Panel sector

Panel prices to correct as TV maker restocking has ended

Neutral • Maintained

Key message

We expect mid- and large-sized panel prices to flatten or even decline moderately from October, and we estimate panel shipments and ASP will both decline by single-digits in 4Q23. Against this backdrop, we maintain Neutral on AUO (2409 TT, NT$15.7, N) and Innolux (3481 TT, NT$12.3, N), but cut our target prices to a respective NT$14.5 and NT$11.0, based on 2023F PB of 0.7x and 0.45x.

Event

TV panel prices were flattish MoM in September due to stagnant end-demand. We believe restocking of TV panels has officially ended. Notably, TV and IT panel prices have risen a respective 35-64% and 1-4% from their previous troughs in September 2022, due to restocking. We believe the upswings in mid-and large-sized panel prices will flatten or even decline moderately from October, and overall panel shipments and prices will both retreat by single-digits in 4Q23.

Impact

TV & IT panel prices rose respective 8-15% & 0-2% in 3Q23; mid- & large-sized panel prices & shipments to contract in tandem in 4Q23F. Prices of 32", 55", and 65" panels rose respective 40%, 58%, and 60% in 4Q22-3Q23 on restocking by TV manufacturers and strict production discipline by Chinese panel makers. Meanwhile, IT panel prices only grew 0-2% in 2Q-3Q23 as inventory digestion by display and NB vendors took longer. Given anemic end-demand, we expect mid- and large-sized panel prices and shipments to both dip 3-5% QoQ in 4Q23.

2023F OLED TV panel shipments to fall YoY for first time, likely at faster pace than those of LCD TV panels. Given macroeconomic weakness, we forecast LCD and OLED TV panel shipments will fall a respective 5% and 14% YoY to 250mn and 6.3mn units in 2023, while end-market shipments of LCD TV sets will likely edge up 0.4% YoY to 198mn units, compared to a 14% YoY decline in OLED TV set shipments to 5.6mn units. We estimate the penetration rate of OLED TV will sink from 3.3% in 2022 to 2.8% in 2023, and this will end continuous growth in shipments of OLED TV sets since 2018, but we forecast shipments will grow 15% YoY in 2024. For reference, the penetration of OLED handsets will likely climb from 42% in 2022 to 43% in 2023.

Pricing downcycle to begin in 4Q23F. In light of poor market demand, Chinese panel makers have been lowering capacity utilization since the start of September. We expect panel prices to undergo a downcycle in 4Q23-1Q24, and expect mid- and large-sized panel prices to rebound in late-2Q24, prompted by a NB replacement cycle. We estimate TV, Monitor, and NB panel prices will fall a respective 5%, 3%, and 10% YoY to 250mn, 154mn, and 190mn units in 2023.

Valuation & Action

It will be difficult for the panel industry to turn profitable in 4Q23. Despite the efforts of Taiwanese panel makers to diversify their businesses, we think more time will be needed for the benefits to materialize. With panel prices set to fall in 4Q23-1Q24, we maintain Neutral on AUO (2409 TT, NT$15.7, N) and Innolux (3481 TT, NT$12.3, N), but trim our target prices to a respective NT$14.5 and NT$11.0, based on 2023F PB of 0.7x and 0.45x, versus their historic bands of 0.4-1.4x and 0.3-1.4x.

Risks

Slower-than-expected destocking of TV sets; pricing pressure from capacity ramp-ups for large-sized panels by Chinese competitors.

