BizWitz Commentz

19 Nov 09

Key Thoughtz:

- Chi Mei Optoelectronics over-extended itself while realizing diminishing returns to scale and fell into the credit crisis.
- Merging with Innolux Displays improves its access to customers but not its market position in TV panels.
- Realignment of CMO capacity with Hon Hai Group interests may force smaller competitors into small-panel markets.

Expansion — Concentration

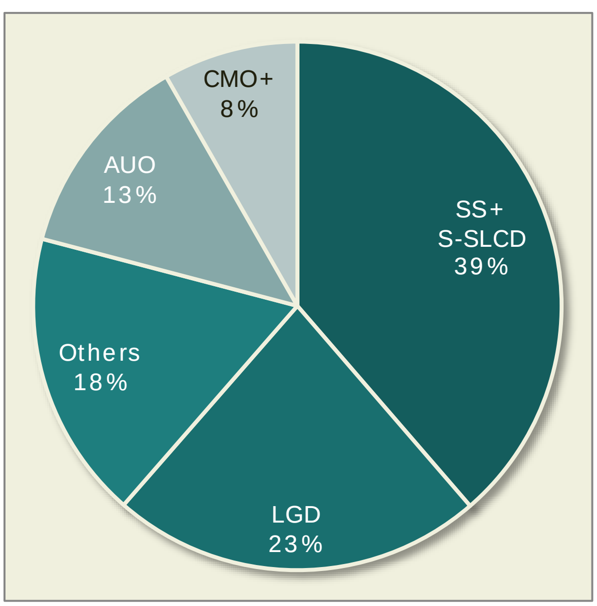
The cause and effect of Chimei Innolux, as AMLCD production shifts to China

The merger of Chi Mei Optoelectronics (CMO) with Innolux Display (ILX) in Taiwan (TSE codes 3009 and 3481) will create an AMLCD producer larger than AU Optronics (AUO, 2409) but weaker in structure. AUO will have a stronger position in large panel markets, especially the TV market segment. The same holds true for the two Korean giants, LG Display (LGD) and Samsung Electronics (SSE, with its Sony joint venture S-LCD). Both Korean producers will increase capacity faster than AUO or CMO will in the near term and both are affiliated with global TV brands.

As shown in Figure 1, combining the fabs of CMO and ILX does not create a powerhouse of TV panel production. Gen-7 or larger glass substrates (1870 x 2200 mm at least) are necessary for a producer to remain cost and product competitive in the TV panel market. Chimei Innolux will have only 8% of such capacity in 2010, significantly less than other leaders will. Note that Sharp will have a 16% share and will account for most of the “Others” in 2010. Sharp is a vertically-integrated Japanese company (which also supplies Sony through a joint venture) that operates in a different style than leading merchant panel producers. We therefore exclude it from the discussion but acknowledge that it remains a potent force in the TV market. The central point of the chart is that Chimei Innolux will lack the capacity and market power to drive new value propositions into the TV panel market.

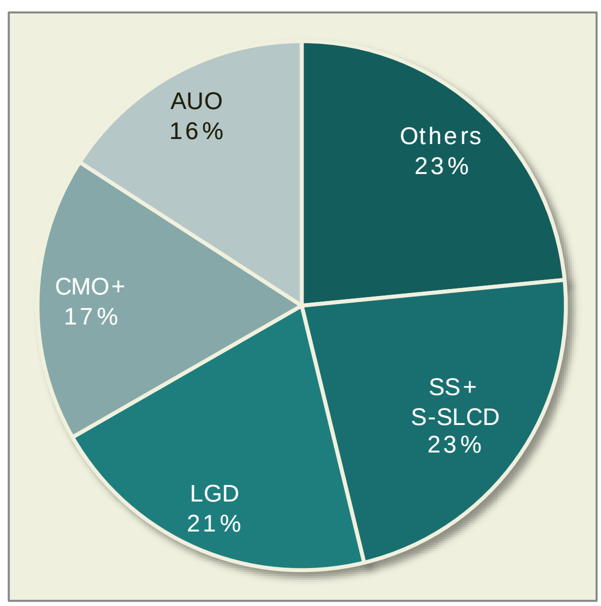
Indeed, CMO has become the leading supplier of low-end TV panels to Chinese OEM and brands. Government stimulus and pro-Taiwan policies created strong demand for 32” and smaller LCD TV sets in recent quarters and CMO was a key beneficiary. In Q2’09, DisplaySearch reported that CMO supplied 33% of the TV panels used by China’s top-six domestic brands.

