



**GlobalWafers Co., Ltd.**  
**環球晶圓股份有限公司**

**Global Family,  
Global Solutions!**

# **GlobalWafers (6488TT)**

## **Q1 2023 Earnings Call**

2023/05/02





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# Executive Comment



# Executive Comments

## ➤ Financial Highlights

### ● Revenue

- ✓ Q123 → NT\$18.6 billion, 14.2% YoY, record high!
- ✓ Continuous growth for 13 quarters since Q120!

(NT\$ mn)	Q419	Q120	Q220	Q320	Q420	Q121	Q221	Q321	Q421	Q122	Q222	Q322	Q422	Q123
Revenue	13,506	13,515	13,701	14,006	14,137	14,806	15,208	15,364	15,752	16,307	17,540	18,053	18,388	18,616

### ● Gross Profit (%)

- ✓ Q123 → 40.6%

### ● Operating Income (%)

- ✓ Q123 → 32.8%



## ➤ Financial Highlights

- **Net Profit (%)**

- ✓ Q123 → 26.9%

- **EPS**

- ✓ Q123 → NT\$ 11.49

- **Prepayment**

- NT\$ 38,507 mn (US\$ 1,265 mn)<sup>1</sup>

- **Planned Dividend Payout**

- ✓ 2022 Dividend – NT\$16 (1H22: NT\$6.5 + 2H22: NT\$9.5)
  - ✓ 2022 Payout Ratio – 45.3%
  - ✓ Ex-dividend Date – July 19, 2023
  - ✓ Record Date – July 25, 2023
  - ✓ Payment Date – August 11, 2023

Note: 1. FX Rate: NTD:USD = 30.45, including guarantee



## ➤ Industry & Overview

### ● Global Economy

- ✓ IMF predicts a decline in global growth from 3.4% in 2022 to 2.8% in 2023, followed by a rebound to 3.0% in 2024. Economic is still burdened by factors including increasing interest rates, the conflict in Ukraine, and geoeconomic fragmentation.

### ● Semiconductor Industry

- ✓ In 2023, the market drivers including servers, data centers, industrial electronics, and automotive will sustain the semiconductor market revenue.
- ✓ Due to very high supply imbalance, memory segment will weigh down the industry the most this year.
- ✓ Expect improved semiconductor market in 2H23 propelled by data center and recovery in macroeconomics.

### ● Compound Semiconductor

- ✓ SiC is a significant driver of fast growth in the compound semiconductor industry.
- ✓ The automotive industry, particularly in the EV/hybrid-vehicle market, contributes the largest market segment for SiC power components.



## ➤ Industry & Overview

### ● Automotive

- ✓ The high level of ADAS and the shift towards EV adoption will increase the semiconductor content per vehicle, resulting in higher overall industry value by 2030.
- ✓ The rapid adoption of EVs has been driven by government policy, company pledges, and consumer behavior, and this adoption will continue throughout the next decade.

### ● Data Center & AI Chip

- ✓ The sustained demand for HPC and related chips is resulting in the growth of the global construction of data centers.
- ✓ There is an escalating need for hardware acceleration and generative AI application in the server and data center market.



## ➤ Other

### ● Corporate Governance Evaluation

- ✓ The Company received **its fifth consecutive top 5% ranking in the 2022 Corporate Governance Evaluation among all listed companies**, continuing its commitment to improving corporate governance and fulfilling ESG responsibilities.

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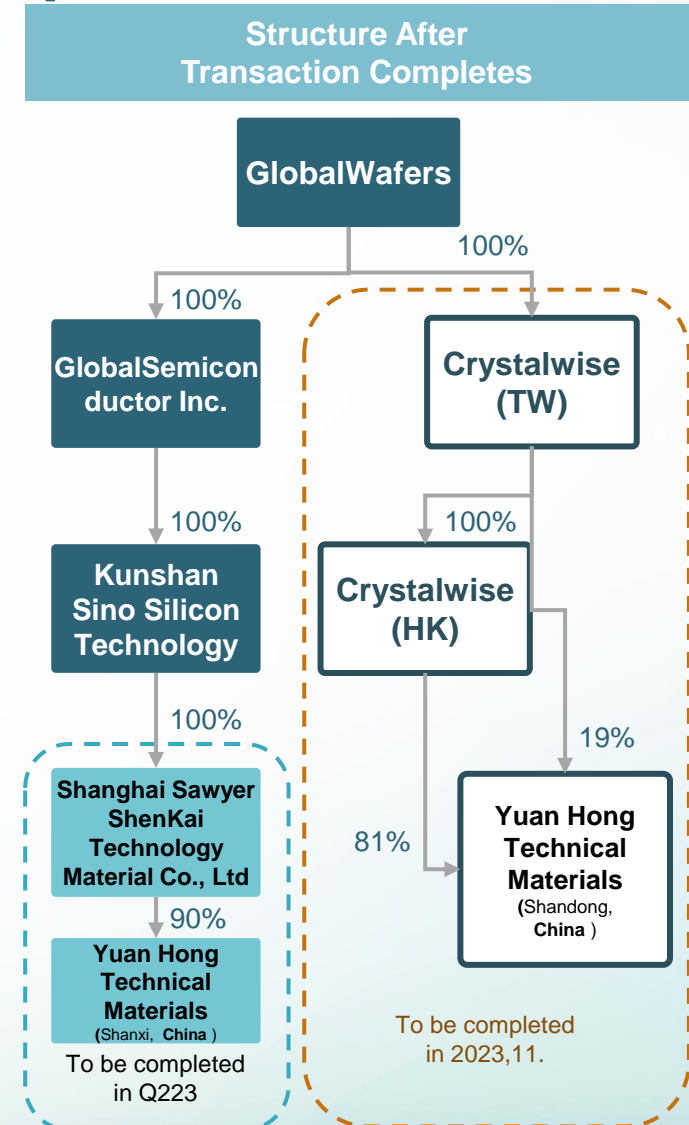
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# GlobalWafers to Acquire 100% of Crystalwise via Share Swap

Target	<ul style="list-style-type: none"><li>Crystalwise Technology Inc. ( 4944 )</li></ul>
Structure	<ul style="list-style-type: none"><li>GlobalWafers issues new shares as consideration payable to Crystalwise in exchange for its whole shares.</li></ul>
Share Swap Ratio	<ul style="list-style-type: none"><li><b>1 Crystalwise share: 0.02 GlobalWafers new shares</b></li><li>GlobalWafers will issue <b>878,004 new shares</b>, increasing its share capital by <b>0.2%</b>.</li></ul>
Synergy	<ul style="list-style-type: none"><li>Enable GlobalWafers to <b>step into GaAs, LT and LN wafer markets</b></li><li>Encompass special wafers into its product portfolio.</li><li>Grasp the growing <b>5G and satellite market</b>.</li></ul>
Precondition	<ul style="list-style-type: none"><li>Crystalwise shareholder meeting approval</li><li>Crystalwise's dissenting shares account for no more than 10% of its total issued shares</li><li>Regulatory approvals</li></ul>
Timeline	<ul style="list-style-type: none"><li>GlobalWafers &amp; Crystalwise Board Meeting: 2023-May-2</li><li>Crystalwise Shareholder Meeting : 2023-June-13</li><li>Share Swap Record Date : 2023-Nov-1 (tentative)</li></ul>





