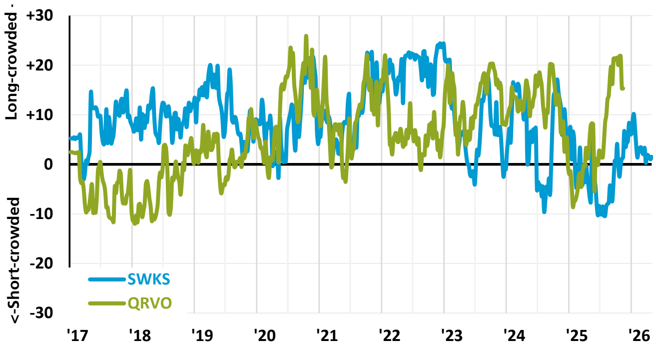
Source: UBS Quant Answers, UBS research.

Figure 32: Qualcomm Crowding Score - 1 year history



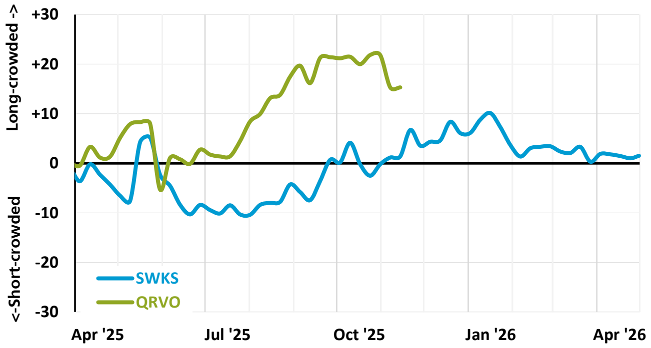
Source: UBS Quant Answers, UBS research.

Figure 33: Skyworks and Qorvo Crowding Score - 9 year history



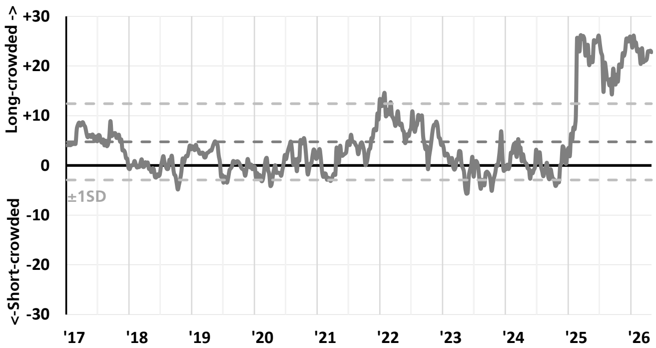
Source: UBS Quant Answers, UBS research.

Figure 34: Skyworks and Qorvo Crowding Score - 1 year history



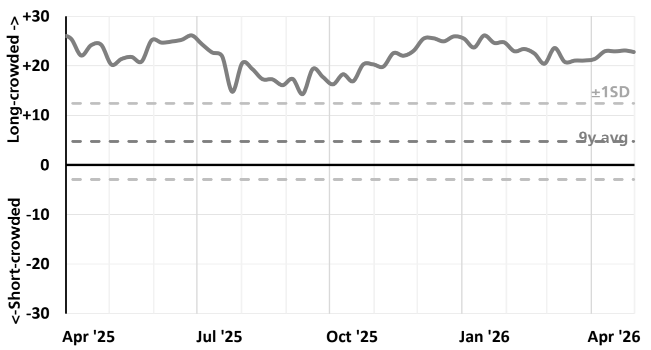
Source: UBS Quant Answers, UBS research.

Figure 35: Networking Average Crowding Score - 9 year history



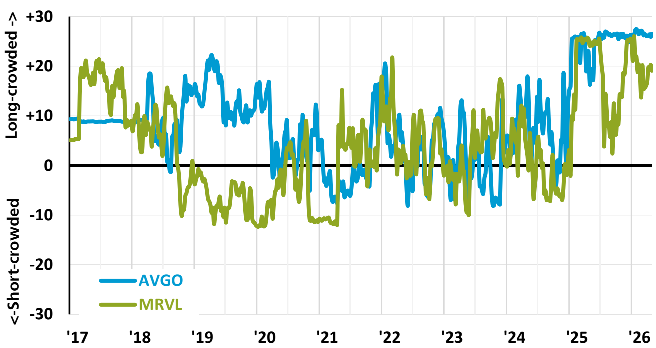
Source: UBS Quant Answers, UBS research. Networking & Infrastructure aggregate sentiment is a simple average of ALAB, AVGO, MRVL, MTSI, and SMTC.

Figure 36: Networking Average Crowding Score - 1 year history



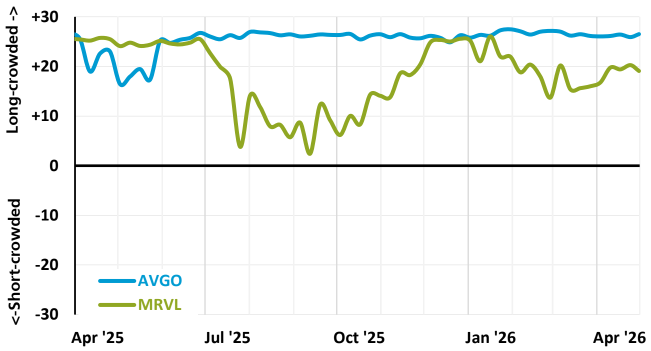
Source: UBS Quant Answers, UBS research. Networking & Infrastructure aggregate sentiment is a simple average of ALAB, AVGO, MRVL, MTSI, and SMTC.

Figure 37: Broadcom and Marvell Crowding Score - 9 year history



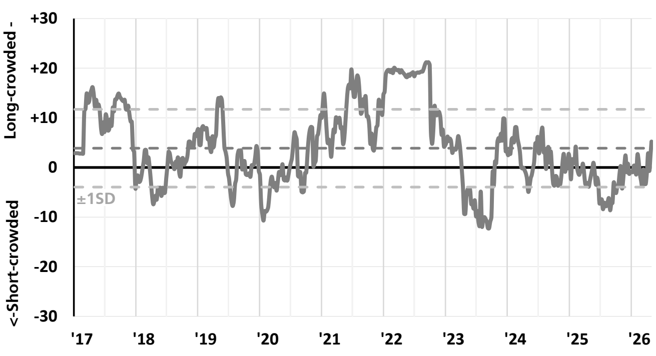
Source: UBS Quant Answers, UBS research.

Figure 38: Broadcom and Marvell Crowding Score - 1 year history



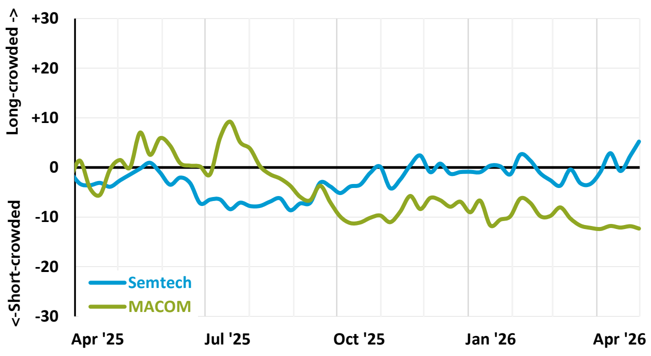
Source: UBS Quant Answers, UBS research.

