

# China CIS sector

## Maintain long-term positive outlook; near-term challenges persist

We expect global CIS sales to decline 5.1% YoY in 2022, mainly dragged by the weak performance in mobile CIS market. We expect CIS market to recover in 2H23, as mobile CIS inventory level returns to a normal level. However, challenges remain given high uncertainties in economy and geopolitical issues.

- **2022 CIS outlook by markets: 1) Mobile CIS market** (the largest CIS segment) will drop 9.8% YoY in revenue. The lackluster handset shipment has resulted in slower-than-expected CIS destocking during 1H22, and we see no sign of recovery (especially for domestic Android OEMs) in 2H22. **2) Auto CIS market** will outperform again in 2022, with 24% YoY growth. This is driven by increasing electrification and ADAS penetration, that utilize high number of cameras per vehicle. **3) Security CIS sales** will also fall, as the government and enterprises are expected to be more conservative in spending.
- China semi sector plunged on the recent U.S. export curbs (Oct-7) on China semi industry with restrictions focusing on purchase and manufacture specific advanced chips. Unlike chips (CPU, GPU, FPGA, etc.) developed utilizing advanced nodes, most CIS can be manufactured at mature nodes (22nm or older). We believe the revised stricter restrictions have less marginal impact on CIS names. In our view, the end use demand for CIS is the key area of focus. Should 1) domestic smartphone OEM's share to bounce, or 2) mobile CIS inventory returns to normal level, or 3) security spending from enterprises and government picks up again, we believe these would be positive catalysts that could re-accelerate CIS growth.
- **Long-term outlook of domestic CIS suppliers remains positive. Willsemi** will continue to ride the tailwind of auto CIS market growth and enjoy share gain. The Company is also well-positioned in AR/VR industry, which is expected to gain momentum in 2023/24E. **GalaxyCore** will enjoy share gain in mobile CIS market in 2023/24E as their own production line has entered mass production in Sep 2022. Being the CIS leader in mid- to low-end mobile CIS market, GalaxyCore's product mix will improve while avg. ASP will rise.
- We maintain **BUY for Willsemi (603501 CH)** with revised **TP of RMB120**. We maintain **BUY for GalaxyCore (688728 CH)** with revised **TP of RMB20**.

### Valuation Table

Name	Ticker	Mkt Cap (US\$ mn)	Last Price (LC)	TP (LC)	P/E (x)		ROE	
					FY22E	FY23E	FY22E	FY23E
Willsemi	603501 CH	12,424	74.89	120.0	22.6	21.3	19.2	16.9
GalaxyCore	688728 CH	5,342	15.26	20.0	37.0	30.8	11.9	12.5
Sony	SONY US	82,505	9891.00	NA	14.0	12.5	11.3	11.5
Samsung	005930 KS	234,853	56,200.00	NA	9.7	11.8	12.2	9.4
STM	STM FP	29,709	33.62	NA	8.4	8.7	33.3	25.2
ON Semi	ON US	28,087	64.83	NA	12.6	12.9	39.7	28.4
<b>Avg.</b>					<b>17.4</b>	<b>16.3</b>	<b>21.3</b>	<b>17.3</b>

Source: Company data, Bloomberg and CMBIGM estimates as of 10 October 2022

**OUTPERFORM**  
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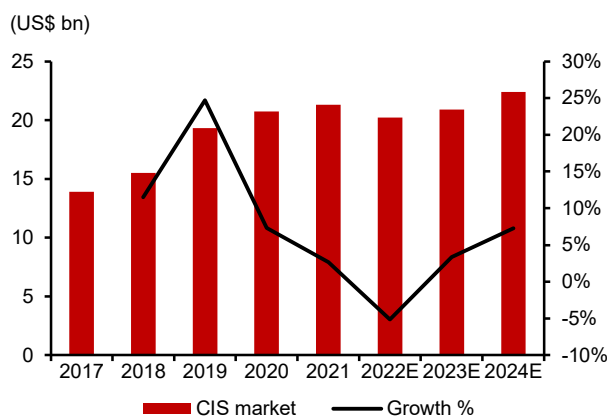
1. "China Tech Update: China TMT Hardware barometer" – 30 May 2022 ([Link](#))
2. "China CIS Sector – Can non-mobile CIS strength offset handset weakness? We remain cautiously optimistic" – 1 Apr 2022 ([Link](#))

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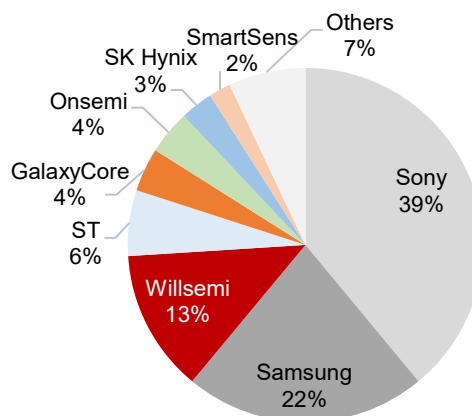
## Section Title: Focus Charts

**Figure 1: CIS market sales was US\$ 21.3bn in 2021, 2.7% YoY (the slowest growth in the past decade)**



Source: Yole, CMBIGM estimates

**Figure 2: Top 3 (Sony/Samsung/Willsemi) took ~74% market share (2021)**



Source: Yole, CMBIGM estimates

**Figure 3: Share gain/loss for Samsung/Willsemi/GalaxyCore/SmartSens during 2019-2021**

Market share change%	2019	2020	2021
Sony	3.31%	-3.60%	-0.15%
Samsung	0.34%	0.67%	1.00%
Willsemi	2.09%	3.54%	1.28%
GalaxyCore	0.71%	1.93%	0.10%
SmartSens	0.20%	0.62%	0.87%
OnSemi	-0.99%	0.21%	0.00%
Others	-5.66%	-3.30%	-3.16%

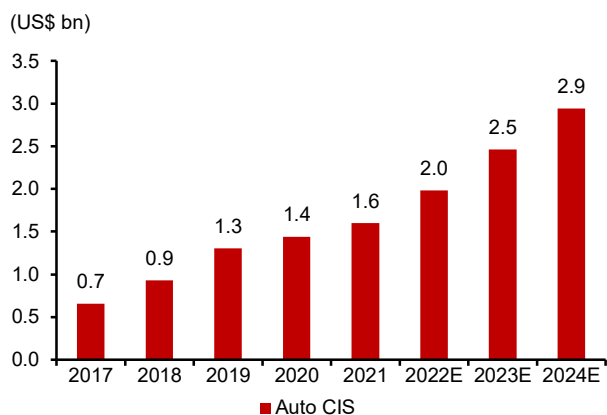
Source: Company filings, Yole, Counterpoint, Strategy analytics, Bloomberg and CMBIGM estimates

**Figure 4: Key smartphone OEMs' share change: Samsung and Honor gained share in 8M22 and Apple is expected to gain share in 2H22**

Market share change%	2019	2020	2021	8M22
Samsung	0.75%	-0.14%	-1.05%	2.49%
Apple	-0.52%	1.62%	2.60%	-0.78%
Xiaomi	0.09%	2.45%	2.82%	-1.14%
Vivo	0.84%	0.83%	1.40%	-0.72%
Oppo	0.55%	0.56%	1.48%	-1.18%
Honor		2.97%	-0.38%	1.86%
Transsion	0.40%	0.94%	2.16%	-0.14%
Other	-2.11%	-9.24%	-9.02%	-0.38%

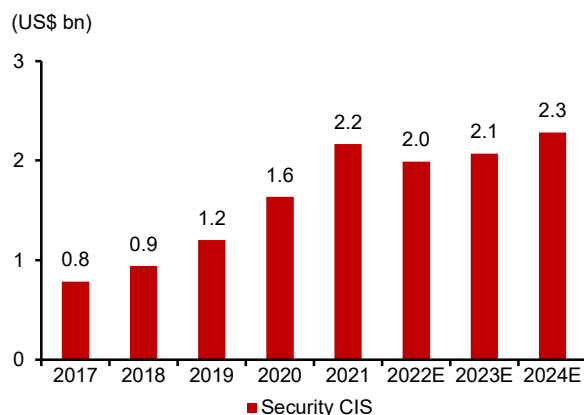
Source: Company filings, Yole, Counterpoint, Strategy analytics, Bloomberg and CMBIGM estimates

