GC Tech: BOE, Hon Hai, USI, Sunway; demand outlook and supply chain status were the main concerns

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We hosted BOE, USI, Hon Hai, and Sunway management teams on May 23-25. During the meetings, investors were looking for signs of recovery and drivers for growth visibility. Key topics discussed were 1) demand outlook; 2) production/supply chain recovery status amid COVID restrictions; 3) pricing trend; and 4) new business expansion. Overall, management noted 2Q demand/revenue remain under pressure with scope for a recovery in 3Q22 driven by seasonality; companies with a diversified production base (e.g. Hon Hai) have fared relatively better amid COVID disruptions; management noted logistics continues to be the main challenge, and visibility for a strong 2H22 demand recovery remains limited. To cope with the logistics disruptions in China, USI and Hon Hai have planned to add more capacity overseas per customers' requests. We summarize the key takeaways from each meeting in this report.

BOE: scope for a recovery in 3Q on seasonality

Demand outlook; a weak 2Q as expected; 2H22 will likely stabilize driven by seasonality. Management noted demand weakness continues into 2Q22 against the backdrop of the macro slowdown, tight logistics and the COVID lockdown, and BOE sees muted shipment growth across the globe. Looking ahead into 3Q22, management expects sequential recovery driven by seasonality considering the macro improvements and promotions/new product launches will likely stimulate panel demand. Additionally, management noted that previous industry-wide LCD inventory build-up from 2H21 (pricing started to decline) has been digested to a healthy level currently, which provides a good support for 2H shipment ramp-up. Lastly, despite an incrementally positive outlook in 3Q22 (vs. 2Q22), management noted that it's unlikely the recovery will take place for all panel sizes simultaneously. By end-application, IT, TV and smartphones made up 45%+, 30%, and 20% of 1Q22 revenue, respectively.

Flexible OLED: 100mn units target remains for 2022. Management maintains its flexible OLED shipment target at 100m units for 2022, despite recent COVID disruptions and the soft smartphone market, considering **1)** BOE has penetrated into more smartphone models with growing allocations; **2)** despite the soft smartphone demand, flexible OLED is mainly for mid/high-end models, which have so far seen better demand compared to mid/low-end models, and the flexible OLED penetration rate is still rising; and **3)** foldable phones have shown good traction with customers; scroll screen smartphones are likely entering mass production and mid-size foldable screen notebooks are in mass production, per management. Management stated that shipment of 100mn units could drive its Chengdu and Mianyang plants to the breakeven point, while the Chongqing plant will remain loss making considering depreciation has just started.

Pricing dynamics: 2Q remains under pressure; better outlook in 2H. TV LCD panel prices will remain under pressure in 2Q but the downside will be limited, while 3Q could see better prices supported by better demand, per management. Pricing saw a steep decline in 3Q/4Q21 when the 32" TV LCD price dropped 50%+.

Investment thesis, valuation and risks: We have a Buy rating with an unchanged 12M target price of Rmb6.52 (5.9x 2023E EV / EBITDA). We have set our target EV / EBITDA at 5.9x, in line with the panel sector 10-year trading average. **Downside risks:** 1) slower-than-expected flexible OLED shipment growth; 2) slower-than-expected market share gains in both large-size LCD panels and small-sized flexible OLED; 3) slower-than-expected ramp-up at new factories, especially those for large-sized LCD panels, such as B17, or flexible OLED, which could support BOE's product mix upgrades.

Hon Hai: diversified production base mitigates COVID impact; reiterated ambitions in EV and semis

Demand outlook stable, strong CSP (Cloud service provider) growth. Management maintains its target of flattish QoQ and YoY growth for 2Q22 and 2022, while it expects CSP will enjoy double-digit growth, driven by market share gain in US customers. On margin, management expects GM will improve due to a product mix upgrade and favorable FX, which should help offset the inflation impacts on EMS (electronics manufacturing services). On the demand side, management noted that overall demand is largely stable, and it has not seen any order cuts yet.

COVID implications: logistics is the main challenge, while the production impact is manageable due to diversified production sites. Management noted that across the 40+ facilities in China, logistics remain the key challenge while the impact on production is largely manageable - the Kunshan and Shanghai plants (for components and networking products) are affected by the COVID lockdown, but other plants are operating as normal. In addition, the company can leverage its global production sites to coordinate orders and production. Specifically, Hon Hai produces consumer electronics in mainland China, India and Brazil, networking equipment in mainland China and Vietnam, servers in mainland China, Mexico, Europe and the US, and PCs in mainland China and Mexico. In all, 75% of its capacity is located in mainland China, while the company is adding capacity in other areas to enhance diversity, per management.