FIGURE 1 SHARE OF GEN-7-PLUS CAPACITY IN 2010



Source: DisplaySearch, BizWitz analysis

FIGURE 2 SHARE OF TOTAL AMLCD CAPACITY IN 2010



Source: DisplaySearch, BizWitz analysis

In contrast, ILX evolved to serve the monitor panel market rather than the TV panel market. As a result, the combined capacity of Chimei Innolux will be greater than the capacity of AU Optronics (AUO) in 2010 (see Figure 2). While AUO was investing in larger glass factories and growing at a discount through acquisition, CMO was struggling to catch up and ILX was concentrating on smaller panels to support commodity PC monitor demand by its affiliate, Hon Hai Precision Industries (TSE:2317). This makes the combined firm a strong competitor in mobile and PC display markets but a weaker competitor in TV markets.

The combination of CMO and ILX may have its greatest impact on small panel market segments such as mobile phones. The connection between Chimei Innolux and other Hon Hai Group affiliates such as FIH (HKG: 2038) assures access to many brands and applications. The Apple iPhone and the Amazon Kindle are but two leading products made by Hon Hai affiliates. Add to this the Hon Hai presence in PC assembly and it seems inevitable that smaller firms in the AMLCD market such as Chunghwa Picture Tubes (CPT, TSE: 2475) will face increased competition in PC display market segments. Indeed, the president of CPT resigned last week and the manager of its small panel business lines replaced him. As described in *Small Markers. Small Panels* earlier this month [http://www.bizwitz.com/Downloads/Commentz-20091113.pdf], slower growth in desktop PC demand leads weaker producers to seek opportunities in mobile phone or other small panel applications.

The following sections describe factors that led to the merger and postulate its effects on end-product markets.

CMO Expands Too Fast

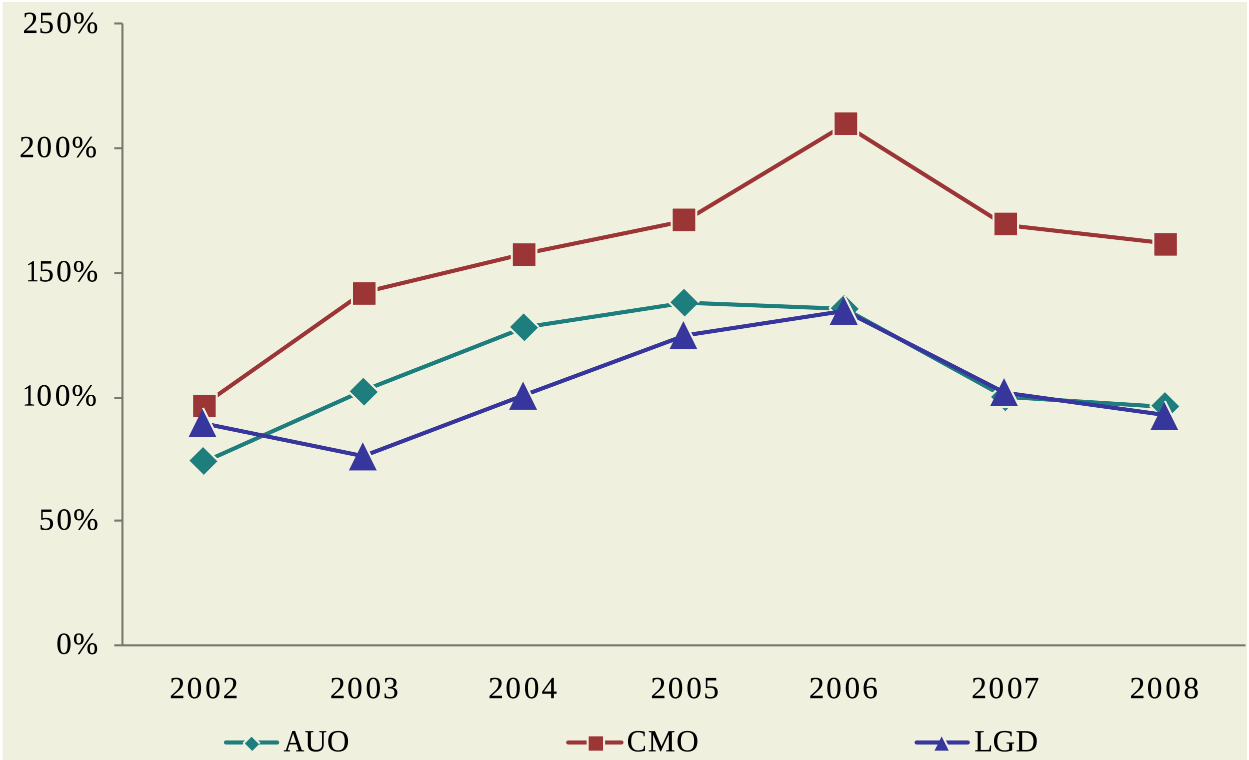
Chi Mei, a leading ABS plastics company, entered the display industry 1998 as a supplier of color filters but soon entered the AMLCD module market and merged the companies into CMO. A deal with IBM in 2001 gave CMO access to former IBM customers and 85% of a panel fab in Japan with advanced technology. CMO seemed content to operate as a secondary supplier until 2003. At that point, CMO undertook an aggressive expansion plan with an apparent goal of becoming a major AMLCD supplier by matching or exceeding the capacity of AUO.