**Figure 5: Auto CIS market is expected to grow 11.8% YoY in 2022**



Source: Yole, IHS, CMBIGM estimates

**Figure 6: Security CIS market is expected to maintain at a similar level as 2021**



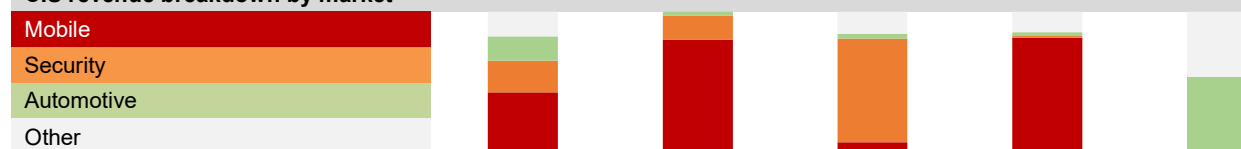
Source: Company data, Yole, CMBIGM estimates

## CIS comp table

Figure 7: CIS comp table

	Willsemi 603501 CH	Galaxycore 688728 CH	SmartSens 688213 CH	Sony 6758 JT	On Semi ON US
Market Cap (US\$m)	12,424.0	5,342.0	2,102.9	83,748.4	28,086.7
EV (US\$m)	13,212.7	5,866.3	2,165.0	96,149.0	29,809.4
Rating	BUY	BUY	NR	NR	NR
TP (LC)	120.00	20.00	-	-	-
Current Price (LC)	74.89	15.26	37.6	9891	64.83
Upside/(Downside)	60.2%	31.1%	-	-	-
YTD performance %	-67.4%	-49.8%		-33.5%	-5.3%

### CIS revenue breakdown by market



### FY22 estimates\*

Sales (US\$m)	3,219.8	951.3		79,599.0	8,260.0
Growth%	-4.8%	-3.1%		-9.9%	22.6%
GPM (%)	33.8%	31.0%		30.0%	49.2%
EBITDA margin (%)	23.7%	20.0%		19.3%	39.8%
NPM (%)	18.4%	15.1%		7.9%	25.0%
EPS (US\$)	0.50	0.06		4.68	4.62
FCF yield	2.2%	-8.0%		10.1%	4.9%

### FY23E estimates\*

Sales (RMBmn)	3,704.8	1,048.3		83,383.0	8,449.0
Growth%	15.1%	10.2%		4.8%	2.3%
GPM (%)	34.5%	31.0%		30.2%	48.7%
EBITDA margin (%)	24.6%	20.4%		18.5%	37.5%
NPM (%)	17.0%	16.4%		7.9%	26.2%
EPS (RMB)	0.53	0.07		5.29	4.68
FCF yield	4.0%	-8.0%		8.7%	6.0%

### Valuation (FY22E)\*

P/E	22.6	37.0		14.5	12.6
EV/EBITDA	17.3	30.9		6.3	9.1

### Valuation (FY23E)\*

P/E	21.3	30.8		12.2	12.9
EV/EBITDA	14.5	27.4		6.2	9.4

Source: Company filings, Bloomberg, Counterpoint, Yole, Strategy Analytics, CMBIGM as of 10 October 2022

\*Sony and On Semi's FY22/23 estimates are based on Bloomberg consensus data.

\*Sony's FYE is March 31.

\*FX rates are based on Bloomberg estimates: RMB/USD = 7.117 and JPY/USD = 135.364.

## Valuation Table

Name	Ticker	Mkt Cap (US\$ mn)	Last Price (LC)	TP (LC)	P/E (x)		ROE	
					FY22E	FY23E	FY22E	FY23E
<b>Global</b>								
<b>Willsemi</b>	<b>603501 CH</b>	<b>12,424</b>	<b>74.89</b>	<b>120.0</b>	<b>22.6</b>	<b>21.3</b>	<b>19.2</b>	<b>16.9</b>
Sony	SONY US	82,505	9891.00	NA	14.0	12.5	11.3	11.5
Samsung	005930 KS	234,853	56,200.00	NA	9.7	11.8	12.2	9.4
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ON Semi	ON US	28,087	64.83	NA	12.6	12.9	39.7	28.4
<b>Avg.</b>					<b>18.2</b>	<b>16.6</b>	<b>21.6</b>	<b>17.3</b>
<b>Domestic</b>								
<b>Willsemi</b>	<b>603501 CH</b>	<b>12,424</b>	<b>74.89</b>	<b>120.0</b>	<b>22.6</b>	<b>21.3</b>	<b>19.2</b>	<b>16.9</b>
<b>GalaxyCore</b>	<b>688728 CH</b>	<b>5,342</b>	<b>15.26</b>	<b>20.0</b>	<b>37.0</b>	<b>30.8</b>	<b>11.9</b>	<b>12.5</b>
Gigadevice	603986 CH	7,990	85.50	NA	19.3	16.0	19.0	19.2
Maxscend	300782 CH	6,066	81.12	NA	25.1	19.9	20.2	21.2
Goodix	603160 CH	2,919	45.48	NA	67.2	34.5	3.4	6.9
SG Micro	300661 CH	6,791	136.10	NA	44.6	33.1	34.5	32.7
<b>Avg.</b>					<b>35.7</b>	<b>25.7</b>	<b>18.0</b>	<b>18.3</b>

Source: Company data, Bloomberg and CMBIGM estimates as of 10 October 2022

## CIS market review and outlook

### 2022: Auto CIS's strength cannot offset the handset weakness

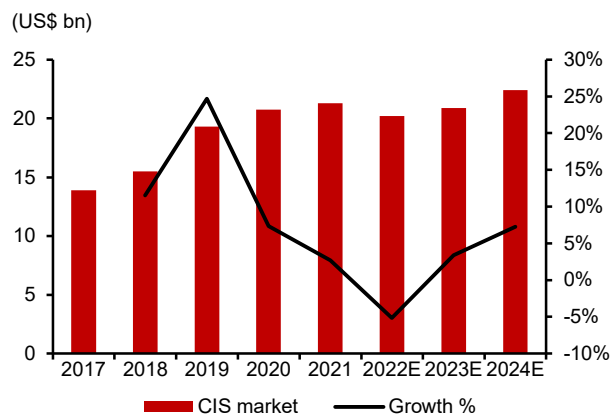
Based on our estimates, we expect global CIS sales to decline 5.1% YoY in 2022, mainly dragged by the weak performance in mobile CIS market. We expect CIS market to recover in 2H23, as mobile CIS inventory level returns to a normal level. However, challenges remain given high uncertainties in economy and geopolitical issues.

Mobile CIS market will remain the largest segment (63% of total CIS sales in 2021); however, its share will shrink further to 60% in 2022. In 1H22, the lackluster handset shipment has resulted in slower-than-expected CIS destocking. We see no sign of recovery in 2H22, especially for domestic Android OEMs. Therefore, we estimate **mobile CIS sales to decline 9.8% YoY in 2022. For domestic CIS manufacturers, their businesses are largely exposed to domestic clients, which will negatively affect their 2022 performance.**

**Auto CIS market will outperform again in 2022, with 24% YoY growth.** This is driven by increasing number of cameras per car as electrification and ADAS penetration are climbing. **For auto CIS suppliers, we expect the market share will be more consolidated to the top 3 (Onsemi, Willsemi and Sony)** in the following years, due to stringent requirement and longer verification cycle.

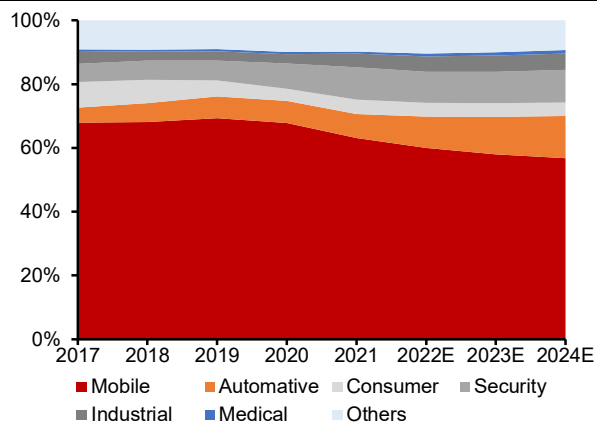
**We lowered the growth forecast for security CIS market in 2022,** as we expect the government and enterprises will be more conservative in spending. The segment sales may still be weak in 2H22 due to financial tightness.