EV: Revenue contribution to start in 2H22 from Lordstown's LMC pickup truck

production in Ohio factory; 5% global EV market share target in 2025 unchanged. Hon Hai reiterated its target of 5% global EV market share by 2025, along with 40% of EV components made in house. On EV production, Hon Hai has signed agreements with Lordstown Motors on **1)** the asset purchase of Lordstown's Ohio factory, which has annual production capacity of 500-600k cars (Hon Hai announced the completion of the acquisition on 12 May; link); **2)** Lordstown's LMC pickup truck will first commence start of production (SOP) in 2H22 in the Ohio factory, with a 500-unit shipment target in 2022 and ASP at US$30,000+, per management; and **3)** a joint venture (Hon Hai holds 55% of shares), which supports the co-design of new EV models based on the MIH platform, per the company. The key pipeline on EV expansion includes:

- **2022**: E-bus (for San-Ti Group) to ship more than 100 units in Taiwan in 2022
- **2023:** PTT factory in Thailand to complete construction in 2023, with capacity ready for 50k EV assembly; Mobile Drive, the JV with Stellantis, to start contributing revenues, and Hon Hai to supply 80% of auto IC for Stellantis in 2024
- **2024:** Fisker to enter SOP and become the main vehicle model produced at the Ohio plant in 2024

Semiconductor: MOSFET, MCU and SoC in expansion. Management noted that in late May, XSemi, a Hon Hai subsidiary (Hon Hai holds 51% of shares), participated in the private placement of APEC (8261.TW, Not Covered) (link), which has a comprehensive product line with over 1,000 MOSFET SKUs and more than 1.5bn unit shipments, securing a steady supply for EVs, along with Hon Hai's self-developed MCU and SoC. In addition, management noted that they have signed an MOU with DNex to set up a JV to build a 12-inch foundry in Malaysia, with planned monthly capacity at 40k wafers, targeting 28nm and 40nm, mainly for power semis, RF, CMOS image sensors, etc., supporting the future expansion in EV.

Valuation: We have a Neutral rating with an unchanged 12M target price of NT$125 (11x 2023E PE). We set our target P/E multiple at 11x, which is in line with the company's historical trading average. Maintain Neutral given limited upside to our target price. **Upside risks:** Better-than-expected outlook for iPhone shipments; lower-than-expected opex ratio caused by a further increase in automated production, or further cost control on SG&A. **Downside risks:** A strong USD against RMB/TWD is a key downside risk given Apple is its main customer, contributing to 40-50% of revenues based on our estimates. Hon Hai's factories are located mainly in mainland China, with costs based in Rmb.

USI: logistics remain as a key near-term challenge

Demand and production: recovery status update from COVID lockdown. From a demand perspective, management noted orders have seen limited impact from COVID disruption and maintained its 2Q guidance of 20-25% YoY revenue growth and YoY improvement in operating profit. USI expects the forgone revenue in 2Q due to COVID restrictions will be made up for in 3Q22. The COVID impact, however, is primarily on production and logistics. Management noted **logistics continues to be a challenge** for its capacity in Shanghai; many components/materials are stored in warehouses or still in vessels waiting to be docked, which means supplies can't arrive on time; plus, the turnover days are increasing as components/materials supplies are required to remain in storage for 7 days before they can be transferred to factory sites (as a COVID prevention measure), according to management. In terms of employees, management stated that some employees are requesting to take days off to go back to their hometown after a 2-month lockdown; this could lead to tight labor supply and prop up labor costs especially as the company is entering the high season in 2H, per management.

Implications of supply tightness, cost inflation and RMB depreciation. 1) RMB depreciation will have a positive effect on the P/L (reported in Rmb) given revenue and components/materials procurement are priced in US dollars; however, foreign debt in US dollars is larger than asset in US dollars, and therefore this will partially offset the benefit; net net, RMB depreciation is net positive on the P/L, per management; **2) components supply tightness;** matured-nodes chips supplies (namely, power semis, PMIC, etc.) are tighter compared with advanced chips; components tightness for consumer electronics is loosening but the company will need to shorten the inventory days to free up more working capital; management noted the elevated inventory level currently consists of mostly raw materials/components, and it will be challenging to reduce the inventory balance in the near term due to logistical bottlenecks. Once logistics/transportation resume to normal levels, inventory levels will improve, per USI.

Automotive electronics growth momentum remained strong. USI's automotive electronics revenue grew >50% in 2021 and 1Q22, and management expects the strong growth momentum to continue through the year. Within the automotive segment, vehicle body related products (e.g. lights, door control, etc.) account for 30% of sales; domain controllers assembly makes up another 30%; powertrain related (e.g. power modules, power management, etc.) is expected to grow faster and contribute nearly 30% in 2022, per management. In 2022, orders from OEMs and tier-1 suppliers have seen strong growth. In terms of margin, management stated the overall trend is upward driven by 1) economies of scale; 2) profitability improvements at its new factory in Mexico; the factory already reached breakeven in 2H21 and will make profits this year, per management; 3) mix improvements as the increase of powertrain-related products (higher margin) will drive up blended margin, per USI. Lastly, USI noted it will enter SiC module mass production this year.

Vietnam production status: the Vietnam base mainly produces SiP for smart watches, and USI is expanding capacity in its Vietnam base as customers request more capacity outside of China. Management plans to allocate EMS orders to the Vietnam base including industrial products, followed by server main board in the future. The Vietnam base contributed nearly US$80mn revenue in 2021, and will see strong growth this year as the Vietnam site started contributing in 2H21, per management.