As charted in Figure 3 on the following page, CMO spent more on property, plant and equipment as a percentage of cash operating profit (or sales, for that matter) than AUO or LG Display (LGD) did from 2003 through 2008. Cash flow into PP&E was $16.6 billion from Q1'02 through Q3'09. Aggregate pre-finance cash flow was negative was negative at -$7.9 billion over the period. Obviously, the credit crisis exacerbated the problems associated with managing the debt load and CMO had to defer planned expansions. This left some equipment suppliers in the lurch when the company halted installations at its Gen-8 fab and stopped taking deliveries.

Commercial factors were also negative in 2008 as CMO neared its goal of matching AUO capacity. Samsung Electronics was one of the company's prime customers but CMO remained a second source because Samsung Electronics was the largest AMLCD producer itself. As display demand withered during 2008, Samsung Electronics chose the wise course of keeping its own AMLCD fabs running and halting orders to CMO. This forced CMO to reduce capacity utilization more than AUO did and motivated CMO to seek substitute customers in China.

Growing demand for LCD TV in China and government subsidies for consumers aided CMO in its campaign to increase its share of the Chinese TV market this year. The down-side to this remedy was that poor markets have poor price tolerance.

FIGURE 3 CAPEX TO CASH PROFIT RATIOS (PPE/EBITDA)



Source: BizWitz analysis of company disclosures

Chinese consumers cannot spend as much on average as European or North American consumers can. They buy 26” or 32” sets primarily. The good news is that CMO can make such panels efficiently. The bad news is that newer fabs can make 32” panels more efficiently. The industry capacity in Gen-7 and larger glass fabs is about 50% greater this year compared to last year, so there is plenty of price pressure on 32” panels. As a result, CMO was able to record an operating profit in Q3’09 but it had to increase debt as well.

There was little good news in alternative technologies, either. Niche producer Prime View International (PVI, TSE: 8069) was able to leverage its relationship with E Ink, the MIT spin-out with market-leading technology for electrophoretic displays, and acquire the venture from its investors. This gave PVI a lock on the existing market for electronic book displays used by Amazon, Barnes & Noble plus Sony. AUO had acquired part of SiPix, an alternative to E Ink (BenQ just announced a reader based on such panels) but CMO was relegated to the role of a TFT foundry for PVI.

Innolux Displays Adds Value

Hon Hai Precision Industries (aka Foxconn) began winning OEM monitor orders from Apple Computer in 2001–2002 and became interested in securing supply of AMLCD. This led to formation of Innolux Displays.

From the beginning, ILX concentrated on the monitor panel market. It forward-integrated its business to assemble LCD monitors, which gave it additional leverage on its AMLCD fab investments. While assembling monitors may generate little material contribution margin for assemblers, adding that margin to a panel maker increases its return on invested capital. An integrated firm may also benefit from coordination. It is much easier to match production flows and manage inventories when a fabricator has timely information.

As a result, Innolux Displays accumulated a 1% operating profit margin from Q1’08 through Q3’09 while Chi Mei Optoelectronics accumulated a 3% operating loss. Demand for PC monitors may have weakened but ILX was well positioned to capture and fulfill orders. As a second source, CMO was poorly positioned to sustain orders.

Combination Effects

The combination is additive, with little overlap in key customers. There was rumor of TPV Technology (TPV, HKG: 0903), a major panel customer of CMO, reacting to the combination with Hon Hai negatively but TPV issued a denial. Apparently, it needs panels from CMO over the midterm, at least. CMO was a key supplier of monitor panels to Philips before TPV acquired that business. With the combination, former CMO panel buyers such as TPV and former ILX monitor customers will enjoy a broader range of industrial capacity as the merged assets become better aligned. Such realignment may take three quarters or longer, as we saw with the integration of Quanta Display with AUO in 2007.