**Figure 8: CIS market sales was US\$ 21.3bn in 2021, +2.7% YoY (the slowest growth in the past decade)**



Source: Yole, CMBIGM estimates

**Figure 9: Mobile CIS was still the largest segment (63.1%) in 2021 and its share will gradually shrink**

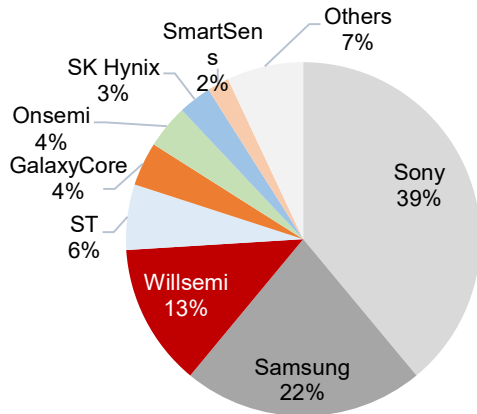


Source: Yole, CMBIGM estimates

For domestic CIS suppliers, **Willsemi (603501 CH)** and **GalaxyCore (688728 CH)** gained shares in the past years. **We still hold a positive outlook for these companies in the long term, despite the headwinds from mobile CIS market in 2022.**

We expect that **Willsemi** will continue to ride the tailwind of auto CIS market growth and enjoy share gain. The Company is also well-positioned in AR/VR industry, which is expected to gain momentum in 2023/24E. **GalaxyCore** will enjoy share gain in mobile CIS market in 2023/24E as their own production line has entered mass production in Sep 2022. Being the CIS leader in mid- to low-end mobile CIS market, GalaxyCore's product mix will improve while avg. ASP will rise.

**Figure 10: Top 3 (Sony/Samsung/Willsemi) took ~74% market share (2021)**



Source: Yole, CMBIGM estimates

**Figure 11: Samsung/Willsemi/GalaxyCore/SmartSens gained share during 2019-2021**

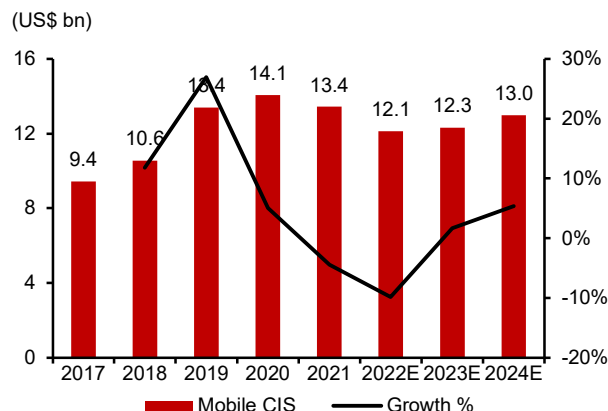
Market share change%	2019	2020	2021
Sony	3.31%	-3.60%	-0.15%
Samsung	0.34%	0.67%	1.00%
<b>Willsemi</b>	<b>2.09%</b>	<b>3.54%</b>	<b>1.28%</b>
<b>GalaxyCore</b>	<b>0.71%</b>	<b>1.93%</b>	<b>0.10%</b>
<b>SmartSens</b>	<b>0.20%</b>	<b>0.62%</b>	<b>0.87%</b>
OnSemi	-0.99%	0.21%	0.00%
Others	-5.66%	-3.30%	-3.16%

Source: Company filings, Yole, Counterpoint, Strategy analytics, Bloomberg and CMBIGM estimates

## Mobile CIS

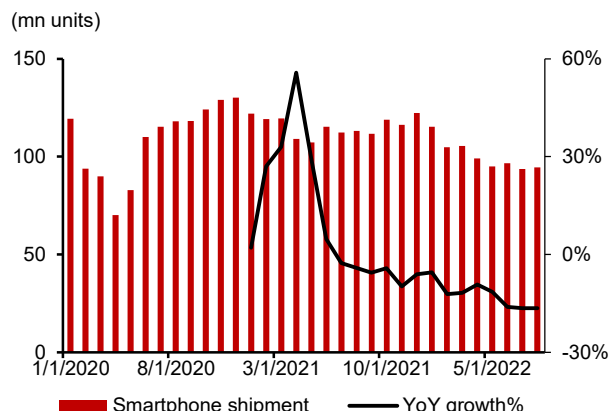
The smartphone market continues to be weak as expected. **We estimate 2022 mobile CIS sales will drop 9.8% YoY**, due to 1) lower smartphone shipment (sluggish demand) and 2) primary camera setup downgrade (BOM pressure).

**Figure 12: Mobile CIS market to decline 9.8% YoY, due to lower smartphone shipment and primary camera setup downgrade**



Source: Company filings, Counterpoint, Yole, Strategy Analytics, CMBIGM

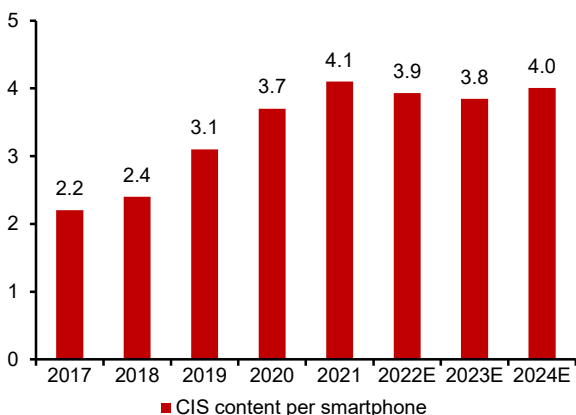
**Figure 13: Monthly smartphone shipment declined 12.4% YoY on average during Jan 2022 and Aug 2022**



Source: Company filings, Counterpoint, Yole, Strategy Analytics, CMBIGM

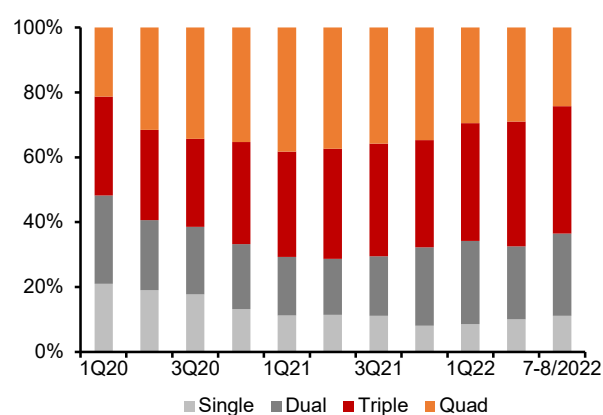
In 1H22, the average CIS content declined to 3.9 from 4.1 in 2021. The trend has not been reversed as the quad-camera's share dropped further to 24.2% in the first two months of 3Q22 (vs. 35.7% in 3Q21 and 29.0% in 2Q22). This was mainly due to BOM pressure for domestic OEMs as some depth cameras were being replaced with AI algorithm. Counterpoint has pointed out that Samsung will "remove the depth camera from its Galaxy A series next year as mid-end chipsets can use AI algorithm to produce bokeh effects." Following the trend, **we estimate the average CIS content will decline 4.1% YoY in 2022 and 2.1% in 2023.**

**Figure 14: Average CIS content declined to 3.9 in 1H22 from 4.1 in 2021**



Source: Counterpoint, CMBIGM

**Figure 15: Quad cameras (rear)' share shrink in 2022**

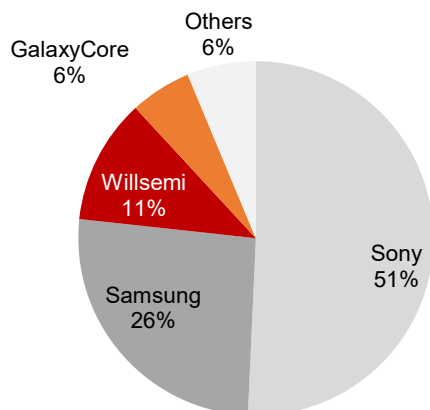


Source: Counterpoint, CMBIGM



Sony, Samsung and Willsemi are the top 3 players in mobile CIS market, accounting for 88% share in 2021. In 2022, we expect **Sony will gain the most share**, driven by stronger demand for iPhone. **Willsemi is likely to lose 2.6% share** due to declining OVM's share in smartphone market. **GalaxyCore's share will slightly drop by 0.05%** based on our estimate, better than Willsemi thanks to a broader client base including Samsung.