Figure 39: Semtech Crowding Score - 9 year history



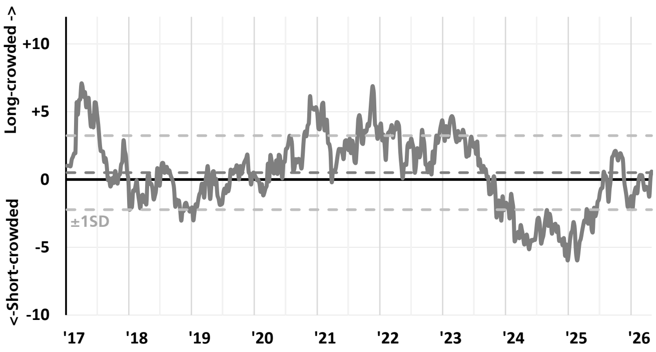
Source: UBS Quant Answers, UBS research.

Figure 40: Semtech and MACOM Crowding Score - 1 year history



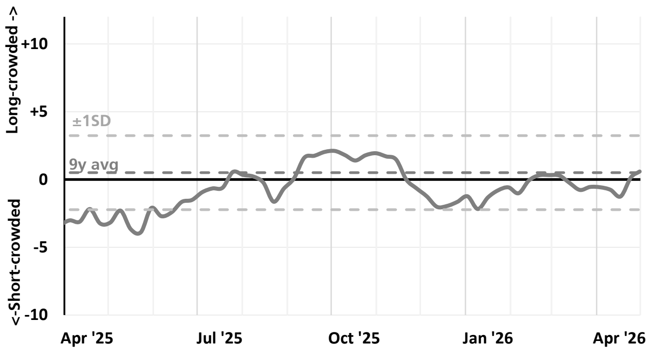
Source: UBS Quant Answers, UBS research.

Figure 41: Analog Average Crowding Score - 9 year history



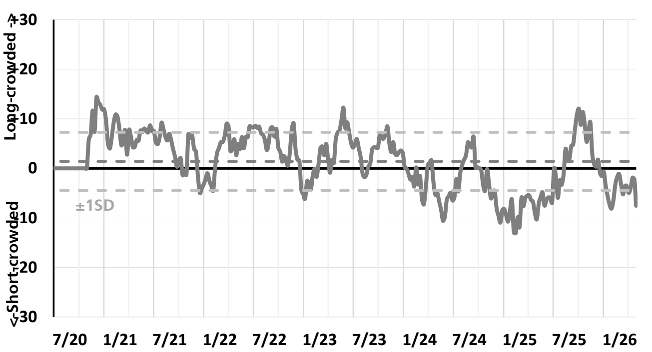
Source: UBS Quant Answers, UBS research. Analog aggregate sentiment is a simple average of ADI, ALGM, AMBQ, AMS, INDI, IFX, PI, MCHP, MELE, NXPI, ON, Renesas, SITM, STM, and TXN.

Figure 42: Analog Average Crowding Score - 1 year history



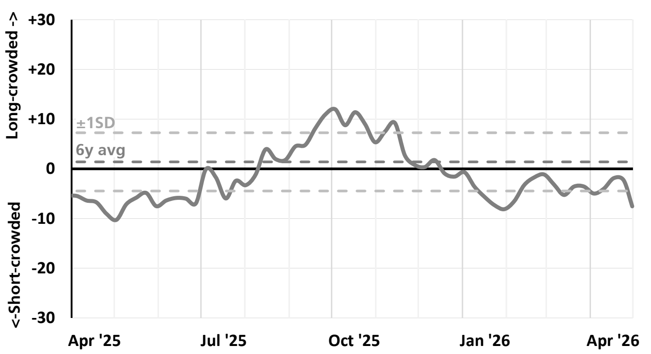
Source: UBS Quant Answers, UBS research. Analog aggregate sentiment is a simple average of ADI, ALGM, AMBQ, AMS, INDI, IFX, PI, MCHP, MELE, NXPI, ON, Renesas, SITM, STM, and TXN.

Figure 43: Allegro Microsystems Crowding Score - LT history



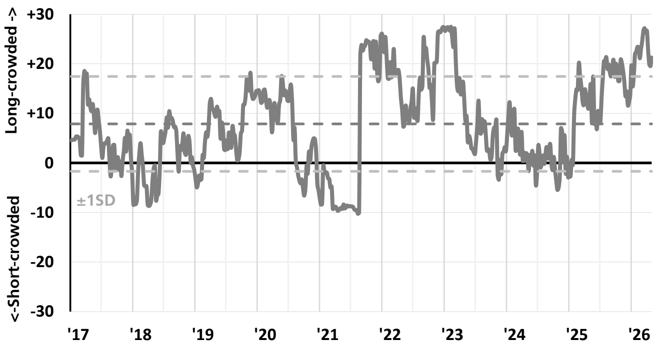
Source: UBS Quant Answers, UBS research.

Figure 44: Allegro Microsystems Crowding Score - 1 year history



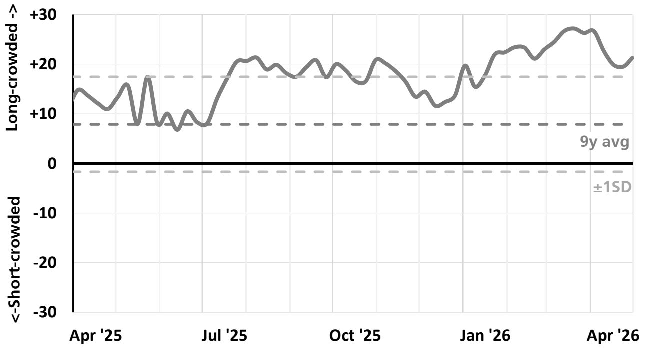
Source: UBS Quant Answers, UBS research.

Figure 45: Analog Devices Crowding Score - 9 year history



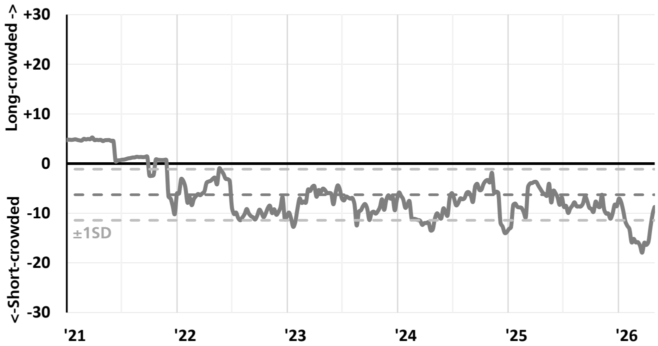
Source: UBS Quant Answers, UBS research.

Figure 46: Analog Devices Crowding Score - 1 year history



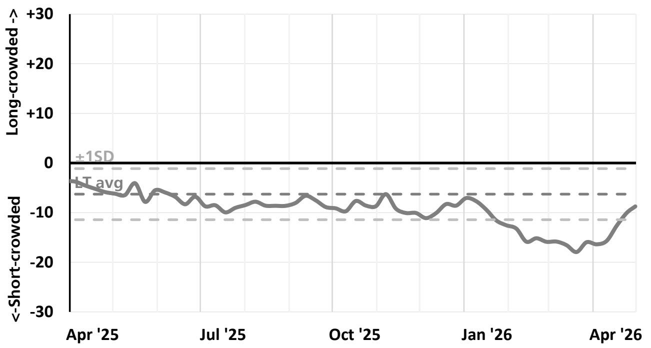
Source: UBS Quant Answers, UBS research.