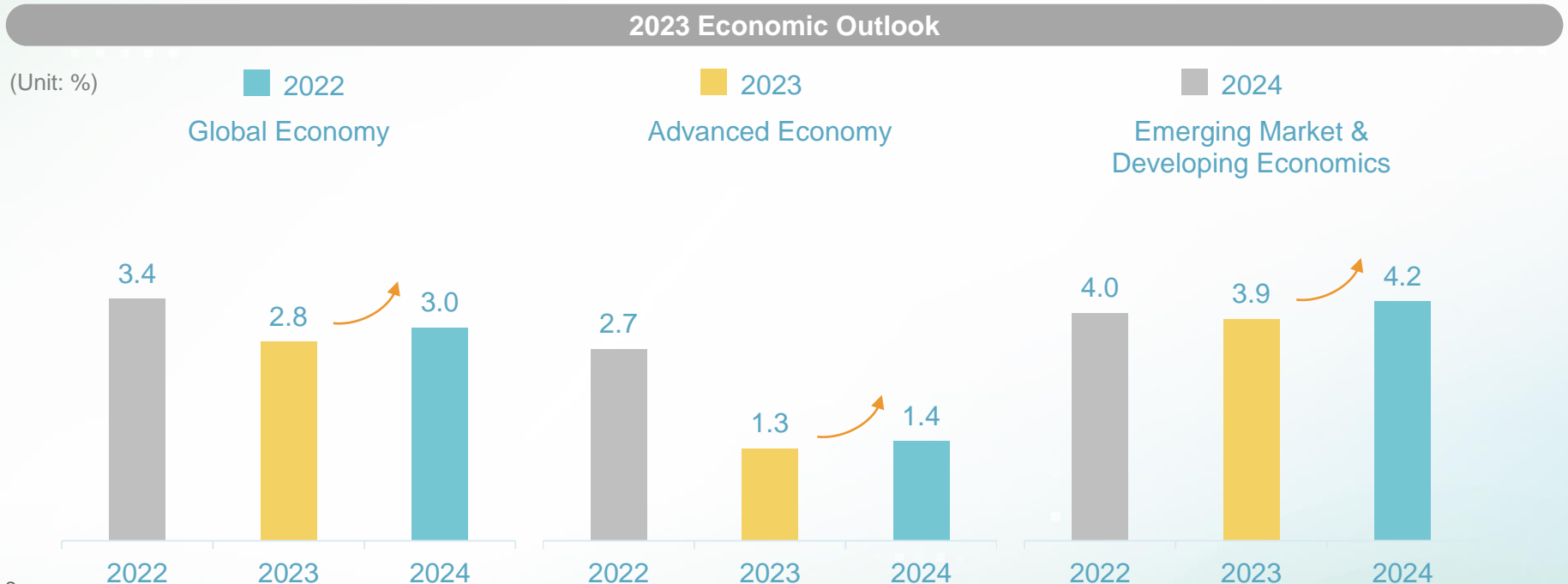
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## Industry Overview



# Global GDP Growth Forecast

- The IMF's April 2023 World Economic Outlook predicts global growth to decrease from 3.4% in 2022 to 2.8% in 2023, then rebound to 3.0% in 2024<sup>1</sup>.
- China's economy is exhibiting signs of recovery, growing 4.5% in Q123 compared with the same months last year<sup>2</sup>.
- Economic activity is being weighed down by increasing interest rates, the prolonged conflict in Ukraine, and the expanding trend towards geoeconomic fragmentation.



Source:

1. IMF, April 2023

2. China National Bureau of Statistics, April 2023

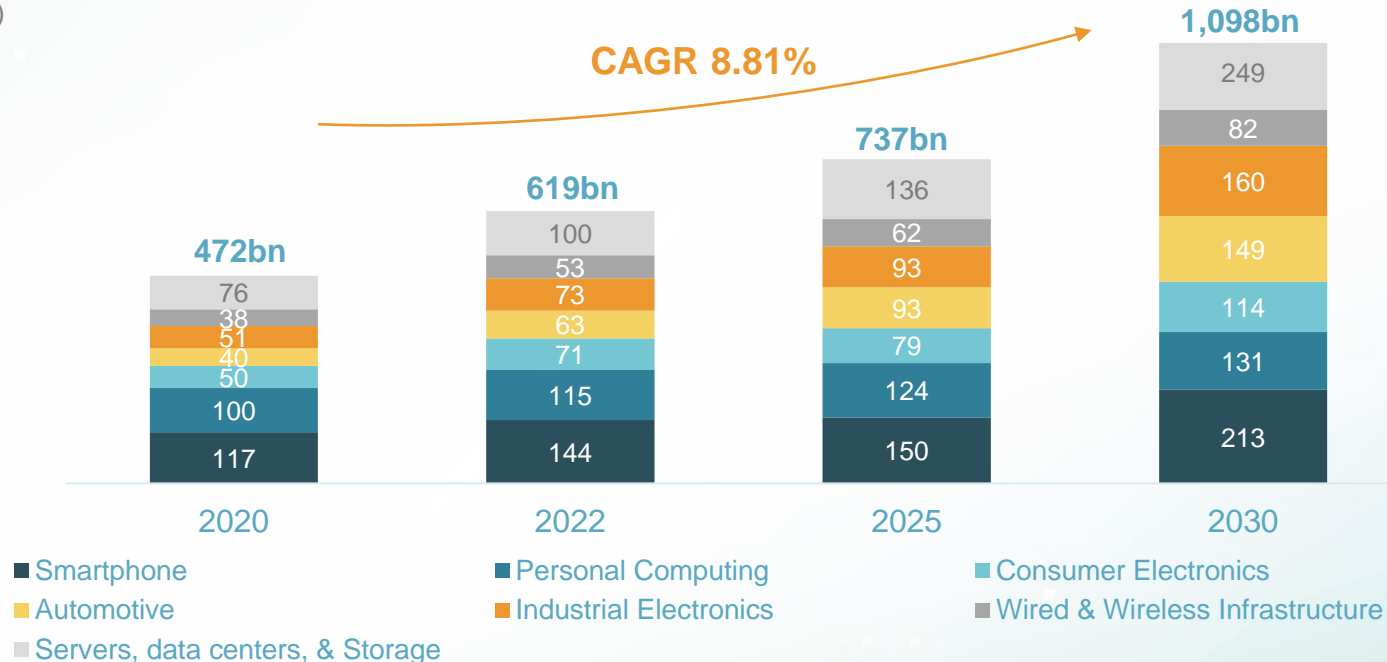


# Worldwide Semiconductor Market Revenue Forecast

- The global semiconductor market revenue has exhibited steady growth, surpassing \$619 billion in 2022. Looking ahead, the global semiconductor market value is expected to remain above \$1 trillion in 2030.
- New market drivers including servers, data centers, and storage, industrial electronics and automotive continue to emerge and have helped contribute toward a rise in semiconductor market revenue.