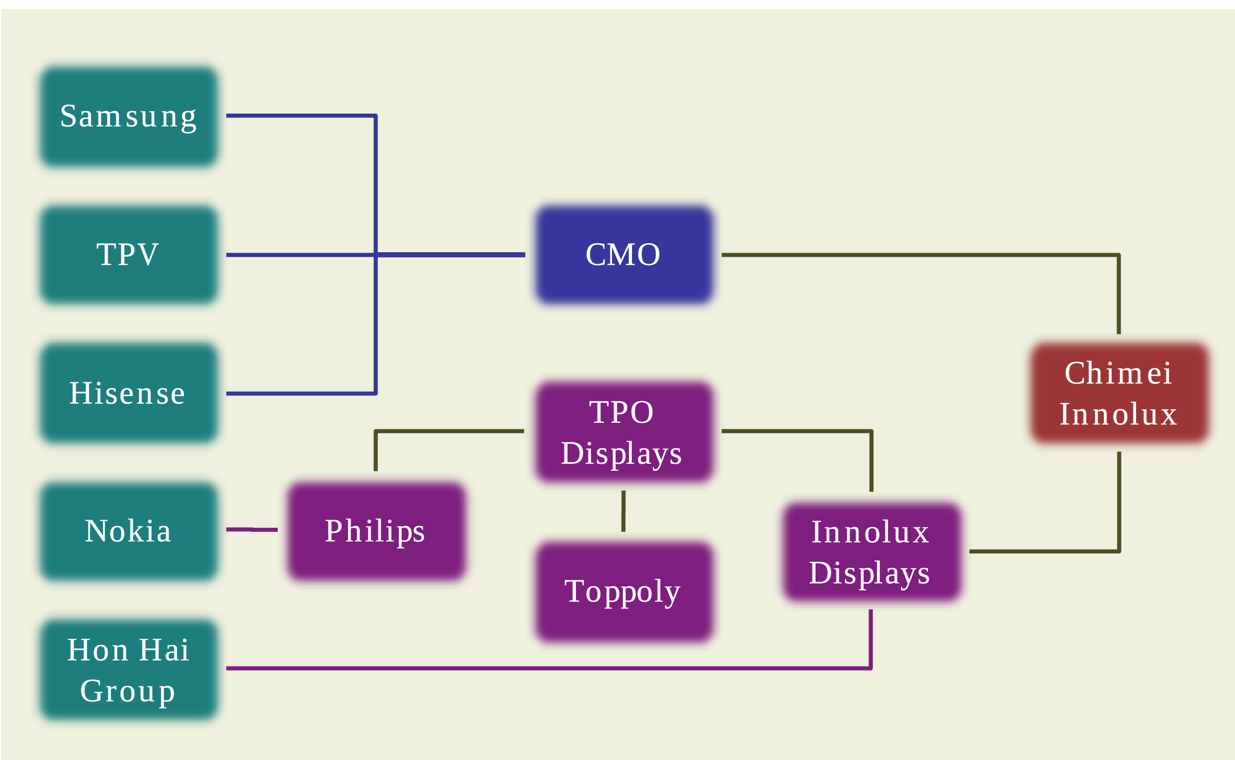
Regarding TV panels, the combination may benefit slightly from association with Hon Hai Group customers and suppliers. There is potential for the Hon Hai Group to play a more important role in China's TV market as Chimei Innolux adds capacity after 2010.

The main effect of the combination will occur in the mobile phone market. Nokia has been a key customer of the former Philips MDS business unit for more than a decade. It remained a key customer when Philips combined that business with the LTPS business of Toppoly. After Samsung Group merged its small panel assets into a new venture, Samsung Mobile Display, Nokia may have felt threatened and constrained by a smaller supply base in TPO Displays. The acquisition by Innolux Displays earlier this year benefitted Nokia and the addition of CMO technology gives Nokia another boost.

Smaller competitors of Chimei Innolux will face fewer potential large accounts in the monitor and mobile phone market segments than they did before the merger. They will likely seek orders from Chinese domestic handset companies and explore applications in niche market segments.

—by David Barnes for BizWitz LLC, a consultancy specializing in electronic display and imaging business decisions throughout the supply chain from raw materials through retail, worldwide

FIGURE 4 CUSTOMERS AND PRODUCER CONCENTRATION



Source: BizWitz