**Figure 16: Top 3 (Sony/Samsung/Willsemi) took ~88% market share (2021)**



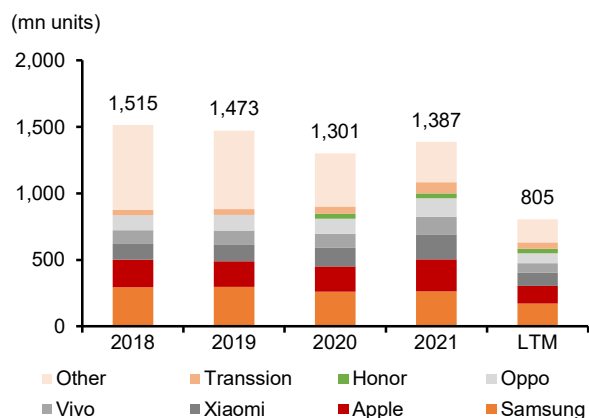
Source: Company filings, Yole, Counterpoint, Strategy analytics, Bloomberg and CMBIGM estimates

**Figure 17: Share gain/loss for mobile CIS suppliers in 2020-2021**

Market share change%	2020	2021
Sony	-3.30%	3.30%
Samsung	1.30%	-3.00%
Willsemi	4.33%	0.34%
GalaxyCore	2.14%	0.37%
Others	-4.48%	-1.01%

Source: Company filings, Yole, Counterpoint, Strategy analytics, Bloomberg and CMBIGM estimates

**Figure 18: Global smartphone shipment accounted for 58.0% of 2021 shipment in 8M22, while OVM only accounted for 52.7% of their 2021 shipment**



Source: Counterpoint, CMBIGM estimates

**Figure 19: Key smartphone OEMs' share change: Samsung and Honor gained share in 8M22 and Apple is expected to gain share in 2H22**

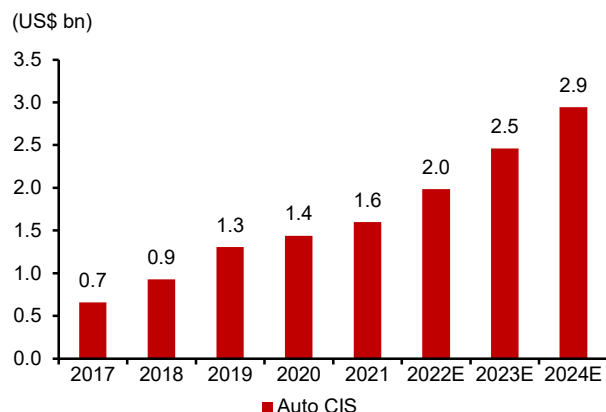
Market share change%	2019	2020	2021	8M22
Samsung	0.75%	-0.14%	-1.05%	2.49%
Apple	-0.52%	1.62%	2.60%	-0.78%
Xiaomi	0.09%	2.45%	2.82%	-1.14%
Vivo	0.84%	0.83%	1.40%	-0.72%
Oppo	0.55%	0.56%	1.48%	-1.18%
Honor		2.97%	-0.38%	1.86%
Transsion	0.40%	0.94%	2.16%	-0.14%
Other	-2.11%	-9.24%	-9.02%	-0.38%

Source: Company filings, Yole, Counterpoint, Strategy analytics, Bloomberg and CMBIGM estimates

## Auto CIS

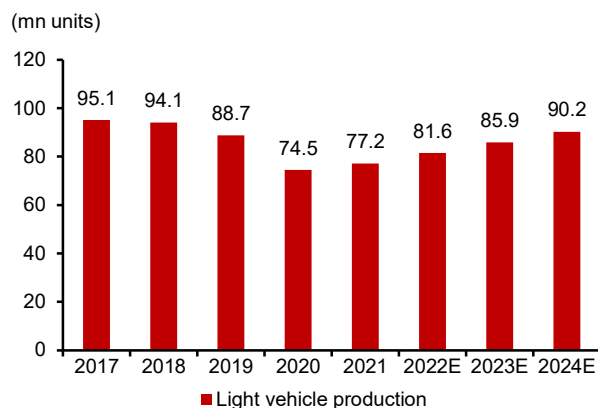
According to IHS's Sep forecast, global light vehicle production will increase 5.7% YoY and 5.3% YoY in 2022 and 2023. Although supply chain is improving, challenges still remain given high uncertainties in economy and geopolitical issues.

**Figure 20: Auto CIS market is expected to grow 24% YoY in 2022**



Source: Yole, IHS, CMBIGM estimates

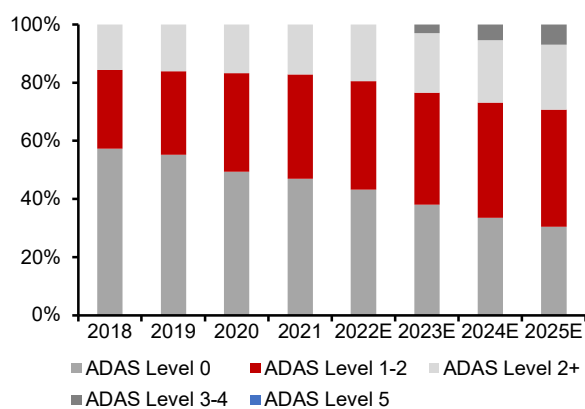
**Figure 21: Global light vehicle production to grow 5.1% YoY**



Source: IHS, Yole, CMBIGM estimates

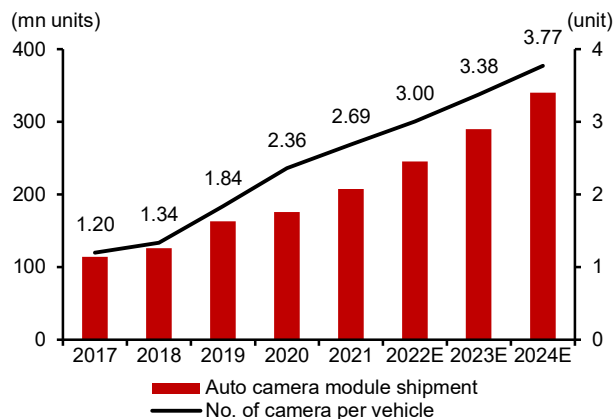
We expect global auto CIS market to grow 24% YoY in 2022. This is driven by increasing number of cameras per car as: 1) the transition from ordinary vehicles to electrified intelligent vehicles will require installation of a large number of cameras; 2) Advanced Driver Assistance Systems (“ADAS”) toward Autonomous Driving (“AD”) demand. Currently, there are ~2.7 cameras per vehicle and we estimate the number will be 4.2 in 2025. Prototypes presented nowadays are already installed with 10+ cameras.

**Figure 22: ADAD penetration rate is expected to accelerate**



Source: Yole, IHS, CMBIGM estimates

**Figure 23: No. of camera per vehicle to grow 10.8% YoY in 2022**



Source: Yole, IHS, CMBIGM estimates

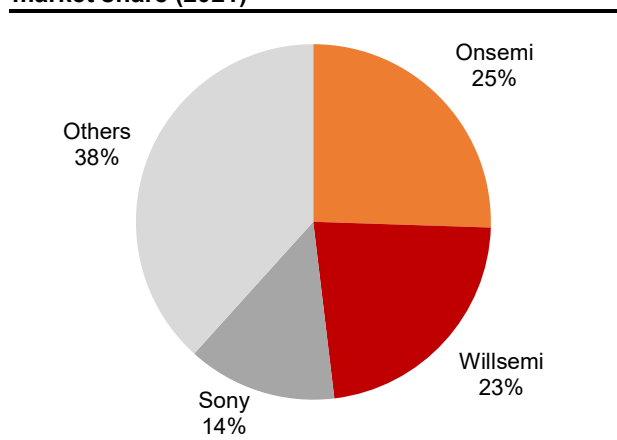
For auto CIS suppliers, **Onsemi, Willsemi and Sony accounted for 62% of market share. We expect the market share will be more consolidated to the top 3 in the following years, due to stringent requirement and longer verification cycle.**

On Semi faced supply chain bottleneck in 2021 and its share dropped by 8.5%. However, the Company's Automotive Sensing Division's revenue grew 75% YoY in 1H22, due to *"the strategy to focus on a product mix that yields higher margins, and an increase in average selling prices driven by strong market demand"*.

Willsemi is also well-positioned. According to Digitimes, *"since the company's first car-use CIS hit the market in 2005, OmniVision (Willsemi) has sold over 800mn automotive CIS chips, ranking as the world's No.2 supplier of such chips"*. Willsemi's current auto CIS clients include Mercedes-Benz, BMW, Volkswagen, Toyota, Tesla and China's Changan Auto, Great Wall Motor, BYD Auto, and Geely Automobile. Willsemi's auto CIS sales reached RMB2.3bn in 2021 (85% YoY growth) and RMB1.6bn in 1H22. We expect the segment revenue will grow at least 50% YoY in 2022.

We also hold a positive outlook for Sony, as the Company is catching up in auto CIS market. Given its technology strength, we believe the Company should enjoy share gain as well, especially beyond 2022.