## Worldwide Semiconductor Market Revenue Forecast

(Unit: USD Bn)



Source: Statista, February 2023



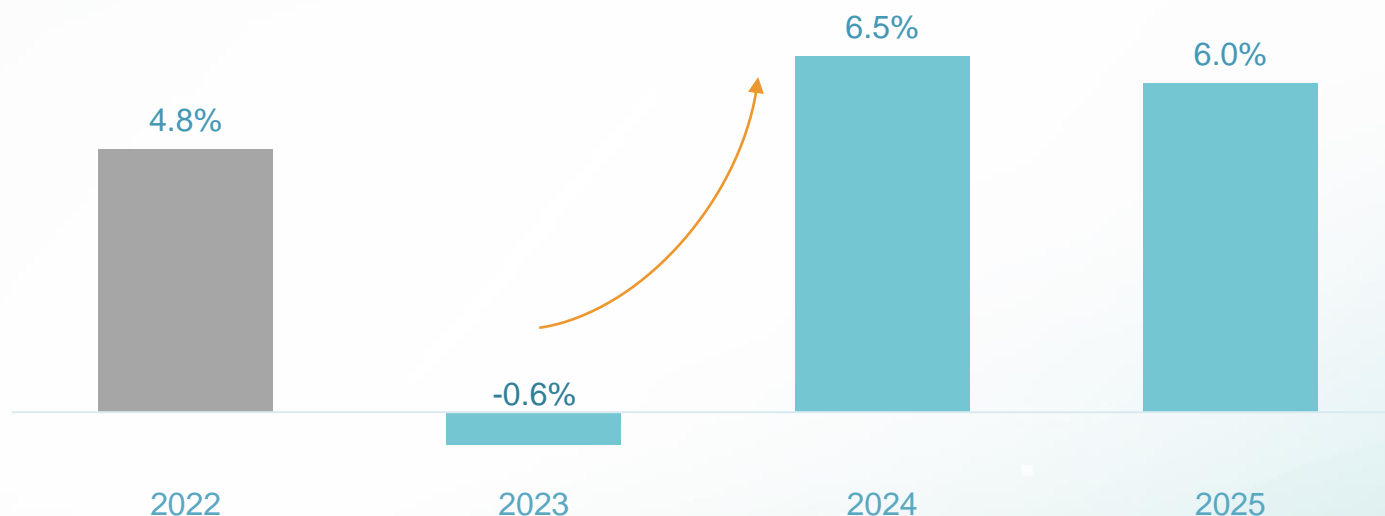
# Global Silicon Wafer Shipments Forecast

- SEMI forecasts a -0.6% decline in total wafer shipments for 2023 due to difficult macroeconomic conditions.
- Expect a rebound in datacenter, automotive and industrial applications despite the temporary decline in total wafer shipments.
- Total shipment growth projected to have a 4.14% CAGR for 2023-2025 and continued growth through 2030, driven by positive digitization mega trends.

## Global Silicon Wafer Shipments Forecast

(Unit: %)

**2023 to 2025 Wafer Shipment CAGR: 4.14%**



*Note: All data cited in this release is inclusive of polished silicon wafers and epitaxial silicon wafers shipped by wafer manufacturers to end users. The data does not include non-polished or reclaimed wafers.  
Source: SEMI, November 2022*

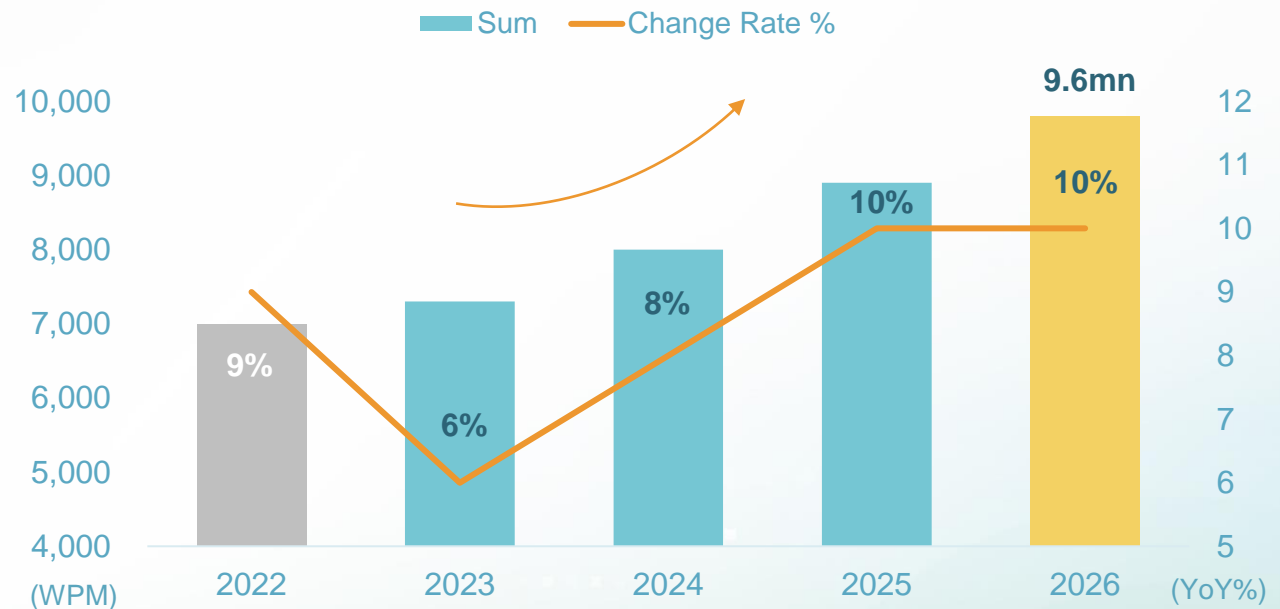
# Global 300mm Semiconductor Fab Capacity

- Semiconductor manufacturers worldwide are forecast to increase 300mm fab capacity to an all-time high of 9.6 million wafers per month (wpm) in 2026 according to SEMI.
- Global semiconductor companies are planning 82 new facilities and lines to start operations from 2023 to 2026.
- The foundry\*, memory and power sectors will be major drivers of the new record capacity increase expected in 2026.