Figure 47: indie Crowding Score - LT History



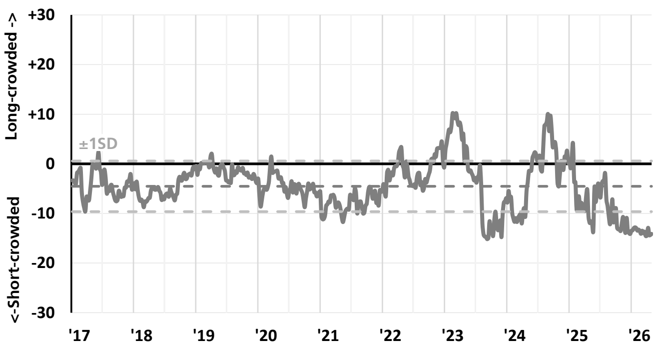
Source: UBS Quant Answers, UBS research.

Figure 48: indie Crowding Score - 1 year history



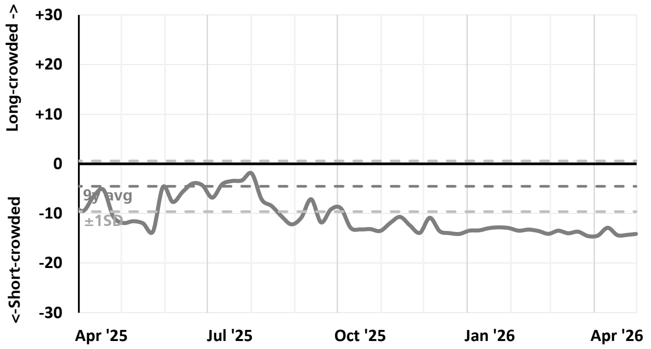
Source: UBS Quant Answers, UBS research.

Figure 49: Impinj Crowding Score - 9 year history



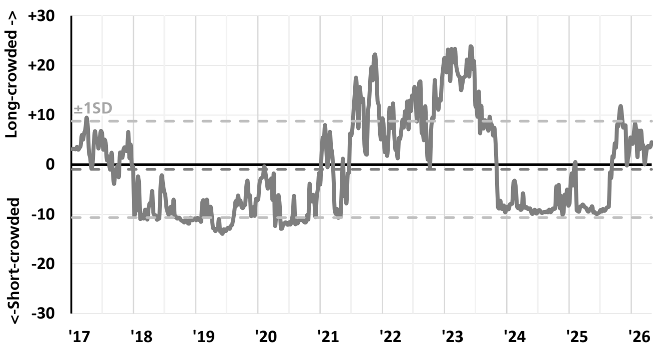
Source: UBS Quant Answers, UBS research.

Figure 50: Impinj Crowding Score - 1 year history



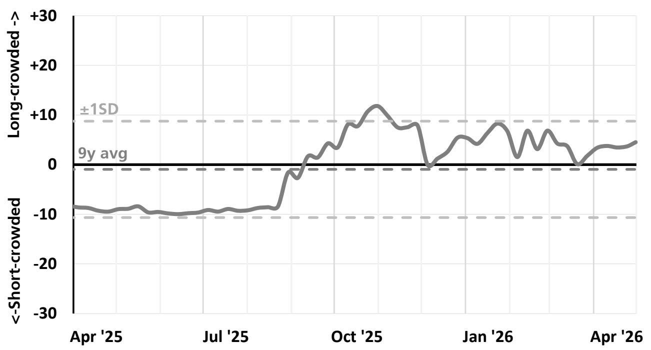
Source: UBS Quant Answers, UBS research.

Figure 51: Microchip Crowding Score - 9 year history



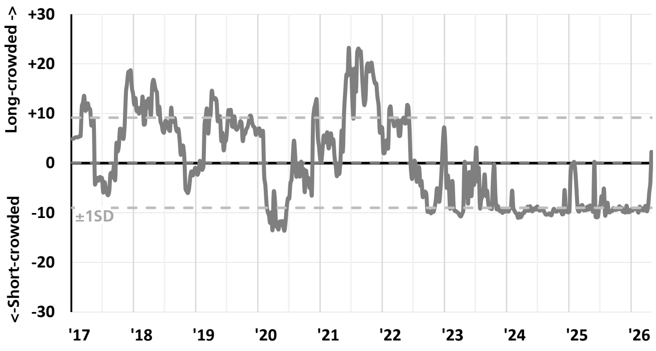
Source: UBS Quant Answers, UBS research.

Figure 52: Microchip Crowding Score - 1 year history



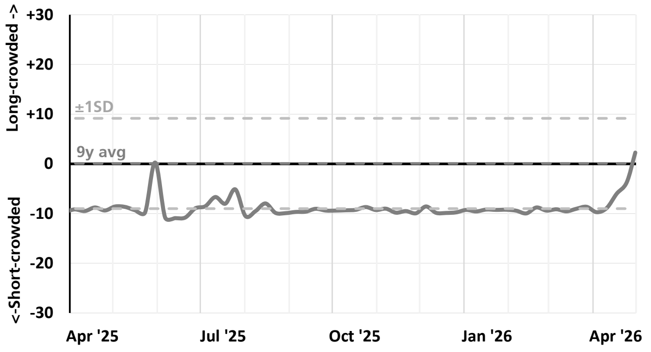
Source: UBS Quant Answers, UBS research.

Figure 53: ON Semi Crowding Score - 9 year history



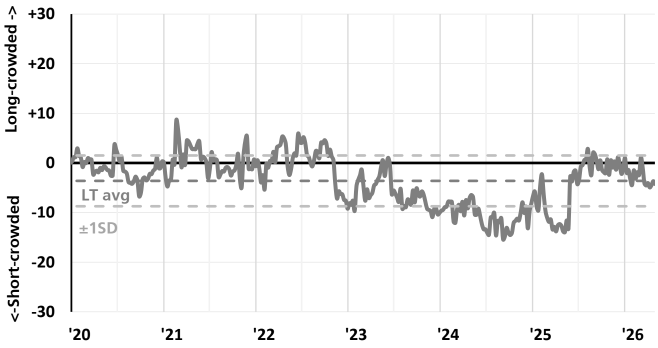
Source: UBS Quant Answers, UBS research.

Figure 54: ON Semi Crowding Score - 1 year history



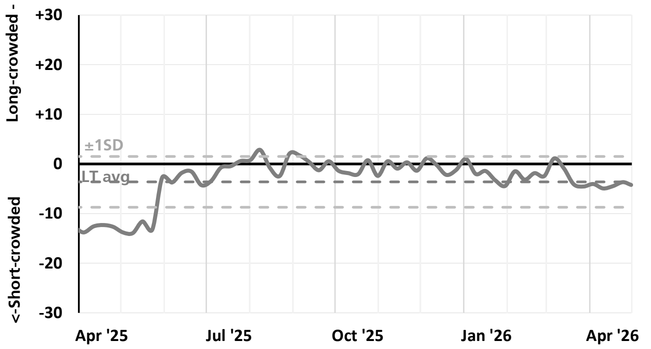
Source: UBS Quant Answers, UBS research.