**Figure 24: Top 3 (On Semi/Willsemi/Sony) took ~62% market share (2021)**      **Figure 25: Auto CIS market share will be more consolidated to the top 3**



Source: Company data, Yole and CMBIGM estimates

Market share change%	2019	2020	2021
Onsemi	-3.89%	-2.37%	-4.22%
Willsemi	-6.97%	-1.96%	9.53%
Sony	-0.92%	1.41%	2.78%
Others	11.78%	2.93%	-8.09%

Source: Company data, Yole, IHS, Bloomberg and CMBIGM estimates

## Security CIS

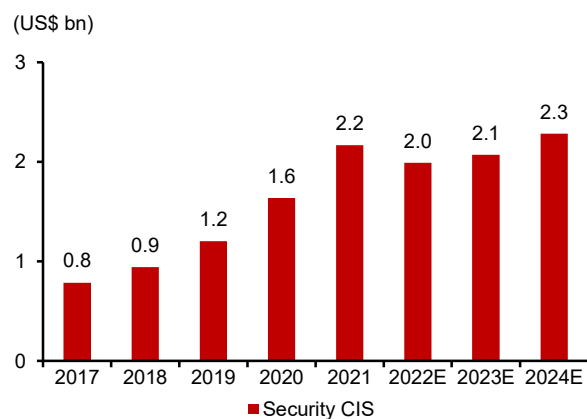
In the near term, the government and enterprise are likely to be more conservative in spending and security CIS market sales will continue to be weak in 2H22. However, we remain a long-term positive outlook for domestic security CIS market and we believe Chinese ecosystem including upstream CIS players and downstream camera suppliers will drive market growth.

For downstream security camera suppliers, **Hikvision and Dahua were leading in the securities market, representing a combined market share of 56%**. From 2018 to 2021, security camera market grew from US\$19.9bn to US\$32.3bn at 18% CAGR, while Hikvision and Dahua's shares remain stable.

However, we remain our positive long-term outlook for this market as security camera continues to upgrade (i.e., resolution and integrated new features, such as autonomous checkout and anti-lifting). Currently, 2MP/5MP accounted for 90% of market share. The security CIS market is expected to grow at 9.0% 2022-26E CAGR.

A few Chinese players are well-positioned to enjoy the growth. **Willsemi (603501 CH) led the market with 22% market share in 2021, followed by Smartsens (688213 CH) and GalaxyCore (688728 CH)**. Among the players, we are particularly positive on Willsemi given its leading position and the ability to monetize both its CIS and ISP solution for cameras.

**Figure 26: Security CIS market is expected to maintain at a similar level as 2021**



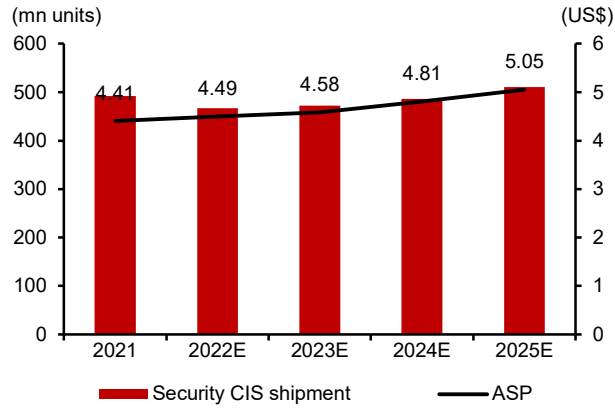
Source: Company data, Yole, CMBIGM estimates

**Figure 27: Share gain/loss for mobile CIS suppliers in 2020-2021**

Market share change%	2020	2021
Willsemi	NA	5.87%
SmartSens	4.23%	2.37%
Sony	-12.61%	-9.05%
Others	NA	3.04%

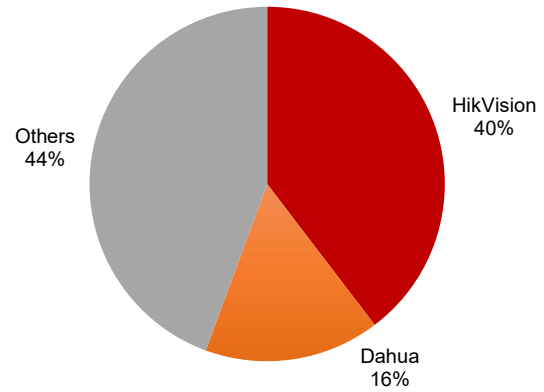
Source: Company filings, Yole and CMBIGM estimates

**Figure 28: We expect security CIS ASP to increase, driven by camera upgrade**



Source: Yole, CMBIGM estimates

**Figure 29: Security camera suppliers' market share (2021)**



Source: Company data, Yole, CMBIGM estimates

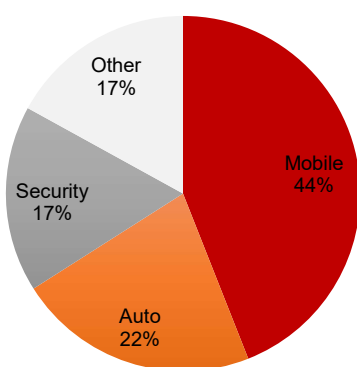
## Willsemi (603501 CH)

### Maintain BUY, with TP revised down to RMB120

We lowered our forecasts for Willsemi, as we see no sign of recovery in domestic smartphone OEMs' shipment in the near term. The lackluster handset shipment has resulted in long-than-expected inventory consumption for CIS suppliers. Although we are still optimistic about the Company's auto CIS sales, we expect the growth from auto segment may not offset the weakness in mobile CIS market.

In a longer horizon, **we maintain our BUY rating for Willsemi**, as we expect the Company will continue to ride the tailwind of auto CIS market growth and enjoy share gain. Willsemi is also well-positioned in AR/VR industry, which is expected to gain momentum in 2023/24E.

**Figure 30: Willsemi's CIS sales breakdown by market (1H22)**



Source: Company filings and CMBIGM estimates

**Figure 31: CMBI estimates: Share gain/loss for Willsemi by markets**

Market share change%	2020	2021	2022E	2023E
Mobile	4.33%	0.34%	-3.16%	0.19%
Auto	-1.96%	9.53%	5.50%	3.50%
Security	NA	5.87%	-1.30%	1.28%

Source: Company filings, Yole, Counterpoint, Strategy analytics, Bloomberg and CMBIGM estimates

However, **given the near-term weakness in mobile market, we revised down our TP to RMB120, based on the same 32x FY23E P/E**. We believe the valuation is justified, given depressed market sentiment and weakened consumer confidence.

Potential downside risks include: 1) worse-than-expected global economy that curbs consumer spending and 2) slower-than-expected destocking of mobile CIS products.

Figure 32: Financials

(RMBmn)	FY20A	FY21A	1H22A	2H22E	FY22E	FY23E	FY24E
<b>Revenue</b>							
<b>Mobile CIS</b>	<b>10,288</b>	<b>9,758</b>	<b>3,211</b>	<b>3,411</b>	<b>6,622</b>	<b>6,766</b>	<b>7,517</b>
...YoY%	62%	-5%			-32%	2%	11%
<b>Security CIS</b>	<b>1,764</b>	<b>3,060</b>	<b>1,241</b>	<b>1,510</b>	<b>2,750</b>	<b>3,037</b>	<b>3,744</b>
...YoY%		74%			-10%	10%	23%
<b>Auto CIS</b>	<b>1,243</b>	<b>2,300</b>	<b>1,606</b>	<b>2,083</b>	<b>3,688</b>	<b>5,146</b>	<b>6,549</b>
...YoY%		85%			60%	40%	27%
<b>Other</b>	<b>1,402</b>	<b>1,146</b>	<b>1,241</b>	<b>951</b>	<b>2,192</b>	<b>3,113</b>	<b>4,723</b>
...YoY%		7%			14%	17%	21%
<b>Total CIS</b>	<b>14,697</b>	<b>16,264</b>	<b>7,298</b>	<b>7,955</b>	<b>15,253</b>	<b>18,061</b>	<b>22,533</b>
...YoY%	50%	11%			-6%	18%	25%
<b>Display driver</b>	<b>744</b>	<b>1,963</b>	<b>1,188</b>	<b>605</b>	<b>1,793</b>	<b>1,917</b>	<b>2,194</b>
...YoY%	na	164%	94%		-9%	7%	14%
<b>Other</b>	<b>1,827</b>	<b>2,153</b>	<b>620</b>	<b>658</b>	<b>1,278</b>	<b>1,517</b>	<b>1,807</b>
...YoY%	16%	18%			-41%	19%	19%
<b>Total IC design</b>	<b>17,267</b>	<b>20,380</b>	<b>9,106</b>	<b>9,978</b>	<b>19,084</b>	<b>22,397</b>	<b>27,662</b>
...YoY%	52%	18%	-14%		-6%	17%	24%
<b>Semi distribution</b>	<b>2,485</b>	<b>3,660</b>	<b>1,925</b>	<b>1,878</b>	<b>3,803</b>	<b>3,946</b>	<b>4,208</b>
...YoY%	11%	47%	4%		4%	4%	7%
<b>Other</b>	<b>71</b>	<b>64</b>	<b>41</b>	<b>23</b>	<b>64</b>	<b>64</b>	<b>64</b>
...YoY%	89%	-10%			0%	0%	0%
<b>Total Revenue</b>	<b>19,824</b>	<b>24,104</b>	<b>11,072</b>	<b>11,879</b>	<b>22,951</b>	<b>26,407</b>	<b>31,934</b>
...YoY%	45%	22%			-5%	15%	21%
<b>Gross profit</b>							
<b>CIS</b>	<b>4,610</b>	<b>5,471</b>			<b>5,528</b>	<b>6,788</b>	<b>8,641</b>
...GPM%	31%	34%			36%	38%	38%
<b>Display driver</b>	<b>179</b>	<b>1,195</b>			<b>986</b>	<b>958</b>	<b>1,053</b>
...GPM%	24%	61%			55%	50%	48%
<b>Other</b>	<b>693</b>	<b>1,058</b>			<b>611</b>	<b>737</b>	<b>878</b>
<b>Total</b>	<b>5,930</b>	<b>8,314</b>			<b>7,746</b>	<b>9,117</b>	<b>11,245</b>
...GPM%	30%	34%			34%	35%	35%