Total Global 300mm Semiconductor Fab Capacity from 2022 to 2026

**9.6<sub>mn</sub>**  
WPM  
300mm fab  
capacity in 2026

**82**  
New facilities &  
lines in 2026



\*Note: Foundry segment includes micro and logic devices  
Source: SEMI, March 2023.

# Global 300mm Semiconductor Fab Capacity

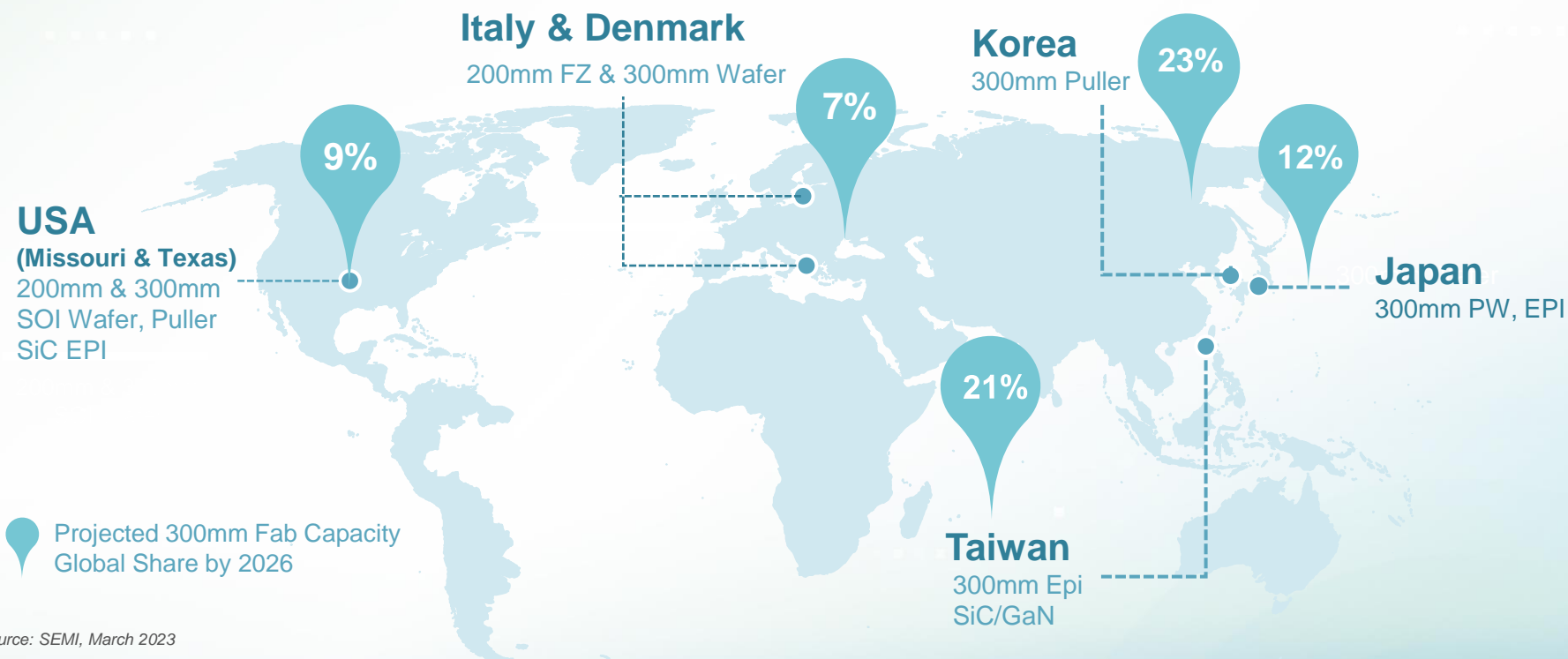


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## Regional Outlook

- Driven by demand in the automotive sector and government investment, America's 300mm fab capacity share is expected to rise 0.2% to nearly 9%, while Europe and the Middle East are anticipated to increase from 6% to 7%. Korea, Japan, and Taiwan are expected to be 23%, 12%, and 21%, respectively. China is also projected to increase its share from 22% to 25%, reaching 2.4 million per month by 2026.
- Reflecting long-term momentum in semiconductor industry, the Company has positioned itself for future growth by expanding production capacity in regions poised for growth.

### GlobalWafers Capacity Expansion Plans & 300mm Fab Capacity Global Share in 2026



Source: SEMI, March 2023

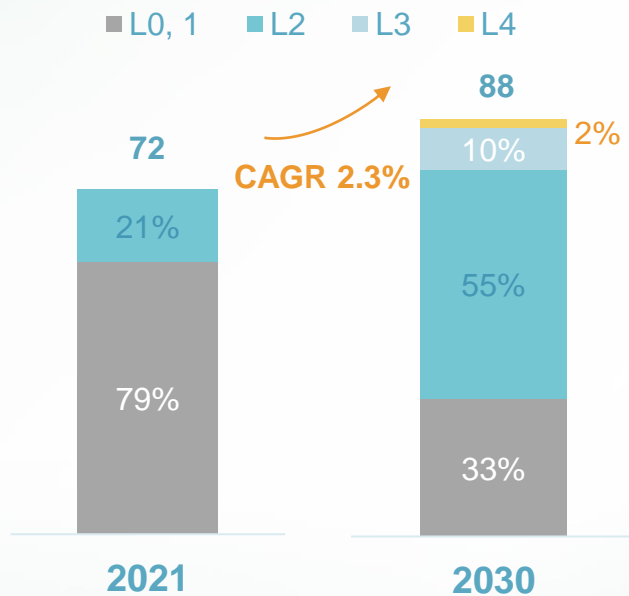
# Higher Level ADAS is a Key Driver in Automotive Semiconductor Market



- The growth of the automotive semiconductor market is being fueled by the adoption of advanced driver assistance systems (ADAS) and the increasing shift towards electric vehicles.
- By 2030, the semiconductor content per vehicle will range from USD 500 to USD 2,000, the adoption of ADAS and the shift towards electric vehicles will result in a higher overall value for the automotive semiconductor industry.