Figure 1: TV panel prices were near flat MoM in September

Application	Size	Resolution	2Q22 (US$)	3Q22 (US$)	4Q22 (US$)	1Q23 (US$)	2Q23 (US$)	3Q23 (US$)	QoQ Chg. (US$)	QoQ (%)	YoY Chg. (US$)	YoY (%)	Apr-23 (US$)	May-23 (US$)	Jun-23 (US$)	July-23 (US$)	Aug-23 (US$)	Sep-23 (US$)	Oct-23F (US$)	Sep-23 MoM Chg.(US$)	MoM (%)	Oct-23F MoM Chg.(US$)	MoM (%)
LCD Monitor	21.5"	FHD (16:9)	44.2	36.4	35.7	35.7	36.2	37.0	0.7	2.0	0.6	1.6	35.9	36.2	36.6	36.9	37.0	37.0	37.0	0.0	0.0	0.0	0.0
	21.5" WVA LED	FHD (16:9)	49.3	44.3	43.3	43.3	43.3	43.7	0.4	0.8	(0.6)	(1.4)	43.3	43.3	43.3	43.6	43.7	43.7	43.7	0.0	0.0	0.0	0.0
	23.8" WVA	FHD	64.2	50.9	46.8	46.1	46.2	47.0	0.8	1.7	(3.9)	(7.7)	46.1	46.1	46.4	46.9	47.0	47.0	47.0	0.0	0.0	0.0	0.0
	27" WVA	FHD (16:9)	71.7	60.0	56.3	55.5	55.6	56.4	0.8	1.5	(3.6)	(6.0)	55.5	55.5	55.8	56.3	56.5	56.5	56.5	0.0	0.0	0.0	0.0
Notebook PC	13.3" (WVA)	FHD IPS WVA	68.8	60.8	58.1	58.0	58.0	58.2	0.2	0.4	(2.6)	(4.3)	58.0	58.0	58.0	58.1	58.3	58.3	58.3	0.0	0.0	0.0	0.0
	14.0" (Slim)	HD	33.1	26.8	26.0	26.0	26.0	26.4	0.4	1.4	(0.5)	(1.7)	26.0	26.0	26.0	26.1	26.5	26.5	26.5	0.0	0.0	0.0	0.0
	15.6" (Slim)	HD	32.9	26.6	25.8	25.8	25.8	26.2	0.4	1.4	(0.5)	(1.8)	25.8	25.8	25.8	25.9	26.3	26.3	26.3	0.0	0.0	0.0	0.0
	15.6" LED (Slim)	FHD IPS WVA	48.0	40.0	37.3	37.2	37.2	37.6	0.4	1.0	(2.5)	(6.2)	37.2	37.2	37.2	37.3	37.7	37.7	37.7	0.0	0.0	0.0	0.0
LCD TV (Open Cell)	32"	HD	34.3	27.7	30.3	31.3	35.7	38.7	3.0	8.4	11.0	39.8	34.0	36.0	37.0	38.0	39.0	39.0	39.0	0.0	0.0	0.0	0.0
	43" 60 Hz	Full HD	63.3	51.0	51.3	53.0	59.7	64.7	5.0	8.4	13.7	26.8	57.0	60.0	62.0	64.0	65.0	65.0	65.0	0.0	0.0	0.0	0.0
	50" 60 Hz	UHD	79.0	71.0	74.0	79.0	96.7	109.3	12.7	13.1	38.3	54.0	91.0	96.0	103.0	108.0	110.0	110.0	110.0	0.0	0.0	0.0	0.0
	55" 60 Hz	UHD	97.3	83.3	86.0	91.0	115.0	132.0	17.0	14.8	48.7	58.4	106.0	116.0	123.0	130.0	133.0	133.0	133.0	0.0	0.0	0.0	0.0
	65" 60 Hz	UHD	150.0	109.7	114.3	124.3	155.7	175.0	19.3	12.4	65.3	59.6	146.0	156.0	165.0	172.0	176.0	177.0	177.0	1.0	0.6	0.0	0.0
Smart Phone	6.7"	1600 x 720 a-Si IPS/FFS	11.2	9.3	8.2	7.3	7.0	7.0	0.0	0.0	(2.3)	(25.0)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	0.0	0.0	0.0	0.0
	6.7''	2400 × 1080 LTPS, IPS/FFS						10.7							9.5	10.5	10.5	11.0	11.0	0.5	4.8	0.0	0.0
	6.7"	2400 ×1080 FHD Flexible OLED		26.0	24.3	22.0	19.3	19.7	0.3	1.7	(6.3)	(24.4)	20.0	19.0	19.0	19.0	20.0	20.0	20.0	0.0	0.0	0.0	0.0
	6.8"	2700 × 1200 1.5K Flexible OLED						24.0							24.0	24.0	24.0	24.0	25.0	0.0	0.0	1.0	4.2
Tablet PC	7"	1280 × 800 IPS/FFS	13.5	10.9	9.6	9.3	9.3	9.3	0.0	0.0	(1.6)	(14.4)	9.3	9.3	9.3	9.3	9.3	9.3	9.1	0.0	0.0	(0.2)	(2.2)
	10.1"	1280 × 800 IPS/FFS	25.2	22.4	21.0	20.7	20.7	20.7	0.0	0.0	(1.7)	(7.5)	20.7	20.7	20.7	20.7	20.7	20.7	20.5	0.0	0.0	(0.2)	(1.0)