Source: Bloomberg, CMBIGM estimates

**Figure 33: Earnings revision**

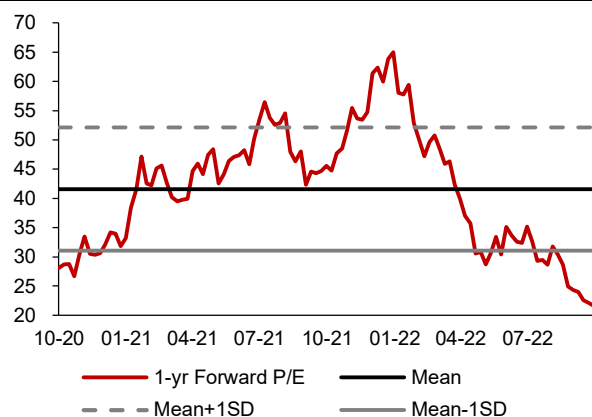
US\$ mn	New			Old			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	22,951	26,407	31,934	24,548	30,957	38,004	-7%	-15%	-16%
Gross Profit	7,746	9,117	11,245	8,195	10,728	13,404	-5%	-15%	-16%
Operating Profit	4,616	4,924	6,278	4,709	6,316	8,026	-2%	-22%	-22%
Net profit	4,220	4,502	5,739	4,316	5,547	7,212	-2%	-19%	-20%
EPS (US\$ cents)	3.541	3.767	4.797	3.871	4.955	6.596	-9%	-24%	-27%
Gross Margin	33.8%	34.5%	35.2%	33.4%	34.7%	35.3%	0.4 ppt	-0.1 ppt	-0.1 ppt
Operating Margin	20.1%	18.6%	19.7%	19.2%	20.4%	21.1%	0.9 ppt	-1.8 ppt	-1.5 ppt
Net Margin	18.4%	17.0%	18.0%	17.6%	17.9%	19.0%	0.8 ppt	-0.9 ppt	-1 ppt

Source: Company data, CMBIGM estimates

**Figure 34: CMBIGM estimates vs consensus**

US\$ mn	CMBIGM			Consensus			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	22,951	26,407	31,934	28,269	33,428	38,566	-19%	-21%	-17%
Gross Profit	7,746	9,117	11,245	9,865	11,821	13,677	-21%	-23%	-18%
Operating Profit	4,616	4,924	6,278	5,543	6,816	7,947	-17%	-28%	-21%
Net profit	4,220	4,502	5,739	5,040	6,198	7,225	-16%	-27%	-21%
EPS (US\$ cents)	3.541	3.767	4.797	3.835	4.771	5.600	-8%	-21%	-14%
Gross Margin	33.8%	34.5%	35.2%	34.9%	35.4%	35.5%	-1.1 ppt	-0.8 ppt	-0.3 ppt
Operating Margin	20.1%	18.6%	19.7%	19.6%	20.4%	20.6%	0.5 ppt	-1.7 ppt	-0.9 ppt
Net Margin	18.4%	17.0%	18.0%	17.8%	18.5%	18.7%	0.6 ppt	-1.5 ppt	-0.8 ppt

Source: Company data, CMBIGM estimates

**Figure 35: 12M forward P/E chart**

Source: Company data, CMBIGM estimates

**Figure 36: 12M forward P/E band**

Source: Company data, CMBIGM estimates



## Galaxycore (688728 CH)

### Maintain BUY, with TP revised down to RMB20

We lowered our forecasts for GalaxyCore, as we see no sign of recovery in domestic smartphone OEMs' shipment in the near term. This has resulted in long-than-expected inventory consumption for CIS suppliers.

We maintain our BUY rating for **GalaxyCore**. We expect the Company will enjoy share gain in mobile CIS market in 2023/24E as their own production line has entered mass production in Sep 2022. Being the CIS leader in mid- to low-end mobile CIS market, GalaxyCore's product mix will improve while avg. ASP will rise.

However, given the near-term weakness in mobile market, we revised down our TP to RMB20, based on the same 40x FY23E P/E. We believe the valuation is justified, given depressed market sentiment and weakened consumer confidence.

Potential downside risks include: 1) worse-than-expected global economy that curbs consumer spending and 2) slower-than-expected destocking of mobile CIS products.

**Figure 37: Financials**

(RMBmn)	FY19A	FY20A	FY21A	FY22E	FY23E	FY24E
<b>Revenue</b>						
<b>CIS</b>	<b>3,194</b>	<b>5,864</b>	<b>5,937</b>	5,826	6,636	7,775
...YoY%	-	84%	1%	-2%	14%	17%
<b>Display driver</b>	<b>486</b>	<b>591</b>	<b>1,062</b>	955	836	806
...YoY%	-	22%	80%	-10%	-12%	-4%
<b>Other</b>	<b>10</b>	<b>0</b>	<b>0</b>	0	0	0
...YoY%	-	-96%	nm	na	na	na
<b>Total Revenue</b>	<b>3,690</b>	<b>6,456</b>	<b>6,998</b>	<b>6,781</b>	<b>7,472</b>	<b>8,581</b>
...YoY%	-	75%	8%	-3%	10%	15%
<b>Gross Margin</b>						
CIS	27.5%	28.5%	29.7%	27.9%	28.9%	29.5%
Display driver	15.2%	27.8%	56.1%	50.0%	47.0%	45.0%
<b>Total</b>	<b>26.0%</b>	<b>28.4%</b>	<b>33.7%</b>	<b>31.0%</b>	<b>31.0%</b>	<b>30.9%</b>

Source: Bloomberg and CMBIGM estimates.

**Figure 38: Earnings revision**

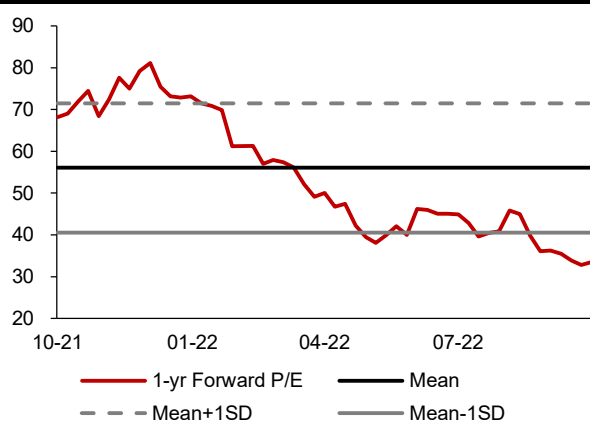
US\$ mn	New			Old			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	6,781	7,472	8,581	9,512	12,699	na	-29%	-41%	na
Gross Profit	2,101	2,314	2,656	3,216	4,243	na	-35%	-45%	na
Operating Profit	1,134	1,364	1,367	2,018	2,603	na	-44%	-48%	na
Net profit	1,021	1,228	1,231	1,817	2,344	na	-44%	-48%	na
EPS (RMB)	0.413	0.496	0.498	0.726	0.936	na	-43%	-47%	na
Gross Margin	31.0%	31.0%	30.9%	32.1%	30.1%	na	-1.1 ppt	0.9 ppt	na
Operating Margin	16.7%	18.3%	15.9%	18.9%	16.8%	na	-2.1 ppt	1.4 ppt	na
Net Margin	15.1%	16.4%	14.3%	16.9%	15.0%	na	-1.8 ppt	1.4 ppt	na