Share of ADAS Level Growth  
from 2021 to 2030

(Unit: mn)



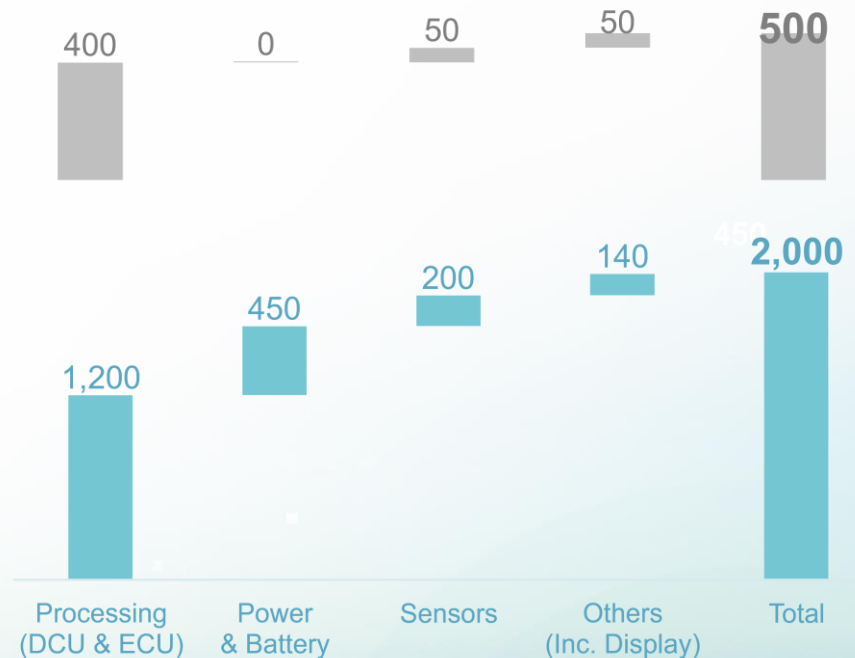
Semiconductor Content Per Vehicle in 2030

(Unit: USD/Vehicle)

SAE Level 1  
ICE Powertrain



SAE Level 2/3  
BEV Powertrain





# Automotive-Electrification Accelerates

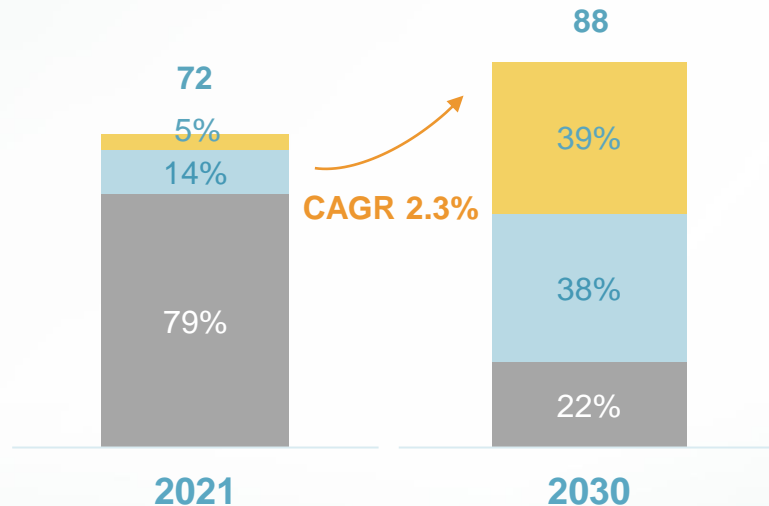
- Electrification is rapidly accelerating, with EV sales surging due to increased action on climate change by governments, companies, and consumers.
- Battery electric vehicle (BEVs) are projected to make up over 65% of new light-vehicle sales worldwide by 2035, and the market share for both BEVs and Hybrid Electric Vehicles (xHEV) is expected to rise from 19% in 2021 to 77% by 2030.

Share of EV Growth from 2021 to 2030

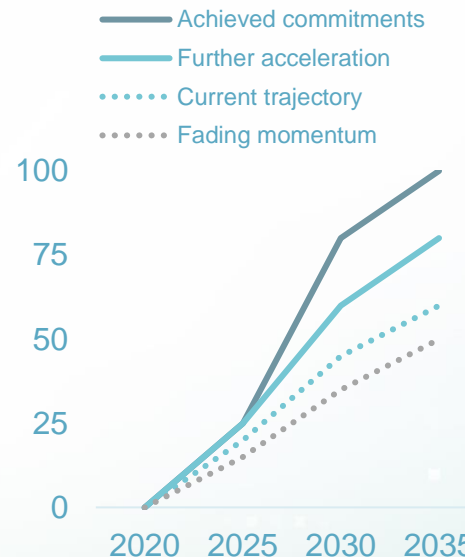
EV Sales as A Share of New Passenger Vehicle Sales (%)

(Unit: mn)