Figure 55: SiTime Crowding Score - LT history



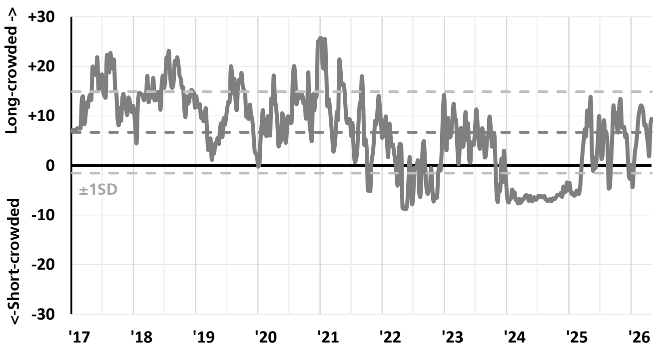
Source: UBS Quant Answers, UBS research.

Figure 56: SiTime Crowding Score - 1 year history



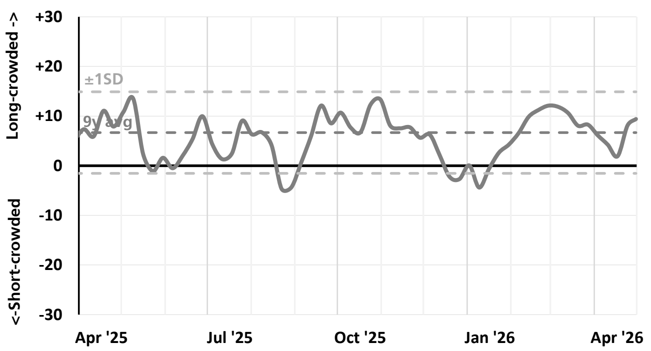
Source: UBS Quant Answers, UBS research

Figure 57: Texas Instruments Crowding Score - 9 year history



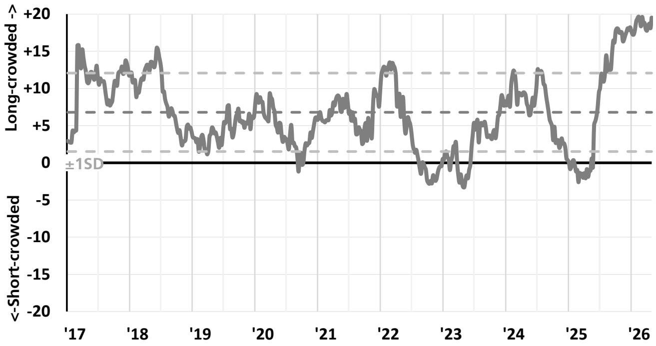
Source: UBS Quant Answers, UBS research.

Figure 58: Texas Instruments Crowding Score - 1 year history



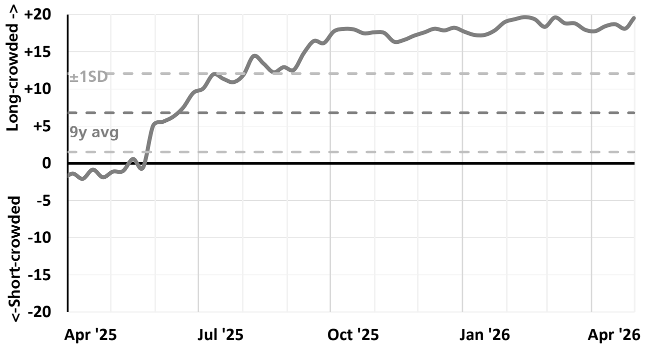
Source: UBS Quant Answers, UBS research.

Figure 59: Memory & Storage Average Crowding Score - 9 year history



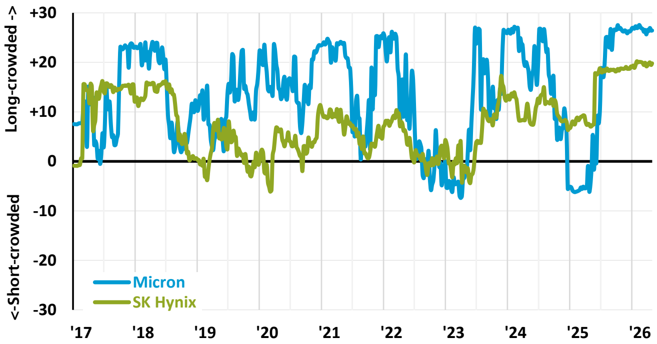
Source: UBS Quant Answers, UBS research. Memory & Storage aggregate sentiment is a simple average of Micron, Nanya Tech, Samsung, SNDK, Sk Hynix, STX, and WDC.

Figure 60: Memory & Storage Average Crowding Score - 1 year history



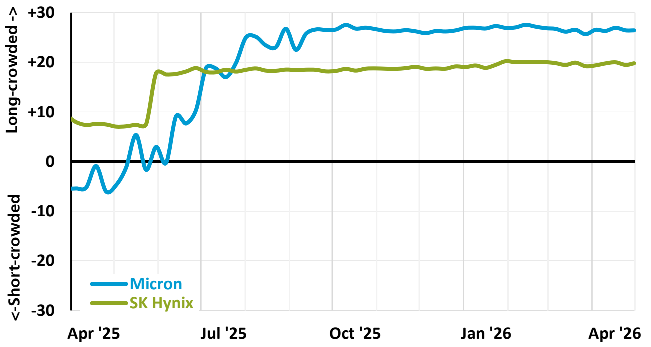
Source: UBS Quant Answers, UBS research. Memory & Storage aggregate sentiment is a simple average of Micron, Nanya Tech, Samsung, SNDK, Sk Hynix, STX, and WDC.

Figure 61: Micron and SKH Crowding Score - 9 year history



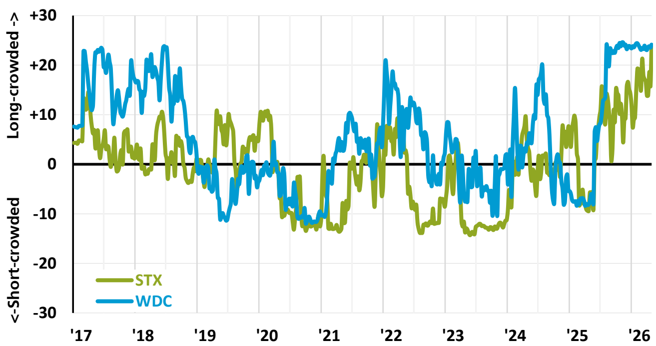
Source: UBS Quant Answers, UBS research.

Figure 62: Micron and SKH Crowding Score - 1 year history



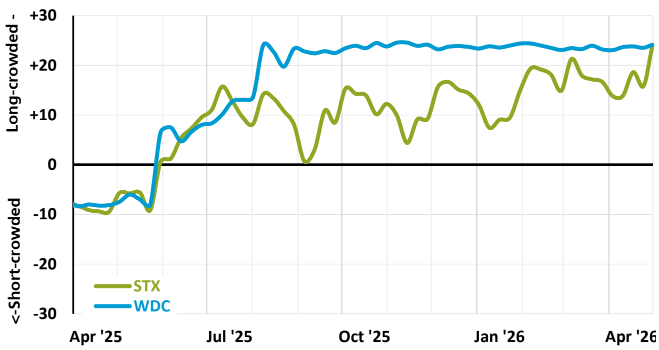
Source: UBS Quant Answers, UBS research.

Figure 63: Seagate and Western Digital Crowding Score - 9 year history



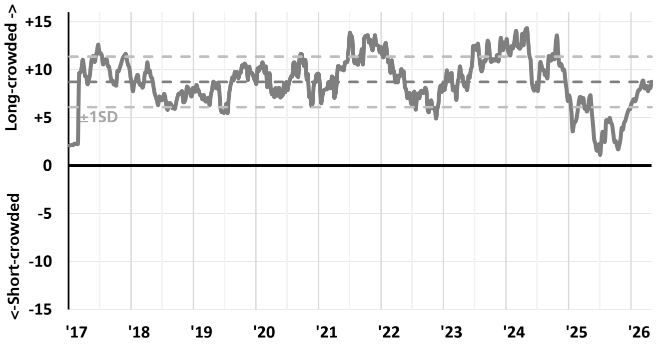
Source: UBS Quant Answers, UBS research.

