

China Technology Sector

Implications of TSMC and Largan 2Q22 results

TSMC/Largan guidance suggested consumer tech weakness and ongoing inventory correction will persist into 2H22E. While TSMC remains bullish on 2022 sales outlook given stronger HPC/ automotive demand, Largan expected weak high-end demand in 2H22E despite 7P/8P product shipment on track. Overall, we believe rising inflation, global macro weakness and inventory correction are major overhang for smartphone/PC/tablet supply chain, while rising semi content and digitalization in IoT/HPC/automotive will remain structural LT growth drivers for the sector. We remain conservative on Sunny Optical (2382 HK, HOLD), BYDE (285 HK, HOLD) and AAC Tech (2018 HK, HOLD) given high revenue exposure to consumer electronics and limited revenue from automotive/HPC applications in near term.

- TSMC: upbeat 3Q guidance but conservative in 2023.** Key takeaways include: 1) 2Q22 GPM beat due to favorable FX, cost improvement and value selling; 2) better-than-expected 3Q22 revenue/GPM/OPM guidance; 3) strong customer demand and tight capacity to continue in 2022 driven by strong HPC/auto demand, advanced technology leadership and healthy utilization; 4) mature nodes/specialty capacity to expand by 50% in next three years; 5) 2022 CAPEX plan is close to low-end of prior guidance (US\$42-44bn); 6) inventory correction will last for a few quarters in 2023; 7) delivery schedule of certain tools to impact capacity plan in 2023.
- Largan: better 3Q22 shipment but concerns on de-spec/inventory level.** Key takeaways include: 1) 2Q22 earnings beat due to FX gain; 2) better 3Q22 with MoM sequential improvement; 3) 7P/8P upgrade on track in 2H22E and 9P to enter MP next year, but high-end demand remains sluggish; 4) mid/low-end product competition remains fierce; 5) VR/MR shipment started and AR product under development; 6) periscope products to pick up in 2H23E; 7) equipment move-in for new plants is on track in 2H23E.
- Conservative 2H22E outlook on inventory correction and demand weakness.** We maintain our conservative view on tech supply chain given global macro uncertainties, consumer electronics weakness, lack of upgrade and intense competition for most components. We recommend to stay on the sidelines until demand recovery and meaningful sales contribution from new growth drivers such as AR/VR and auto/HPC business. For upcoming earnings season, we remain cautious on earnings downside for names with high exposure to smartphone/PC. Maintain HOLD on Sunny Optical, BYDE and AAC Tech.

Valuation Table

Name	Ticker	Rating	Mkt Cap (USD mn)	Price (LC)	TP (LC)	Up/Down -side	P/E (x) FY22E	P/E (x) FY23E	P/B (x) FY22E	ROE FY22E
AAC Tech	2018 HK	HOLD	2,553	16.58	14.0	-16%	19.6	13.6	0.8	4.0
BYDE	285 HK	HOLD	6,430	22.40	12.5	-44%	25.4	15.1	1.8	6.9
Sunny Optical	2382 HK	HOLD	15,566	111.4	108.6	-3%	31.2	25.8	4.6	14.7

Source: Bloomberg, CMBIGM estimates

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China Technology Sector

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Key takeaways of TSMC (2330 TT, NR) 2Q22 results:

2Q22 results:

- Revenue: TWD 534.14bn (US\$18.16bn), +43.5% YoY/+8.8% QoQ, close to high-end of guidance, supported by strong HPC, IoT and automotive-related demand
- GM: 59.1%, +9.0 ppts YoY/+3.4 ppts QoQ, above guidance, due to 1) more favorable FX; 2) cost improvement; 3) value selling
- OPM: 49.1%, +9.9 ppts YoY/+3.5 ppts QoQ, above previous guidance
- Net profit margin: 44.4%, +8.3ppts YoY/+3.1ppts QoQ
- EPS: TWD 9.14, +76.4% YoY/+16.9% QoQ
- Days of receivables: 37 days, -1 day QoQ
- DOI: 95 days, -7 days QoQ due to N5 prebuild and increase in raw materials
- Capex: US\$7.34bn