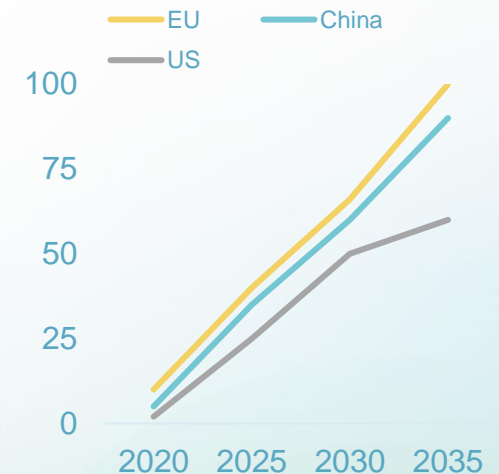
■ ICE ■ xHEV ■ BEV



Global EV-adoption Scenarios



Accelerated EV-adoption Scenarios by Selected Countries



Source: McKinsey, March 2023

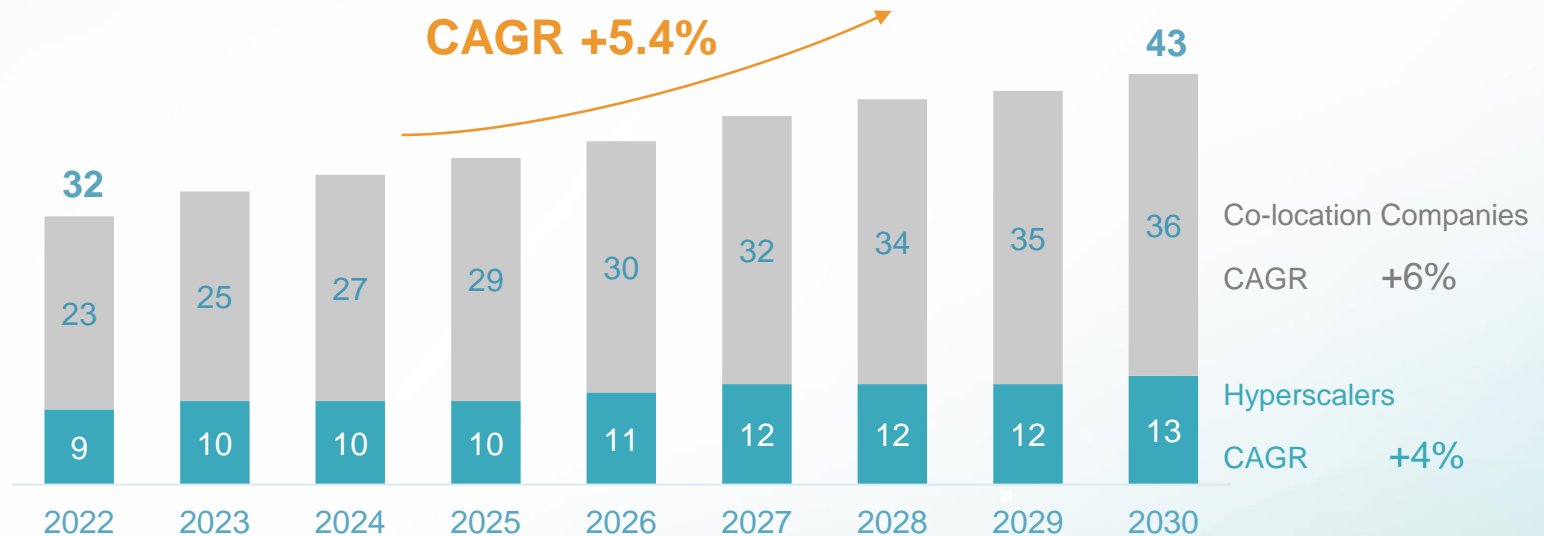
# Data Center Forecast

- McKinsey predicts global construction of data centers will continue to grow at 5.4% CAGR through 2030, representing steady HPC and related chip demand.
- Datacenter construction spending amounted to \$32 billion in 2022 to expand capacity, and this amount is expected to increase to \$43 billion by 2030.

Predicted Data Center Construction Spending from 2022 to 2030

(USD Bn)

■ Hyperscalers ■ Co-location Companies



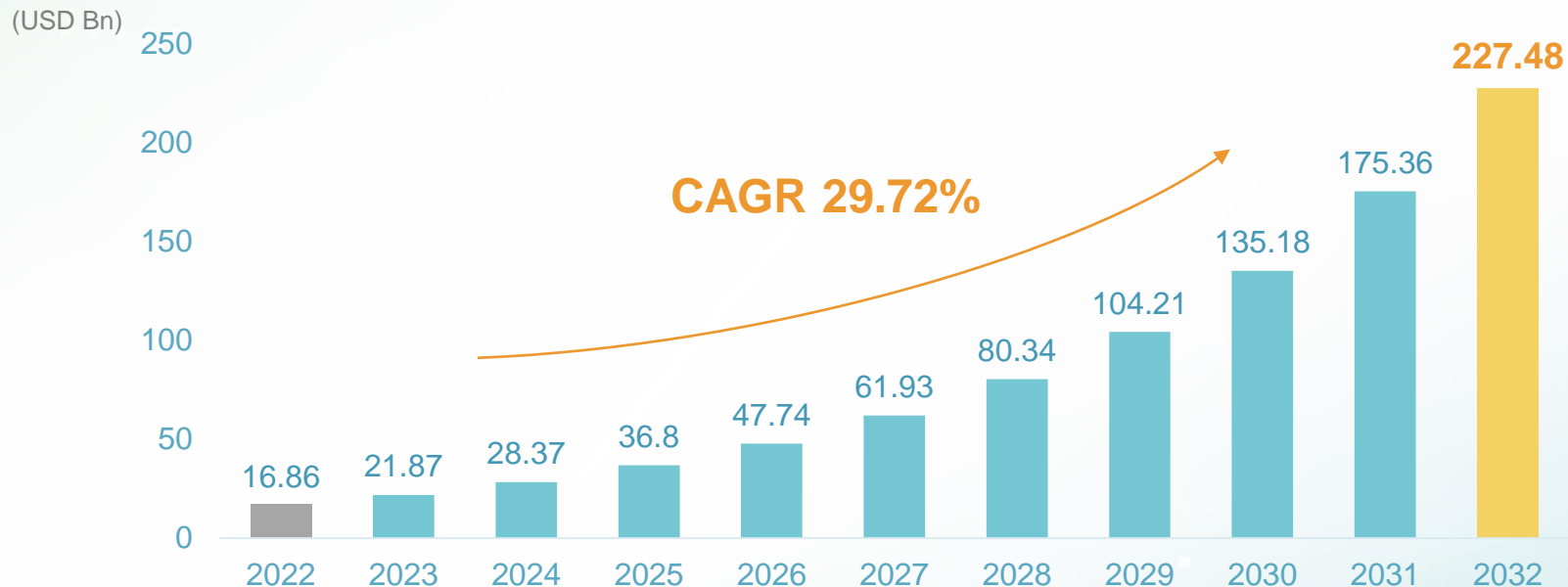
Note: Excludes enterprise spending and any other capital expenditure outside of construction  
Source: McKinsey, January 2023



# Artificial Intelligence (AI) Chip Market

- The global AI chip market is expected to grow at a CAGR of 29.72% from 2023 to 2032, reaching \$227.48 billion from \$16.86 billion in 2022.
- In 2022, smartphones and personal computing devices accounted for 23% and 19% of semiconductor industry revenue, respectively, while GPUs for hardware acceleration and generative AI applications like ChatGPT are expected to grow in the server and data center market.