Source: Omdia; KGI Research

Figure 2: 1Q21-4Q23 quarterly panel shipments by application

Shipments (mn units)	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	2019	2020	2021	2022	2023
TV	65.8	66.2	62.5	66.8	67.7	64.9	63.5	66.3	58.5	64.2	64.3	62.5	287	272	261	262	250
Notebook	66.3	68.0	74.3	79.0	71.2	52.8	46.4	41.9	37.3	49.4	53.2	50.8	190	228	288	212	191
Monitor	39.4	40.6	43.9	48.5	48.3	43.6	34.0	32.9	32.7	38.8	42.0	40.1	144	165	172	159	154
Tablet	51.3	43.7	38.0	36.3	34.7	38.4	37.7	44.2	37.8	38.4	36.9	33.2	99	158	169	155	146
QoQ (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
TV	(5.2)	0.6	(5.6)	6.9	1.3	(4.1)	(2.2)	4.4	(11.8)	9.7	0.2	(2.9)					
Notebook	3.1	2.6	9.3	6.3	(9.9)	(25.8)	(12.1)	(9.7)	(11.0)	32.4	7.6	(4.4)					
Monitor	(10.0)	3.0	8.1	10.5	(0.4)	(9.7)	(22.0)	(3.2)	(0.6)	18.7	8.3	(4.7)					
Tablet	2.8	(14.8)	(13.0)	(4.5)	(4.4)	10.7	(1.8)	17.2	(14.5)	1.6	(4.0)	(9.8)					
YoY growth (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
TV	1.4	0.5	(13.2)	(3.7)	2.9	(2.0)	1.6	(0.7)	(13.6)	(1.1)	1.3	(5.8)	(0.8)	(5.0)	(4.0)	0.4	(4.9)
Notebook	63.7	15.4	15.9	22.9	7.4	(22.4)	(37.6)	(47.0)	(47.6)	(6.4)	14.6	21.2	2.6	20	26	(26)	(10)
Monitor	19.8	(5.8)	(2.7)	10.7	22.6	7.4	(22.6)	(32.2)	(32.3)	(11.0)	23.6	21.8	(4.0)	15	4.5	(7.9)	(3.0)
Tablet	124.0	15.3	(19.3)	(27.3)	(32.4)	(12.1)	(0.8)	21.8	8.9	0.0	(2.2)	(24.8)	(1.8)	60	7.3	(8.6)	(5.5)

Source: Omdia; KGI Research

Figure 3: Peer comparison – Valuations

Company	Ticker	Mkt Cap	Price	EPS (LCY)			PE (x)			PB (x)			ROE (%)			Dividend yield (%)		
		(US$mn)	(LCY)	2022	2023F	2024F	2022	2023F	2024F	2022	2023F	2024F	2022	2023F	2024F	2022	2023F	2024F
AU Optronics	2409 TT	3,750	15.70	(2.39)	(2.36)	(0.28)	N.M.	N.M.	N.M.	0.65	0.75	0.76	(10.1)	(10.5)	(1.4)	5.1	0.0	0.0
Innolux	3481 TT	3,464	12.30	(2.76)	(2.02)	(0.60)	N.M.	N.M.	N.M.	0.47	0.50	0.52	(10.1)	(7.9)	(2.5)	0.0	0.0	0.0
Tianma	000050 CH	3,105	9.22	(0.02)	(0.83)	(0.04)	N.M.	N.M.	N.M.	0.75	0.80	0.80	(0.2)	(6.8)	0.7	N.A.	0.0	0.1
BOE	000725 CH	20,047	3.86	(0.04)	0.18	0.32	N.M.	21.4	12.1	1.13	1.04	0.92	(1.1)	4.1	8.8	1.6	2.0	2.3
LG Display	034220 KS	3,072	11,590	(5,564.3)	(7,135.4)	(217.37)	N.M.	N.M.	N.M.	0.42	0.56	0.55	(17.3)	(29.6)	(2.1)	N.A.	5.0	2.7

Source: Bloomberg; KGI Research

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