Figure 64: Seagate and Western Digital Crowding Score - 1 year history



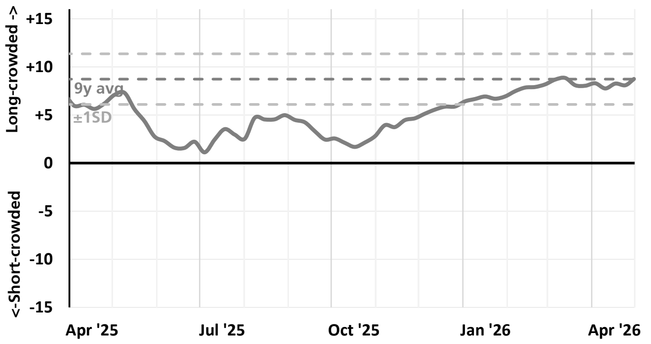
Source: UBS Quant Answers, UBS research.

Figure 65: SPE & EDA Average Crowding Score - 9 year history



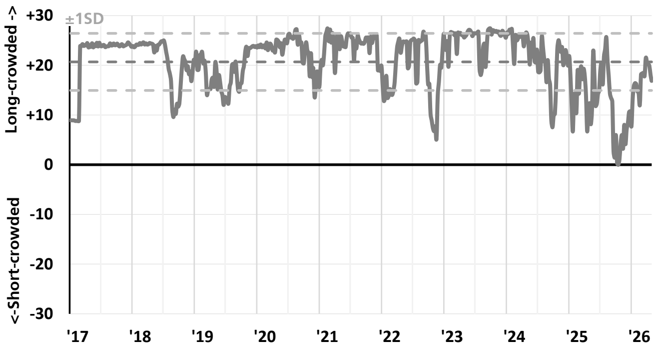
Source: UBS Quant Answers, UBS research. SPE & EDA aggregate sentiment is a simple average of Advantest, AMAT, ASM Intl, ASML, CDNS, DISCO, ENTG, KLAC, LRCX, Q, SNPS, TER, and TEL.

Figure 66: SPE & EDA Average Crowding Score - 1 year history



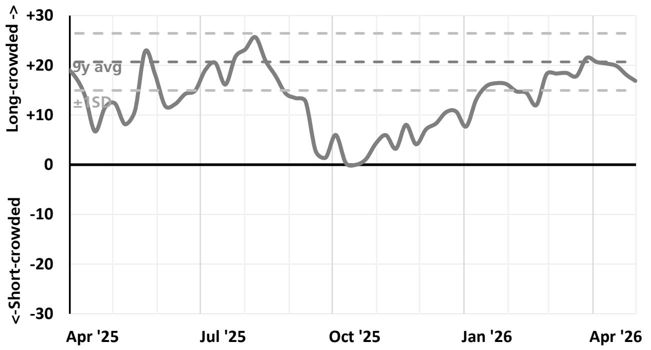
Source: UBS Quant Answers, UBS research. SPE & EDA aggregate sentiment is a simple average of Advantest, AMAT, ASM Intl, ASML, CDNS, DISCO, ENTG, KLAC, LRCX, Q, SNPS, TER, and TEL.

Figure 67: Applied Materials Crowding Score - 9 year history



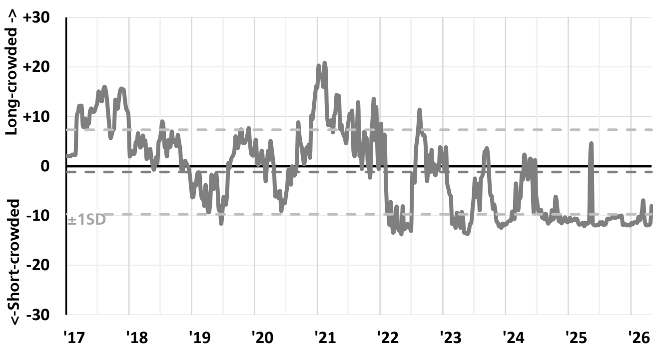
Source: UBS Quant Answers, UBS research.

Figure 68: Applied Materials Crowding Score - 1 year history



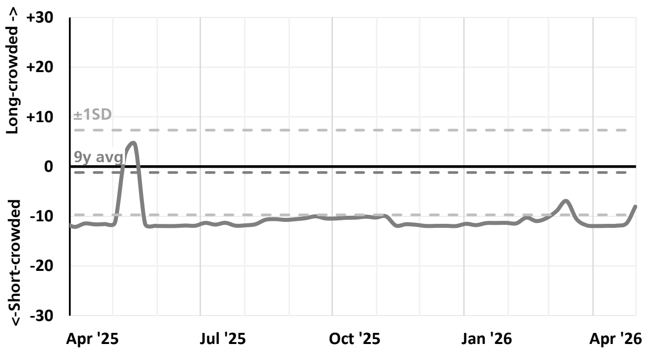
Source: UBS Quant Answers, UBS research.

Figure 69: Entegris Crowding Score - 9 year history



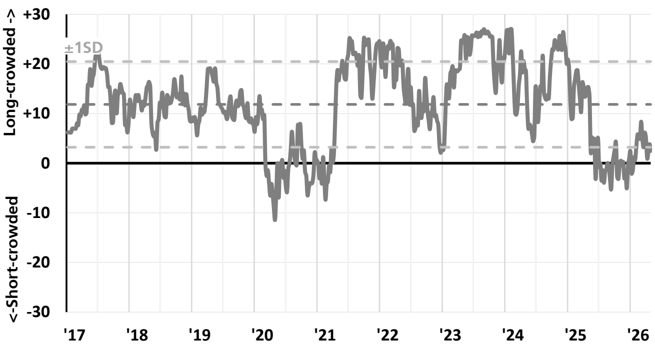
Source: UBS Quant Answers, UBS research.

Figure 70: Entegris Crowding Score - 1 year history



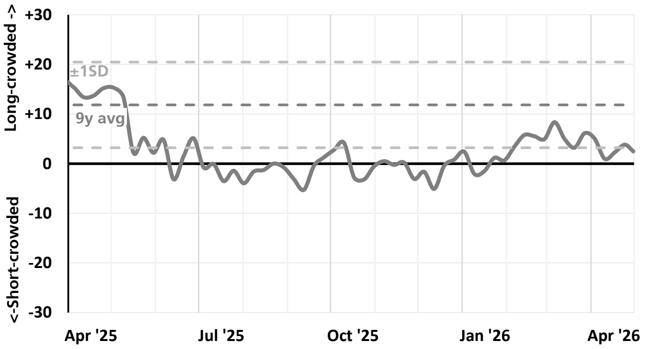
Source: UBS Quant Answers, UBS research.