Artificial Intelligence (AI) Chip Market Size from 2023 to 2032



Source: Precedence Research, January 2023

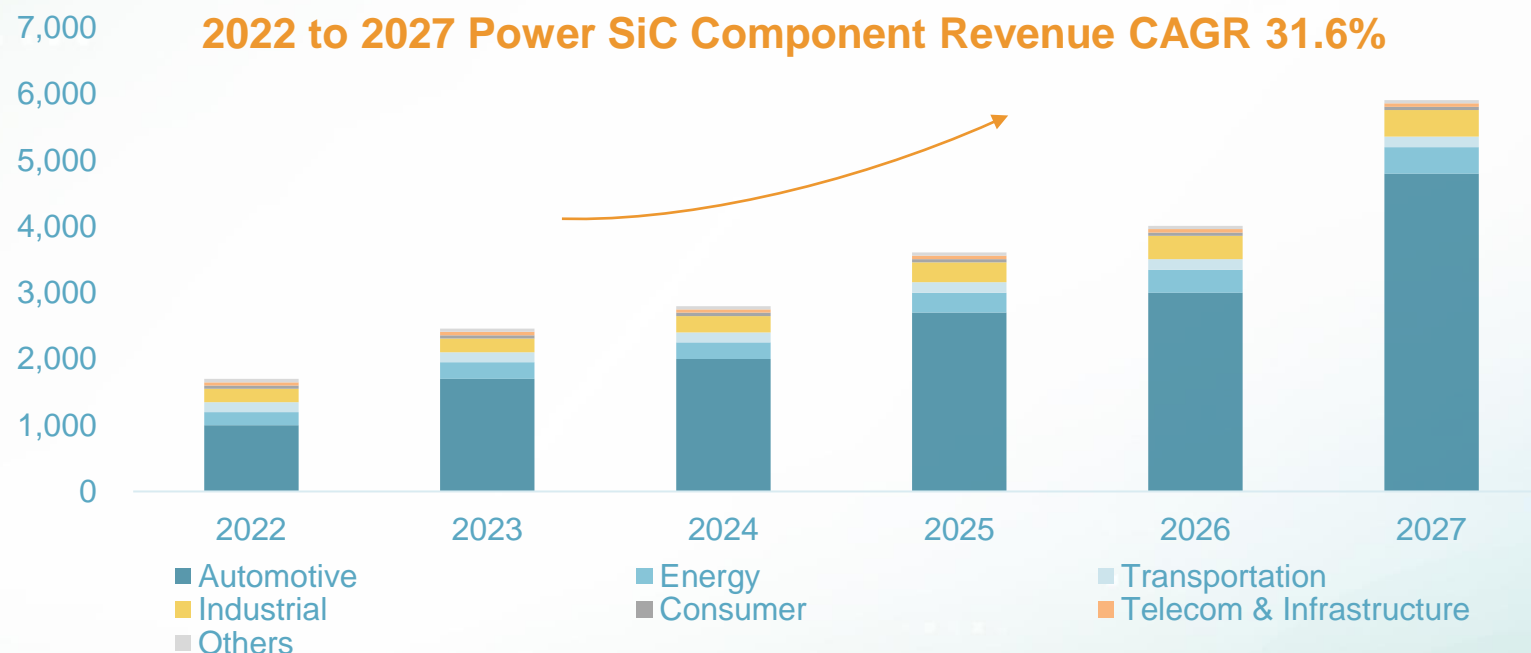
# SiC Forecast

- Yole forecasts a 31.6% CAGR growth in power SiC component revenue between 2023 and 2027, projected to exceed \$6 billion during this period.
- The automotive power segment represents the largest SiC market, comprising approximately 70% of the total revenues.

Power SiC Component Market Forecast by Segment from 2022 to 2027

(USD Mn)

**2022 to 2027 Power SiC Component Revenue CAGR 31.6%**



Source: Yole Group, December 2022



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## Financial Performance



## Financial Highlight : Q123 vs. Q422 vs. Q122

(NT\$ mn, except EPS)	Q123	Q422	Q122	QoQ	YoY
Revenue	18,616	18,388	16,307	1.2%	14.2%
Gross Profit %	40.6%	42.7%	42.6%	-2.1%	-2.0%
Operating Income	6,103	6,362	5,891	-4.1%	3.6%
Operating Income %	32.8%	34.6%	36.1%	-1.8%	-3.3%
Net Profit	5,000	5,794	1,746	-13.7%	186.4%
Net Profit %	26.9%	31.5%	10.7%	-4.6%	16.2%
EPS	NT11.49	NT13.31	NT\$4.01	(NT\$1.82)	NT\$7.48
EBITDA* <sup>1</sup>	7,907	9,910	1,802	-20.2%	338.7%
EBITDA %	42.5%	53.9%	11.1%	-11.4%	31.4%
EBIT	6,302	8,311	338	-24.2%	1763.3%
ROE* <sup>2</sup> (annualized)	35.6%	44.4%	15.0%	-8.8%	20.6%
ROA* <sup>3</sup> (annualized)	11.8%	14.4%	3.5%	-2.6%	8.3%

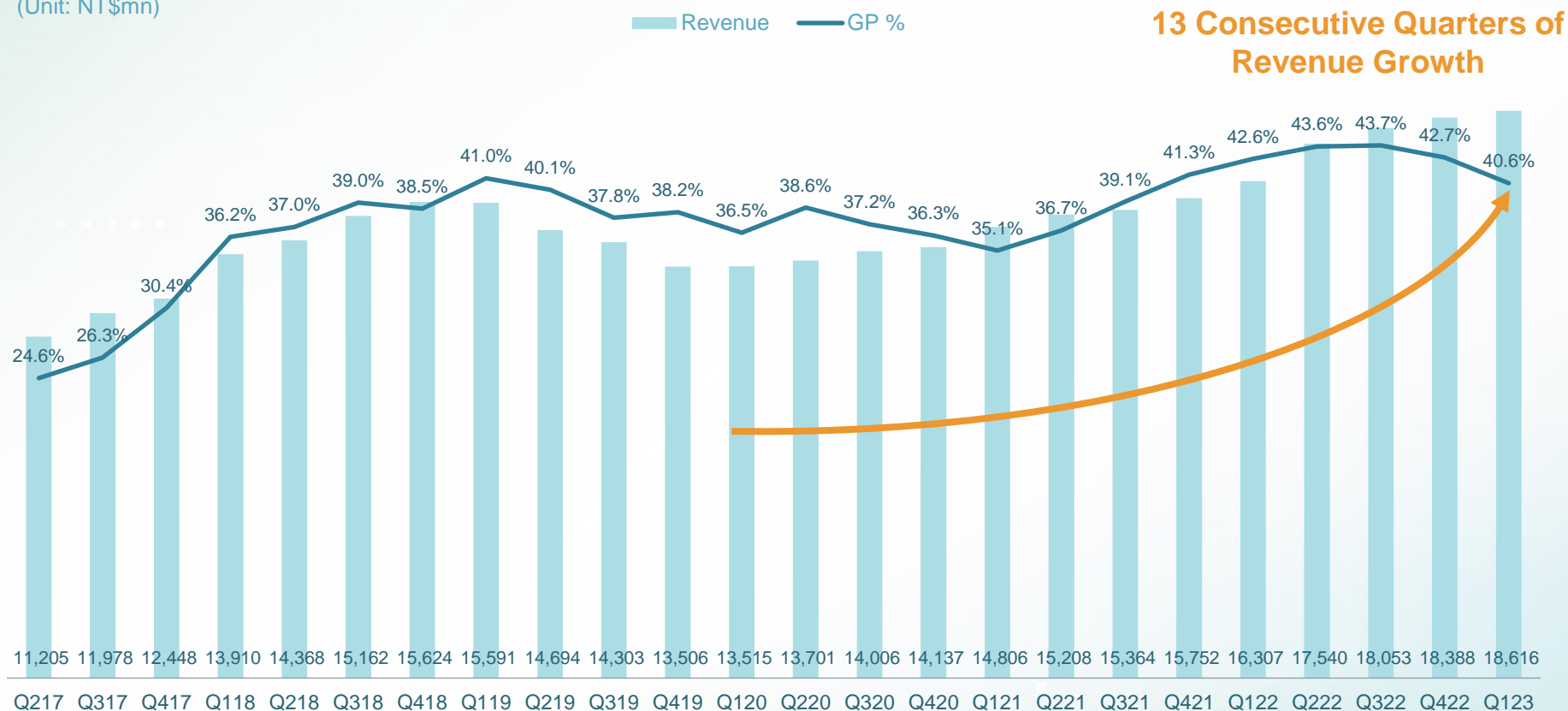
1. EBITDA = Net Profit + Tax + Interests + Depreciation + Amortization.  
2. ROE = Net Profit / Average Shareholders Equity  
3. ROA = (Net Profit + Interest\*(1- Effective Tax Rate))/Average Asset