Source: Company data, CMBIGM estimates

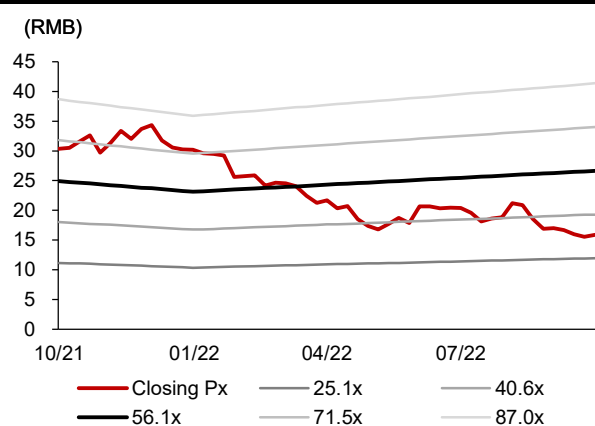
**Figure 39: CMBIGM estimates vs consensus**

US\$ mn	CMBIGM			Consensus			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	6,781	7,472	8,581	6,842	8,455	11,096	-1%	-12%	-23%
Gross Profit	2,101	2,314	2,656	2,087	2,409	3,363	1%	-4%	-21%
Operating Profit	1,134	1,364	1,367	1,262	1,514	1,982	-10%	-10%	-31%
Net profit	1,021	1,228	1,231	1,040	1,272	1,642	-2%	-4%	-25%
EPS (RMB)	0.413	0.496	0.498	0.420	0.498	0.597	-2%	0%	-17%
Gross Margin	31.0%	31.0%	30.9%	30.5%	28.5%	30.3%	0.5 ppt	2.5 ppt	0.6 ppt
Operating Margin	16.7%	18.3%	15.9%	18.4%	17.9%	17.9%	-1.7 ppt	0.3 ppt	-1.9 ppt
Net Margin	15.1%	16.4%	14.3%	15.2%	15.0%	14.8%	-0.1 ppt	1.4 ppt	-0.5 ppt

Source: Company data, CMBIGM estimates

**Figure 40: 12M forward P/E chart**

Source: Company data, CMBIGM estimates

**Figure 41: 12M forward P/E band**

Source: Company data, CMBIGM estimates

## Financial Summary – Willsemi (603501 CH)

### Income statement

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
<b>Revenue</b>	<b>19,824</b>	<b>24,104</b>	<b>22,951</b>	<b>26,407</b>	<b>31,934</b>
COGS	-13,894	-15,790	-15,204	-17,290	-20,689
<b>Gross Profit</b>	<b>5,930</b>	<b>8,314</b>	<b>7,746</b>	<b>9,117</b>	<b>11,245</b>
SG&A	-1,147	-1,201	-1,250	-1,377	-1,665
R&D exp.	-1,727	-2,110	-2,009	-2,312	-2,796
Financing exp.	-275	-356	-463	-429	-449
Other opex	176	352	593	-75	-57
<b>Operating profit</b>	<b>2,956</b>	<b>5,000</b>	<b>4,616</b>	<b>4,924</b>	<b>6,278</b>
Non-operating income	44	5	3	4	4
Non-operating exp.	-9	-3	-2	-3	-3
<b>Pre-tax profit</b>	<b>2,991</b>	<b>5,002</b>	<b>4,617</b>	<b>4,925</b>	<b>6,279</b>
Income tax expenses	-308	-456	-391	-417	-532
<b>Net profit</b>	<b>2,683</b>	<b>4,546</b>	<b>4,226</b>	<b>4,508</b>	<b>5,747</b>
Non-controlling interests	-23	70	6	6	8
<b>Net profit to shareholders</b>	<b>2,706</b>	<b>4,476</b>	<b>4,220</b>	<b>4,502</b>	<b>5,739</b>
<b>Adj. EBITDA</b>	<b>3,830</b>	<b>5,949</b>	<b>5,440</b>	<b>6,502</b>	<b>8,088</b>

### Cash flow summary

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
<b>Pretax profit</b>	<b>2,683</b>	<b>4,546</b>	<b>4,226</b>	<b>4,508</b>	<b>5,747</b>
D&A	765	879	855	967	1,162
Change in working capital	-221	-3,328	-1,657	-1,006	-1,293
Others	117	96	-15	712	732
<b>Net cash from operating</b>	<b>3,345</b>	<b>2,192</b>	<b>3,408</b>	<b>5,182</b>	<b>6,348</b>
Capex	-1,133	-1,122	-1,406	-1,563	-1,839
Purchase/sale of investments	-373	-1,969	-3,076	-877	-1,080
Purchase/sale of subs	-1,163	96	12	12	12
Other	38	96	1,005	346	436
<b>Net cash from investing</b>	<b>-2,631</b>	<b>-2,899</b>	<b>-3,464</b>	<b>-2,082</b>	<b>-2,470</b>
Change in shares	683	1,203	2,086	628	217
Change in debt	1,567	3,066	2,524	-263	429
Dividend/interests paid	-413	-569	-934	-959	-991
Other	-3	-767	-284	-242	-275
<b>Net cash from financing</b>	<b>1,835</b>	<b>2,932</b>	<b>3,391</b>	<b>-836</b>	<b>-621</b>
<b>Net change in cash</b>	<b>2,548</b>	<b>2,226</b>	<b>3,335</b>	<b>2,264</b>	<b>3,257</b>
Cash, beginning	3,116	5,423	7,630	10,947	13,193
Exchange difference	-241	-18	-18	-18	-18
<b>Cash, end</b>	<b>5,423</b>	<b>7,630</b>	<b>10,947</b>	<b>13,193</b>	<b>16,432</b>

### Balance sheet

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
<b>Current assets</b>	<b>13,913</b>	<b>20,296</b>	<b>24,908</b>	<b>28,861</b>	<b>32,974</b>
Cash & equivalents	5,456	7,671	10,989	13,235	16,474
Trade & other receivables	2,583	3,029	2,718	3,367	3,583
Inventories	5,274	8,781	10,485	11,299	11,961
Other current assets	600	814	715	961	954
<b>Non-current assets</b>	<b>8,735</b>	<b>11,784</b>	<b>15,258</b>	<b>16,731</b>	<b>18,309</b>
PPE	1,871	1,863	2,040	2,308	2,622
Intangibles	1,509	1,604	1,547	1,476	1,410
Goodwill	2,800	2,998	2,986	2,974	2,962
Other non-current assets	2,556	5,320	8,686	9,973	11,315
<b>Total assets</b>	<b>22,648</b>	<b>32,080</b>	<b>40,166</b>	<b>45,592</b>	<b>51,282</b>
<b>Current liabilities</b>	<b>6,845</b>	<b>8,700</b>	<b>11,798</b>	<b>11,850</b>	<b>11,182</b>
ST debt & LT debt to mature	3,041	3,745	7,247	6,453	6,088
Trade & other payables	2,544	3,956	3,964	4,377	4,130
Other current liabilities	1,260	999	587	1,020	964
<b>Non-current liabilities</b>	<b>4,278</b>	<b>7,076</b>	<b>6,376</b>	<b>7,171</b>	<b>8,181</b>
LT debt	3,182	3,448	2,720	3,251	4,044
Bonds payables	0	2,250	2,000	2,000	2,000
Other non-current liabilities	1,096	1,378	1,656	1,919	2,137
<b>Total liabilities</b>	<b>11,123</b>	<b>15,776</b>	<b>18,174</b>	<b>19,020</b>	<b>19,363</b>
<b>Total equity</b>	<b>11,525</b>	<b>16,304</b>	<b>21,992</b>	<b>26,572</b>	<b>31,919</b>
Share capital	868	876	1,192	1,195	1,196
Reserves	7,248	8,434	10,204	10,829	11,045
Treasury stock	-255.4	-741.7	-741.7	-741.7	-741.7
Retained earnings	3,895	8,049	11,767	15,790	21,009
Other equities	-516.2	-418.8	-541.4	-618.9	-716.3
Minority interests	286	106	112	119	127
<b>Total liabilities and equity</b>	<b>22,648</b>	<b>32,080</b>	<b>40,166</b>	<b>45,592</b>	<b>51,282</b>