Figure 71: KLA Crowding Score - 9 year history



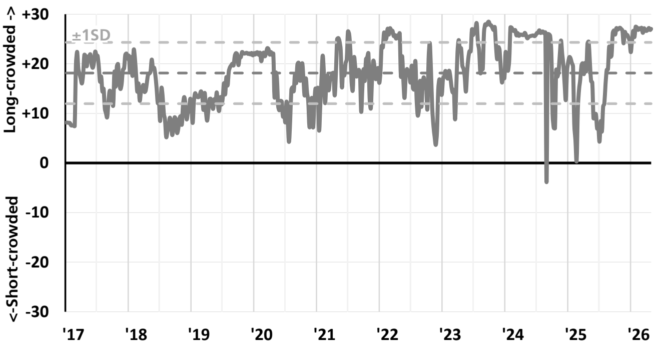
Source: UBS Quant Answers, UBS research.

Figure 72: KLA Crowding Score - 1 year history



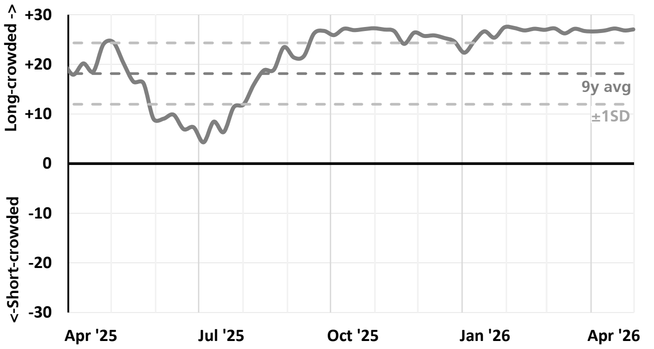
Source: UBS Quant Answers, UBS research.

Figure 73: Lam Research Crowding Score - 9 year history



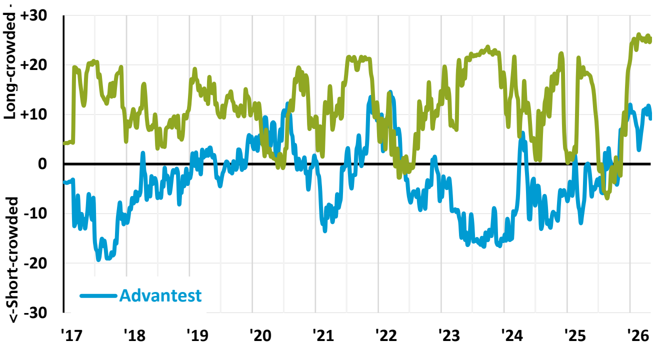
Source: UBS Quant Answers, UBS research.

Figure 74: Lam Research Crowding Score - 1 year history



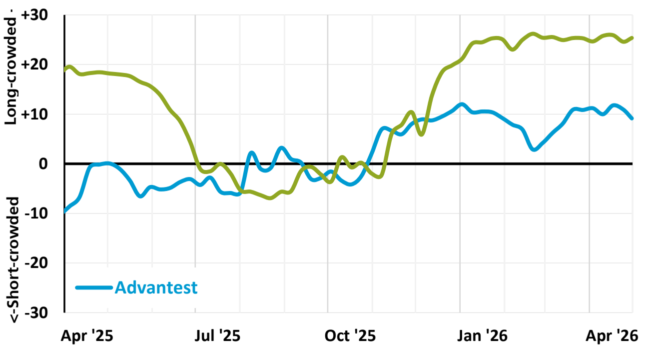
Source: UBS Quant Answers, UBS research.

Figure 75: Advantest and Teradyne Crowding Score - 9 year history



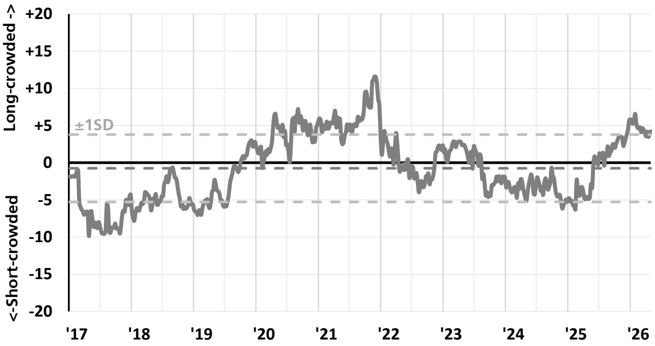
Source: UBS Quant Answers, UBS research.

Figure 76: Advantest and Teradyne Crowding Score - 1 year history



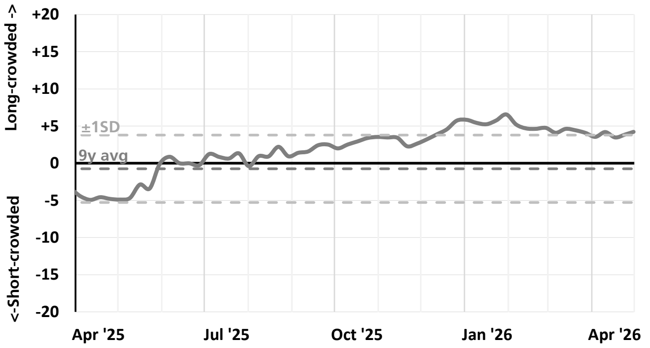
Source: UBS Quant Answers, UBS research.

Figure 77: Foundry Average Crowding Score - 9 year history



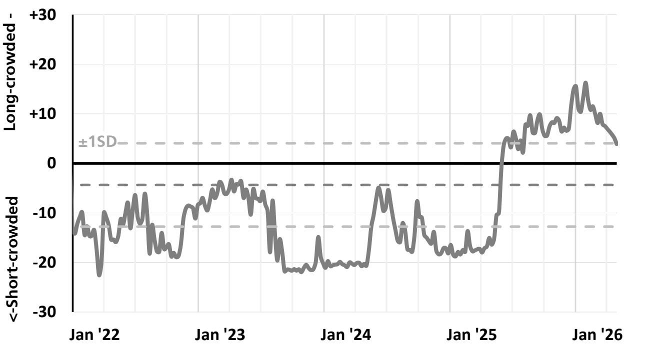
Source: UBS Quant Answers, UBS research. Foundry aggregate sentiment is a simple average of GFS, Hua Hong, SMIC, TSMC, UMC, and Vanguard.

Figure 78: Foundry Average Crowding Score - 1 year history



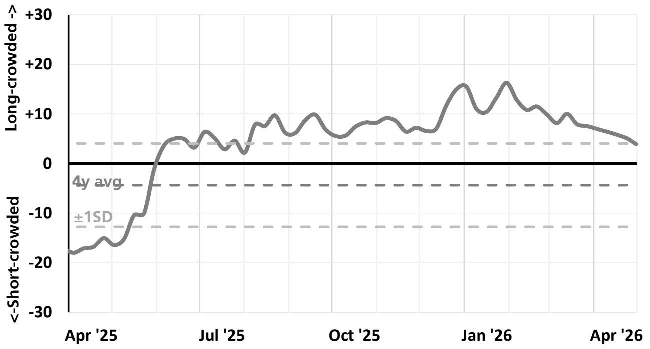
Source: UBS Quant Answers, UBS research. Foundry aggregate sentiment is a simple average of GFS, Hua Hong, SMIC, TSMC, UMC, and Vanguard.

Figure 79: Globalfoundries Crowding Score - LT history



Source: UBS Quant Answers, UBS research.