2Q22 sales breakdown:

- Breakdown by technology:
 - 5nm: 21% of sales, vs 20% in 1Q22
 - 7nm: 30% of sales, vs 30% in 1Q22
 - 16nm and below: 49% of sales, vs 50% in 1Q22
- Breakdown by platform:
 - Smartphone: 38% of sales, revenue +3% QoQ
 - High-performance computing (HPC): 43% of sales, revenue +13% QoQ
 - Internet of things (IoT): 8% of sales, revenue +14% QoQ
 - Automotive: 5% of sales, revenue +14% QoQ
 - Digital consumer electronics (DCE): 3% of sales, revenue +5% QoQ
 - Others: 3% of sales, revenue +7% QoQ

3Q22 Guidance Beats

- Revenue: US\$19.8-20.6bn, 11.2% sequential increase at mid-point vs. consensus of US\$18.4bn
- GM: 57.5-59.5% vs. consensus of 56.8%
- Operating profit margin: 47-49% vs. consensus of 46.4%

Capex

- 2022: close to lower end of previous guidance (US\$42-44bn)
- 2023: too early to tell; mgmt. believes that if future outlook looks good, they will invest in future growth opportunities
- Mature node and specialty capacity expansion by 50% in next three years

2022&2023 Outlook:

- **Demand:** led by 5&7nm technologies; weak demand in smartphone and PC consumer market; strong demand in HPC
- **Inventory:** inventory correction to continue through a few quarters in 2023; not much inventory build-up in high-end smartphones
- **Capacity& utilization:** tight capacity throughout 2022; UTR to stay at healthy level
- **Tool supply:** 2022 capacity plan is not impacted; delivery schedule of certain tools will impact capacity plan in 2023
- **Advanced packaging:** healthy business and ahead of growth forecast

Figure 1: TSMC 2Q22 results review

TSMC (2330 TT) TWD mn	2Q21	2Q22	QoQ %	YoY %	Consensus	
					2Q22E	Diff (%)
Revenue	372.15	534.14	8.8%	43.5%	523.16	2.1%
Gross profit	186.20	315.47	15.5%	69.4%	297.41	6.1%
Operating profit	145.67	262.12	17.1%	79.9%	244.56	7.2%
Net income	134.36	237.03	16.9%	76.4%	219.81	7.8%
EPS (TWD)	5.18	9.14	16.9%	76.4%	8.50	7.6%
Gross margin	50.0%	59.1%	3.4ppts	9.0ppts	56.8%	2.2ppts
Operating margin	39.1%	49.1%	3.5ppts	9.9ppts	46.7%	2.3ppts
Net margin	36.1%	44.4%	3.1ppts	8.3ppts	42.0%	2.4ppts

Source: Bloomberg, Company data, CMBIGM

Figure 2: TSMC 3Q22 and 2022 guidance

TSMC (2330 TT) USD mn	Guidance	3Q22E		2022E		
		Consensus	Diff (%)	Guidance	Consensus	Diff (%)
Revenue (USD bn)	19.8-20.6	18.4	9.8%	NA	70.8	NA
Gross margin	57.5-59.5%	56.8%	1.7ppts	NA	56.4%	NA
Operating margin	47-49%	46.4%	1.6ppts	NA	45.9%	NA
D&A expense	NA	4.1	NA	NA	16.5	NA
Net margin	NA	41.7%	NA	NA	41.4%	NA