### Key ratios

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
<b>Revenue by segment</b>					
CMOS	14,697	16,264	15,253	18,061	22,533
TDDI	744	1,963	1,793	1,917	2,194
Others	4,383	5,877	5,905	6,430	7,207
<b>Total</b>	<b>19,824</b>	<b>24,104</b>	<b>22,951</b>	<b>26,407</b>	<b>31,934</b>
CMOS %	74.1%	67.5%	66.5%	68.4%	70.6%
<b>Growth (%)</b>					
Revenue	45.4%	21.6%	-4.8%	15.1%	20.9%
Adj. EBITDA	102.5%	55.4%	-8.6%	19.5%	24.4%
Net profit	481.2%	65.4%	-5.7%	6.7%	27.5%
<b>Profit &amp; loss ratio (%)</b>					
Gross margin	29.9%	34.5%	33.8%	34.5%	35.2%
EBITDA margin	19.3%	24.7%	23.7%	24.6%	25.3%
Net profit margin	13.7%	18.6%	18.4%	17.0%	18.0%
<b>Balance sheet ratio</b>					
Net debt/total equity (%)	6.7%	10.9%	4.4%	net	net
Debt/EBITDA	1.6	1.6	2.2	1.8	1.5
Interest coverage	12.9	14.5	11.4	12.3	15.2
Cash conversion cycle (days)	123.1	152.5	209.2	212.0	197.0
<b>Profitability (%)</b>					
ROE	23.5%	27.5%	19.2%	16.9%	18.0%
ROA	11.9%	14.0%	10.5%	9.9%	11.2%
<b>Per share data (RMB)</b>					
EPS	3.21	5.16	3.54	3.77	4.80
BVPS	13.33	18.67	18.36	22.14	26.57
	14,697	16,264	15,253	18,061	22,533

Source: Company data, CMBIGM estimates

## Financial Summary – GalaxyCore (688728 CH)

### Income statement

YE 31 Dec (RMB mn)	FY20A	FY21E	FY22E	FY23E	FY24E
<b>Revenue</b>	<b>6,456</b>	<b>7,001</b>	<b>6,781</b>	<b>7,472</b>	<b>8,581</b>
COGS	-4,623	-4,641	-4,680	-5,158	-5,925
<b>Gross Profit</b>	<b>1,833</b>	<b>2,360</b>	<b>2,101</b>	<b>2,314</b>	<b>2,656</b>
SG&A	-222	-256	-226	-239	-275
R&D exp.	-595	-520	-509	-538	-618
Financing exp.	-103	-137	-91	-231	-275
Other opex	-28	-19	-141	58	-121
<b>Operating profit</b>	<b>885</b>	<b>1,428</b>	<b>1,134</b>	<b>1,364</b>	<b>1,367</b>
Non-operating income	0	0	0	0	0
Non-operating exp.	-13	-5	0	0	0
<b>Pre-tax profit</b>	<b>872</b>	<b>1,424</b>	<b>1,135</b>	<b>1,364</b>	<b>1,368</b>
Income tax expenses	-99	-166	-113	-136	-137
<b>Net profit</b>	<b>773</b>	<b>1,258</b>	<b>1,021</b>	<b>1,228</b>	<b>1,231</b>
Non-controlling interests	0	0	0	0	0
<b>Net profit to shareholders</b>	<b>773</b>	<b>1,258</b>	<b>1,021</b>	<b>1,228</b>	<b>1,231</b>
<b>Adj. EBITDA</b>	<b>1,068</b>	<b>1,703</b>	<b>1,355</b>	<b>1,525</b>	<b>1,749</b>

### Cash flow summary

YE 31 Dec (RMB mn)	FY20A	FY21E	FY22E	FY23E	FY24E
<b>Pretax profit</b>	<b>773</b>	<b>1,258</b>	<b>1,021</b>	<b>1,228</b>	<b>1,231</b>
D&A	39	82	116	155	203
Change in working capital	-1,295	-1,111	307	-1,118	124
Others	177	210	327	182	398
<b>Net cash from operating</b>	<b>-306</b>	<b>439</b>	<b>1,771</b>	<b>446</b>	<b>1,956</b>
Capex	-405	-3,816	-4,792	-3,483	-2,720
Purchase/sale of investments	-8	-81	-95	-29	-50
Purchase/sale of subs	0	0	0	0	0
Other	29	0	-622	42	45
<b>Net cash from investing</b>	<b>-384</b>	<b>-3,898</b>	<b>-5,509</b>	<b>-3,470</b>	<b>-2,726</b>
Change in shares	0	0	0	0	0
Change in debt	983	2,299	3,162	1,964	1,348
Dividend/interests paid	-83	-123	-197	-252	-291
Other	866	3,496	49	-0	-0
<b>Net cash from financing</b>	<b>1,765</b>	<b>5,672</b>	<b>3,015</b>	<b>1,712</b>	<b>1,058</b>
<b>Net change in cash</b>	<b>1,076</b>	<b>2,214</b>	<b>-724</b>	<b>-1,313</b>	<b>288</b>
Cash, beginning	329	1,374	3,586	2,861	1,547
Exchange difference	-31	-1	-1	-1	-1
<b>Cash, end</b>	<b>1,374</b>	<b>3,586</b>	<b>2,861</b>	<b>1,547</b>	<b>1,833</b>

### Balance sheet

YE 31 Dec (RMB mn)	FY20A	FY21E	FY22E	FY23E	FY24E
<b>Current assets</b>	<b>4,815</b>	<b>8,919</b>	<b>9,515</b>	<b>8,351</b>	<b>8,681</b>
Cash & equivalents	1,470	4,511	4,433	3,119	3,405
Trade & other receivables	1,026	564	483	570	569
Inventories	2,077	3,484	3,971	4,052	3,959
Other current assets	242	360	628	610	747
<b>Non-current assets</b>	<b>902</b>	<b>4,385</b>	<b>8,240</b>	<b>12,904</b>	<b>15,262</b>
PPE	248	269	303	461	626
Intangibles	201	248	269	290	316
Goodwill	0	0	0	0	0
Other non-current assets	452	3,869	7,669	12,152	14,320
<b>Total assets</b>	<b>5,716</b>	<b>13,304</b>	<b>17,754</b>	<b>21,254</b>	<b>23,943</b>
<b>Current liabilities</b>	<b>2,785</b>	<b>4,983</b>	<b>8,320</b>	<b>10,468</b>	<b>11,915</b>
ST debt & LT debt to	1,568	3,670	6,777	8,766	10,146
Trade & other payables	1,030	948	1,360	1,325	1,435
Other current liabilities	188	365	182	377	334
<b>Non-current liabilities</b>	<b>212</b>	<b>771</b>	<b>865</b>	<b>991</b>	<b>1,002</b>
LT debt	201	352	407	381	350
Bonds payables	0	0	0	0	0
Other non-current liabilities	11	419	459	609	652
<b>Total liabilities</b>	<b>2,997</b>	<b>5,754</b>	<b>9,185</b>	<b>11,459</b>	<b>12,917</b>
<b>Total equity</b>	<b>2,719</b>	<b>7,550</b>	<b>8,570</b>	<b>9,796</b>	<b>11,026</b>
Share capital	0	0	0	0	0
Reserves	1,712	5,259	5,259	5,259	5,259
Retained earnings	1,041	2,299	3,320	4,548	5,779
Other equities	-33	-8	-10	-11	-12
Minority interests	0	0	0	0	0
<b>Total liabilities and equity</b>	<b>5,716</b>	<b>13,304</b>	<b>17,754</b>	<b>21,254</b>	<b>23,943</b>

### Key ratios

YE 31 Dec (RMB mn)	FY20A	FY21E	FY22E	FY23E	FY24E
<b>Revenue by segment</b>					
CMOS	5,864	5,937	5,826	6,636	7,775
TDDI	591	1,062	955	836	806
Others	0	2	0	0	0
<b>Total</b>	<b>6,456</b>	<b>7,001</b>	<b>6,781</b>	<b>7,472</b>	<b>8,581</b>
CMOS %	91%	85%	86%	89%	91%
<b>Growth (%)</b>					
Revenue	74.9%	8.4%	-3.1%	10.2%	14.8%
Adj. EBITDA	128.6%	59.4%	-20.4%	12.5%	14.7%
Net profit	115.2%	62.8%	-18.9%	20.2%	0.3%
<b>Profit &amp; loss ratio (%)</b>					
Gross margin	28.4%	33.7%	31.0%	31.0%	30.9%
EBITDA margin	16.5%	24.3%	20.0%	20.4%	20.4%
Net profit margin	12.0%	18.0%	15.1%	16.4%	14.3%
<b>Balance sheet ratio</b>					
Net debt/total equity (%)	11.0%	net	32.1%	61.5%	64.3%
Debt/EBITDA	1.2	1.7	5.3	6.0	6.0
Interest coverage	20.1	16.6	6.9	6.0	6.0
Cash conversion cycle (days)	43.6	156.5	203.5	177.0	156.0
<b>Profitability (%)</b>					
ROE	28.4%	16.7%	11.9%	12.5%	11.2%
ROA	13.5%	9.5%	5.8%	5.8%	5.1%
<b>Per share data (RMB)</b>					
EPS	0.37	0.54	0.41	0.50	0.50
BVPS	1.30	3.24	3.46	3.96	4.46

Source: Company data, CMBIGM estimates

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