Figure 80: Globalfoundries Crowding Score - 1 year history



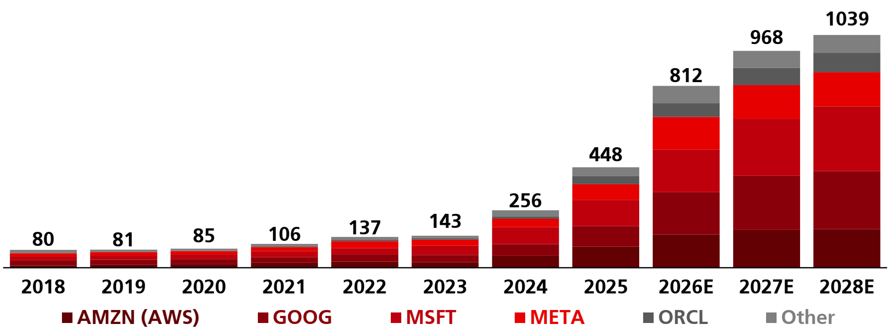
Source: UBS Quant Answers, UBS research.

What is crowding?

Crowding describes the state of many market participants holding similar positions in a security, whether on the long or the short side of a name. Our crowding score takes as inputs prime brokerage position data, Form 13F regulatory filings, stock loan data, and UBS internal data. The crowding scores have no imposed maximum or minimum values, but tend to range from -30 to +30 due to the scaling and combination of inputs. A more positive score implies a stock is more long-crowded, while a more negative score implies a stock is more short-crowded. Aggregates are simple averages of their constituents. An extreme crowding score in either direction suggests investor positioning may start to move in the opposite direction.

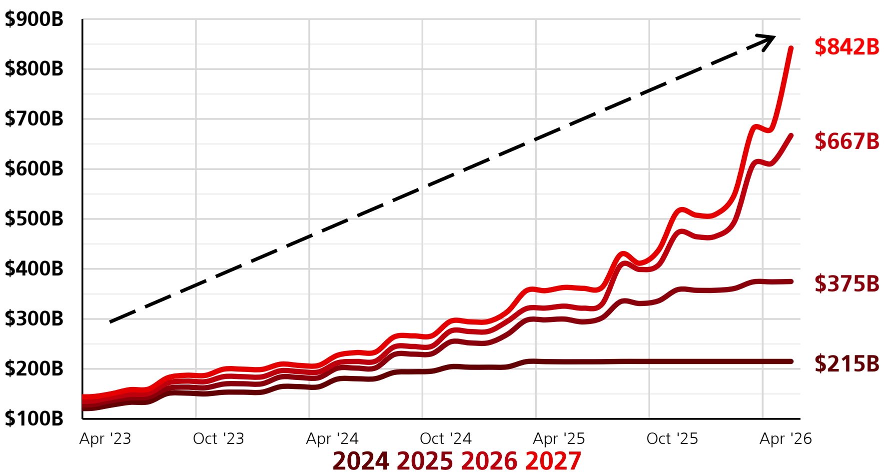
HYPERSCALER CAPEX UPDATE

Figure 81: UBSe Hyperscaler Capital Spending, $B



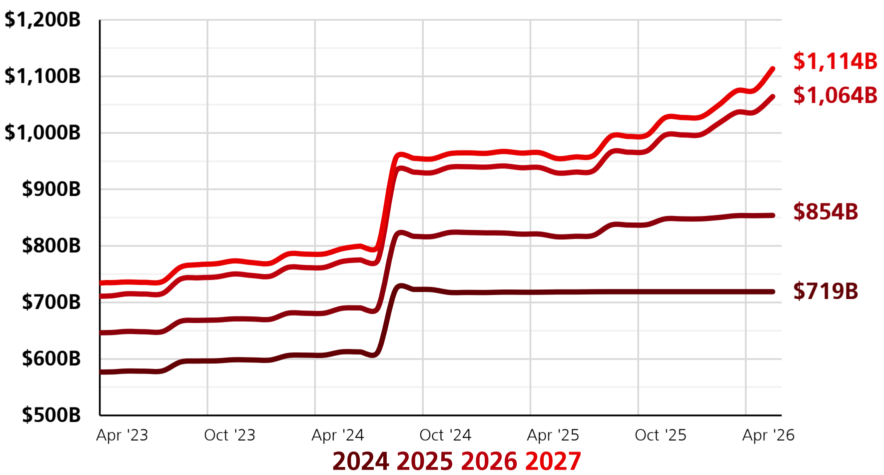
Source: Company reports. UBS estimates

Figure 82: US Big 4 Hyperscaler consensus capital spending



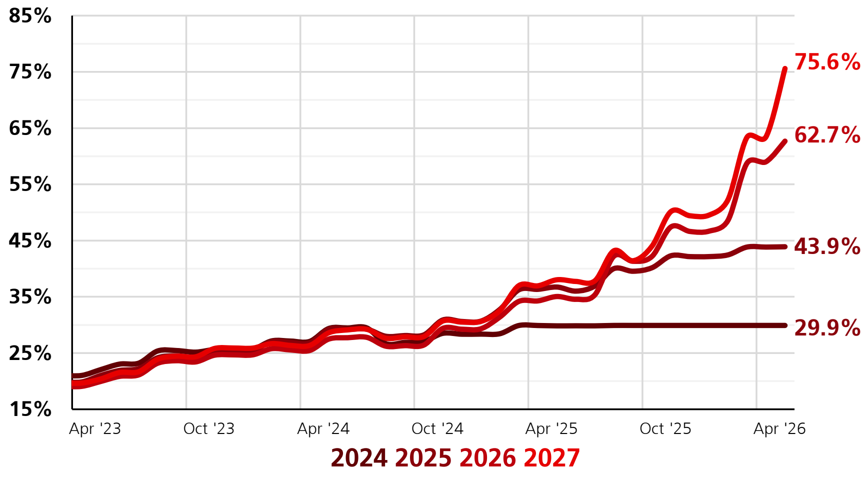
Source: Company reports, UBS, VisibleAlpha