Valuation: We are Neutral rated on USI with an unchanged 12-month target price of Rmb15.0; our TP is based on 21X 2022E P/E. Our target multiple of 21X is largely in line with the stock's mid-cycle trading range. We view the 21X target multiple as appropriate given EPS growth of +6%/-15%/+14% in 2021-23E vs. -10%/+7%/+37% in 2018-20.

Key upside/downside risks: 1) Stronger/weaker demand from smartphones and consumer electronics; 2) faster-/slower-than-expected adoption of new SiP projects; 3) competition from OSAT and EMS/ODM peers; 4) customer concentration: USI has ~50% of revenue from Apple and most of its SiP products are for Apple; and 5) COVID-19-related disruptions.

Sunway (300136.SZ, Not Covered): LCP antenna, automotive electronics, passive components in expansion

2022 revenue target remains at Rmb9-10bn, driven by new products. Management reiterated its target of Rmb9-10bn revenue in 2022, driven by the ramp-up of new products (LCP antenna, passive components, automotive electronics, UWB), from which management expects the revenue contribution to increase to c.20% in 2022 (vs. 15% in 2021). On margin, management sees ongoing pressure from COVID restrictions, soft smartphone demand and continuous investment in new products (R&D ratio at 8%+ going forward); however, the company expects GM to improve in 2022, driven by an increase of wireless charging, ramp-up of new products and better cost management. In addition, the company is expanding from smartphone to non-smartphone (wearable, IoT) markets, driving up scale expansion.

LCP antenna in expansion. Management noted that the global market size of LCP antenna is Rmb30bn, and they are providing a one-stop solution (from magnetic material to final antenna module) for smartphones and IoT. On the Android camp, given that only higher-end Android models will adopt LCP antenna, plus the shipment weakness across Android brands this year, the LCP antenna demand in the Android camp is still low. In addition, management is positive on its penetration into US customers, which have successfully adopted the technology in smart watch products.

Automotive expansion, aiming for profitability in 2 years. Management stated that it has cooperated with Volkswagen, Honda, FAW Hongqi and Mercedes-Benz. For auto OEMs, Sunway can provide on-board wireless charging, antennas, UWB (ultra-wide band) modules and other supporting services. Management also noted that the automotive electronics business now is at an early stage, and customer expansion is the focus, and they are trying to penetrate into partnerships with companies including Huawei, Tesla and Xiaomi. The company expects to achieve profitability within 2 years for its automotive electronics business.

Disclosure Appendix

Reg AC

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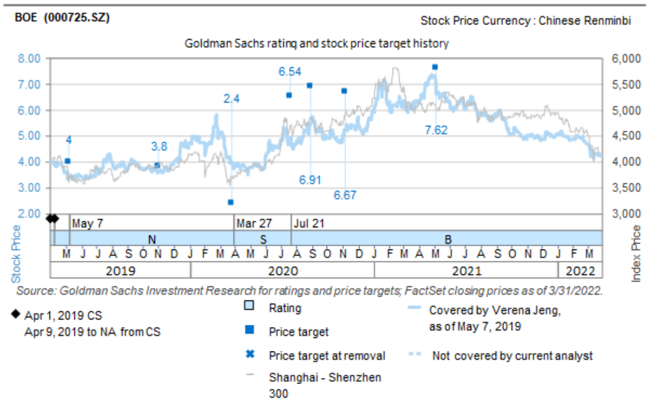

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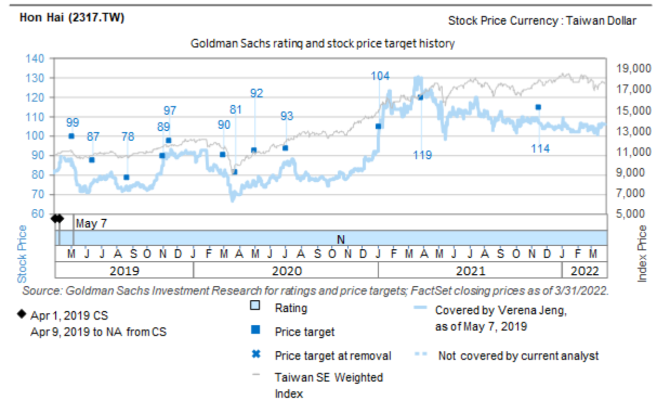

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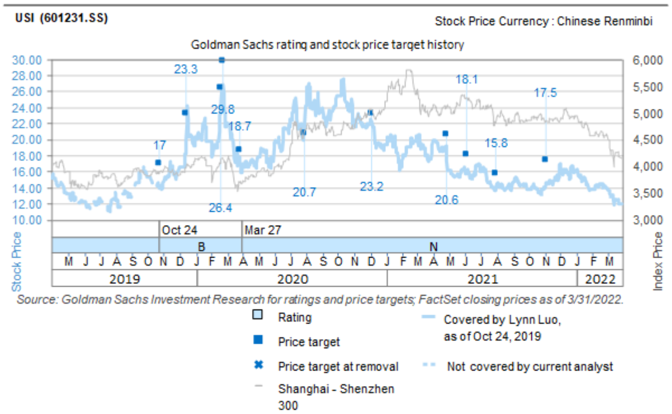

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