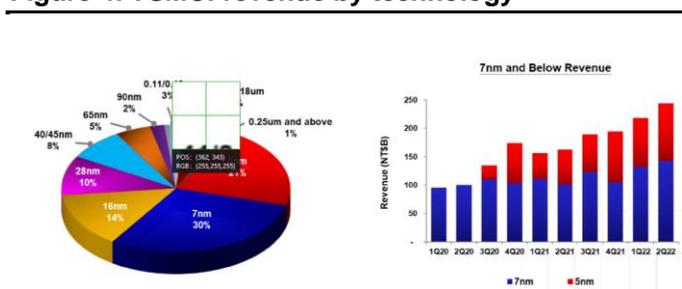
Source: Bloomberg, Company data, CMBIGM

Figure 3: TSMC 2Q22 revenue breakdown

TSMC (2330 TT) TWD mn	2Q21	3Q21	4Q21	1Q22	2Q22	2019	2020	2021
Revenue by Technology								
5nm	18%	18%	23%	20%	20%	0%	8%	19%
7nm	31%	34%	27%	30%	30%	27%	33%	31%
16nm and below	51%	48%	50%	50%	50%	73%	59%	50%
Revenue by Platform								
Smartphone	42%	44%	44%	40%	40%	49%	48%	44%
HPC	39%	37%	37%	41%	41%	30%	33%	37%
IoT	8%	9%	9%	8%	8%	8%	8%	8%
Automotive	4%	4%	4%	5%	5%	4%	3%	4%
DCE	4%	3%	3%	3%	3%	5%	4%	4%
Others	3%	3%	3%	3%	3%	4%	4%	3%
Revenue by Region								
North America	58%	65%	66%	64%	64%	60%	62%	65%
Asia Pacific	10%	13%	12%	15%	12%	17%	11%	14%
China	21%	11%	12%	11%	13%	11%	17%	10%
EMEA	6%	6%	5%	5%	6%	5%	5%	6%
Japan	5%	5%	5%	5%	5%	5%	5%	5%

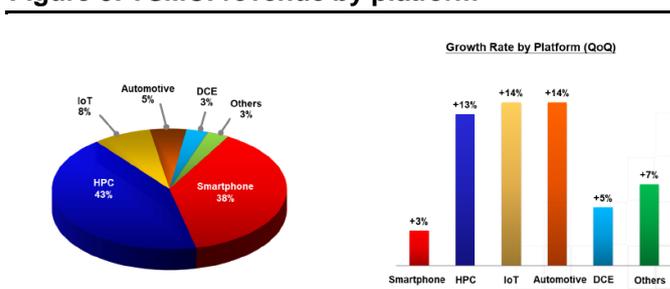
Source: Bloomberg, Company data, CMBIGM

Figure 4: TSMC: revenue by technology



Source: Company data, CMBIGM estimates

Figure 5: TSMC: revenue by platform



Source: Counterpoint, CMBIGM estimates

Key takeaways of Largan (3008 TT, NR) 2Q22 results:

2Q22 results:

- Revenue declined 4.3% YoY to TWD 9,675mn.
- GPM was 55.8%, -4.5 ppts YoY, +2.4 ppts QoQ due to better product mix with less VCM product shipment.
- Operating profit was TWD 4,035mn, -20.1% YoY. Net Income was TWD 4,946mn, +67.1% YoY. Gain from foreign exchange came in at TWD 1.79bn.

2Q22 sales breakdown:

- 20MP+: 10-20% of sales, vs 20-30% in 1Q.
- 10MP: 50-60% of sales, vs 50-60% in 1Q.
- 8MP: 0-10% of sales, vs 0-10% in 1Q.
- 5MP and Below: 30-40% of sales, vs 20-30% in 1Q.

2022 Outlook:

- **Shipment:** 3Q outlook was better than 2Q with MoM improvement.
- **De-spec trend:** stiff competition still obvious in mid-to-low end models. Company will avoid loss-making orders in mid-to-low end market.
- **High-end:** High-end 7P/8P product shipment to accelerate in 2H22E. Number of orders from customers increased while market confidence remains weak. 9P product is expected to enter MP next year.
- **Supply chain:** no more supply chain issues at the moment.
- **Inventory:** level of inventory remains high with no signs of improvement in the near term.
- **Periscope product:** periscope product to see more meaningful order pick-up in 2H23E.
- **New plants:** equipment move-in for the new plants at the end of 3Q23. Minor delays in fab construction due to lack of construction labor at the site. Equipment orders have been put and delivery is expected to be on track at the moment. Mgmt. expects new capacity ramp up schedule could align with customer demand next year.
- **VCM:** VCM production is not running at full capacity in 2Q22, but production will pick up in 2H22.
- **VR/AR/MR:** product shipments for VR/MR started, AR product still under development.