Figure 83: US Big 4 Hyperscaler consensus revenue



Source: Company reports, UBS, VisibleAlpha

Figure 84: UBS Big 4 Hyperscaler consensus capital intensity



Source: Company reports, UBS, VisibleAlpha

Figure 85: UBSe Hyperscaler and CSP Capital Intensity

Calendar years, $MMs		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026E	2027E	2028E
Capex													
AMZN	AWS capex	1,756	1,138	2,458	8,700	18,496	27,482	24,725	53,021	91,854	147,790	169,589	172,270
AMZN	AWS capital leases	7,300	8,400	10,600	7,700	3,500	253	117	238	1,900	-	-	-
GOOG	total capex	13,184	25,139	23,548	22,281	24,640	31,485	32,251	52,535	91,447	189,975	241,557	259,558
MSFT	total co capex + leases	11,400	15,800	18,000	20,600	27,500	28,400	41,200	75,600	118,000	190,023	254,004	288,517
META	total co capex	6,732	13,980	15,102	15,115	18,567	31,376	27,184	37,256	69,691	145,179	150,052	152,483
ORCL	total co capex	2,037	1,468	1,591	1,833	3,118	6,678	6,935	10,745	35,477	61,857	76,244	87,015
AAPL	total co capex	11,927	13,858	9,247	8,702	10,388	11,692	9,564	9,995	12,148	7,853	8,214	8,517
Coreweave	total co capex						25	630	8,702	10,309	31,761	33,598	28,988
Nebius	total co capex								808	4,066	15,373	18,083	26,815
Lambda Labs	total co capex								500	1,500	2,000	2,500	3,000
Other Neoclou	total co capex								7,000	12,000	20,000	14,000	12,000
US Hyperscaler Capital spending		**54,336**	**79,783**	**80,546**	**84,931**	**106,209**	**137,391**	**142,606**	**256,400**	**448,392**	**811,810**	**967,840**	**1,039,163**
% Y/Y			46.8%	1.0%	5.4%	25.1%	29.4%	3.8%	79.8%	74.9%	81.0%	19.2%	7.4%
$ Y-Y			25,447	763	4,385	21,278	31,182	5,215	113,794	191,992	363,418	156,031	71,323
Big Four Only		40,372	64,457	69,708	74,396	92,703	118,996	125,477	218,650	372,892	672,966	815,202	872,828
% Y/Y			59.7%	8.1%	6.7%	24.6%	28.4%	5.4%	74.3%	70.5%	80.5%	21.1%	7.1%
$ Y-Y			24,085	5,251	4,688	18,307	26,293	6,481	93,173	154,242	300,074	142,236	57,626
Big Three CSPs Only		33,640	50,477	54,606	59,281	74,136	87,620	98,293	181,394	303,201	527,787	665,150	720,345
% Y/Y			50.1%	8.2%	8.6%	25.1%	18.2%	12.2%	84.5%	67.2%	74.1%	26.0%	8.3%
$ Y-Y			16,837	4,129	4,675	14,855	13,484	10,673	83,101	121,807	224,586	137,362	55,195
Neoclouds							25	630	17,010	27,875	69,134	68,181	70,803
% Y/Y								2420.0%	2600.0%	63.9%	148.0%	-1.4%	3.8%
$ Y-Y							25	605	16,380	10,865	41,259	(953)	2,622
Hyperscaler "Datacenter" Capex													
MSFT	total co capex + leases								75,600	118,000			
% Y/Y										56.1%			
% Short-lived assets									35.0%	50.5%			
Short-lived capex									26,460	59,620			
% Y/Y										125.3%			
GOOG	total co capex + leases								808	4,066			
% Y/Y										403.2%			
% Short-lived assets									35.0%	0.0%			
Short-lived capex									283	-			
% Y/Y										-100.0%			
Capital Intensity													
US Hyperscaler Capital spending		25.2%	25.8%	20.5%	18.3%	17.0%	19.7%	18.1%	27.8%	40.9%	58.8%	55.0%	49.2%
Y-Y Chg			+62 bp	-529 bp	-214 bp	-135 bp	+267 bp	-158 bp	+970 bp	+1,315 bp	+1,791 bp	-384 bp	-580 bp
Big Four Only		23.9%	27.3%	22.3%	19.9%	17.9%	20.5%	19.1%	28.2%	40.4%	57.8%	54.9%	49.7%
Y-Y Chg			+344 bp	-501 bp	-239 bp	-203 bp	+259 bp	-140 bp	+916 bp	+1,218 bp	+1,736 bp	-287 bp	-525 bp
Big Three CSPs Only		26.2%	28.0%	22.6%	20.6%	18.5%	18.9%	18.8%	29.8%	42.0%	57.9%	56.6%	51.6%
Y-Y Chg			+182 bp	-544 bp	-197 bp	-209 bp	+34 bp	-7 bp	+1,095 bp	+1,227 bp	+1,582 bp	-125 bp	-502 bp
Revenue													
AMZN	AWS revenue	17,458	25,656	35,026	45,370	62,200	80,096	90,757	107,556	128,725	174,796	255,570	346,041
GOOG	total co revenue	110,855	136,819	161,857	182,527	257,637	282,836	307,394	350,018	402,836	494,924	612,175	670,135
MSFT	Cloud revenue	-	17,542	44,766	59,505	80,132	101,278	124,453	152,001	189,806	242,567	307,274	380,149
META	total co revenue	40,653	55,838	70,697	85,936	117,929	116,609	134,901	164,500	200,965	252,270	309,386	360,907
ORCL	Cloud revenue	15,127	32,258	32,796	33,005	35,036	38,431	42,906	46,681	52,602	66,903	93,913	141,245
AAPL	Services revenue	31,937	41,494	48,131	56,814	72,180	79,379	87,551	99,392	112,831	127,615	141,536	155,787
Coreweave	total co revenue						200	500	1,915	5,131	12,461	23,329	33,633
Nebius	total co revenue								118	530	3,277	9,774	15,335
Lambda Labs	total co revenue						20	150	412	868	1,868	2,768	3,768
Other Neoclou	total co revenue							100	300	1,200	3,000	4,000	5,000
US Hyperscale Revenue		**216,030**	**309,607**	**393,273**	**463,157**	**625,114**	**698,849**	**788,712**	**922,893**	**1,095,494**	**1,379,681**	**1,759,726**	**2,112,000**
% Y/Y			43.3%	27.0%	17.8%	35.0%	11.8%	12.9%	17.0%	18.7%	25.9%	27.5%	20.0%
$ Y-Y			93,577	83,666	69,884	161,957	73,735	89,862	134,181	172,601	284,187	380,046	352,273
Big Four Only		168,966	235,855	312,346	373,338	517,898	580,819	657,505	774,075	922,332	1,164,557	1,484,406	1,757,232
% Y/Y			39.6%	32.4%	19.5%	38.7%	12.1%	13.2%	17.7%	19.2%	26.3%	27.5%	18.4%
$ Y-Y			66,889	76,491	60,992	144,560	62,921	76,685	116,571	148,257	242,225	319,849	272,826
Big Three CSPs Only		128,313	180,017	241,649	287,402	399,969	464,210	522,604	609,575	721,367	912,288	1,175,020	1,396,325
% Y/Y			40.3%	34.2%	18.9%	39.2%	16.1%	12.6%	16.6%	18.3%	26.5%	28.8%	18.8%
$ Y-Y			51,704	61,632	45,753	112,567	64,241	58,393	86,972	111,792	190,921	262,732	221,306
NVDA Revenue													
NVDA DC Revenue		1,932	2,932	2,983	6,696	10,613	15,005	47,525	115,186	193,737	367,564	520,321	609,941
% Y/Y			51.8%	1.7%	124.5%	58.5%	41.4%	216.7%	142.4%	68.2%	89.7%	41.6%	17.2%
$ Y-Y			1,000	51	3,713	3,917	4,392	32,520	67,661	78,551	173,827	152,757	89,620
of which compute		1,932	2,932	2,983	5,029	8,268	11,326	38,914	102,196	162,361	306,414	432,829	505,944
of which networking		-	1,089	1,330	1,668	2,275	3,679	8,611	12,990	31,376	61,150	87,492	103,997
Hyperscaler capex		54,336	79,783	80,546	84,931	106,209	137,391	142,606	256,400	448,392	811,810	967,840	1,039,163
NVDA DC revenue		1,932	2,932	2,983	6,696	10,613	15,005	47,525	115,186	193,737	367,564	520,321	609,941
NVDA % of Hyperscaler		4%	4%	4%	8%	10%	11%	33%	45%	43%	45%	54%	59%
Hyperscaler incremental capex			25,447	763	4,385	21,278	31,182	5,215	113,794	191,992	363,418	156,031	71,323
NVDA incremental DC revenue			1,000	51	3,713	3,917	4,392	32,520	67,661	78,551	173,827	152,757	89,620
NVDA inc % of Hyperscaler			4%	7%	85%	18%	14%	624%	59%	41%	48%	98%	126%

Source: Company reports, UBS

Valuation Method and Risk Statement

Investing in the technology sector entails above-average risk given low sales visibility, rapid pace of innovation and technological change, intense competition, frequent M&A, and low barriers to entry in many markets. We use various valuation techniques such as P/E, EV/FCF for valuing the companies in this report.