Figure 6: Largan 2Q22 results review

Largan (3008 TT)					Consensus	
	TWD mn	2Q21	2Q22	QoQ %	YoY %	2Q22E
Revenue	10,113	9,675	-4.5%	-4.3%	9,917	-2.4%
Gross profit	6,101	5,399	-0.2%	-11.5%	5,258	2.7%
Operating profit	5,052	4,035	0.6%	-20.1%	3,931	2.7%
Net income	2,960	4,946	-10.3%	67.1%	3,205	54.3%
EPS (TWD)	22.07	37.06	-3.4%	67.9%	23.87	55.3%
Gross margin	60.3%	55.8%	2.4 ppt	-4.5 ppt	53.0%	2.8 ppt
Operating margin	50.0%	41.7%	2.1 ppt	-8.2 ppt	39.6%	2.1 ppt
Net margin	29.3%	51.1%	-3.3 ppt	21.9 ppt	32.3%	18.8 ppt

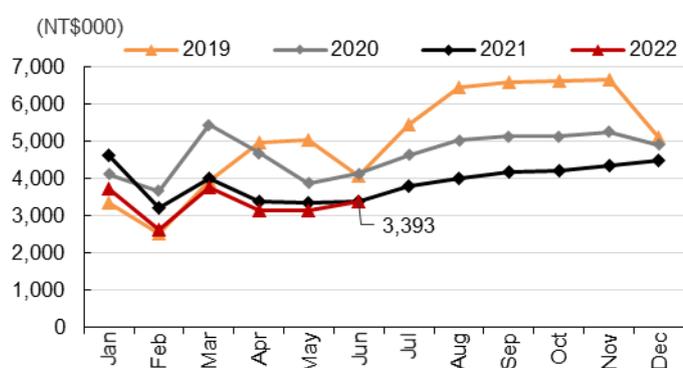
Source: Company data, CMBIGM estimates

Figure 7: Largan 2Q22 revenue breakdown

Largan (3008 TT) TWD mn	2Q21	3Q21	4Q21	1Q22	2Q22	2019	2020	2021
Shipment Breakdown								
20MP+	20-30%	10-20%	20-30%	20-30%	10-20%			10-20%
10MP	50-60%	40-50%	50-60%	50-60%	50-60%			50-60%
8MP and others	10-30%	30-50%	20-40%	20-40%	30-50%			20-40%
Revenue by Region								
China						40,414	32,405	20,495
South Korea						7,050	7,159	9,582
Vietnam						3,992	6,301	9,626
Japan						7,916	8,328	4,888
Others						1,374	1,751	2,371

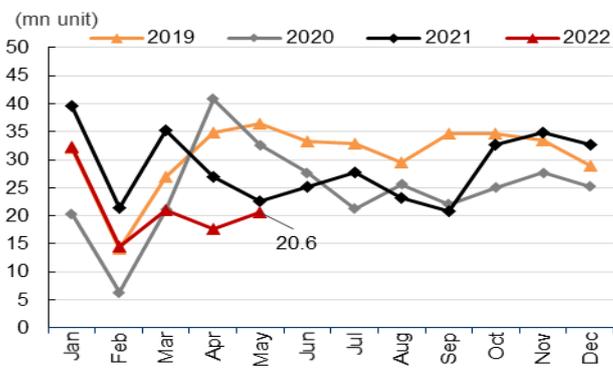
Source: Company data, CMBIGM estimates

Figure 8: Largan: monthly sales



Source: Company data, CMBIGM estimates

Figure 9: China smartphone monthly shipment



Source: CAICT, CMBIGM estimates

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