# Revenue & Gross Profit (%)

## Revenue & Gross Profit (%)

(Unit: NT\$mn)



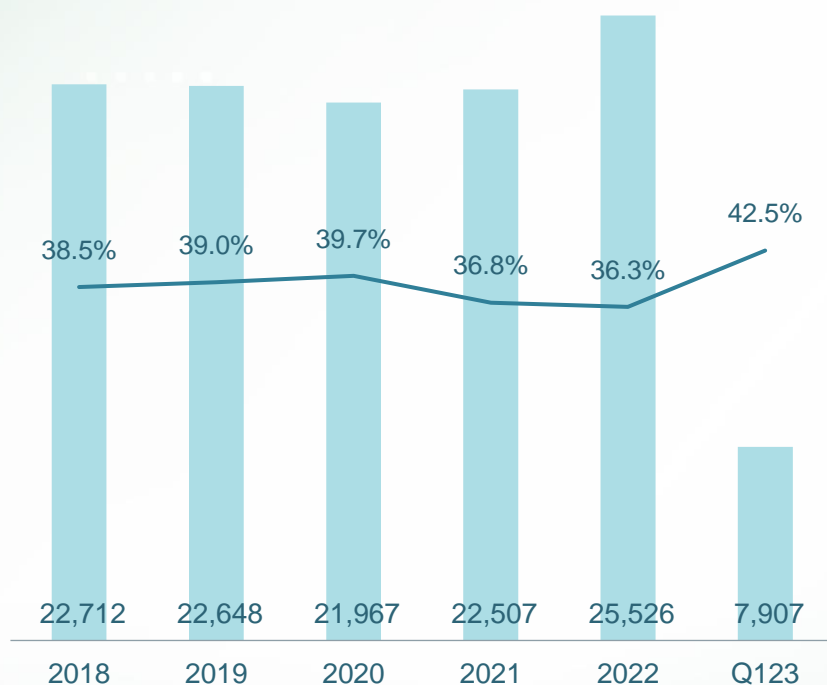


# EBITDA & EPS

## EBITDA

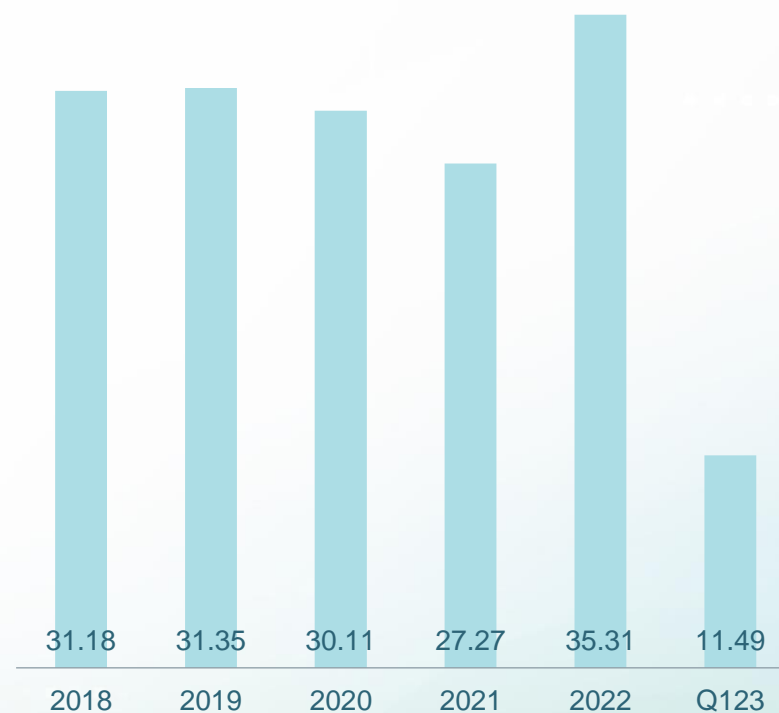
(Unit: NT\$mn)

■ EBITDA    — EBITDA to Revenue



## EPS

(Unit: NT\$)







# Income Statement

## Income Statement

(NT\$m)	2019	2020	2021	2022	Q123
<b>Revenue</b>	<b>58,094</b>	<b>55,359</b>	<b>61,131</b>	<b>70,287</b>	<b>18,616</b>
<i>Growth (%)</i>	-1.6%	-4.7%	10.4%	15.0%	1.2%
<b>Gross Profit</b>	<b>22,847</b>	<b>20,568</b>	<b>23,286</b>	<b>30,342</b>	<b>7,551</b>
<i>Gross Profit (%)</i>	39.3%	37.2%	38.1%	43.2%	40.6% <sup>2</sup>
<b>EBITDA</b>	<b>22,648</b>	<b>21,967</b>	<b>22,507</b>	<b>25,526<sup>1</sup></b>	<b>7,907</b>
<i>EBITDA (%)</i>	39.0%	39.7%	36.8%	36.3%	42.5%
<b>Operating Income</b>	<b>17,897</b>	<b>15,287</b>	<b>17,693</b>	<b>24,983</b>	<b>6,103</b>
<i>Operating Income (%)</i>	30.8%	27.6%	28.9%	35.5%	32.8%
<b>Profit before Tax</b>	<b>18,554</b>	<b>16,615</b>	<b>16,445</b>	<b>20,107<sup>1</sup></b>	<b>6,885</b>
<i>Profit before Tax Margin (%)</i>	31.9%	30.0%	26.9%	28.6%	37.0%
<b>Net Profit</b>	<b>13,636</b>	<b>13,104</b>	<b>11,870</b>	<b>15,367<sup>1</sup></b>	<b>5,000</b>
<i>Net Profit (%)</i>	23.5%	23.7%	19.4%	21.9%	26.9%
<b>EPS (NT\$)</b>	<b>31.35</b>	<b>30.11</b>	<b>27.27</b>	<b>35.31<sup>1</sup></b>	<b>11.49</b>

1. Due to realized gains/loss of Siltronic shares measured at fair value through profit or loss and impacts from other factors  
2. Q123 Gross Profit decreased :Mainly due to increasing power cost and depreciation



# Balance Sheet

## Balance Sheet

(NT\$m)	2019	2020	2021	2022	Q123
<b>Assets</b>					
Cash and cash equivalents	32,822	22,439	65,894	80,491 <sup>1</sup>	74,200
Account receivable	8,140	8,037	9,118	10,160	10,253
Inventories	6,849	7,208	7,295	8,535	9,233 <sup>2</sup>
Property, plant and equipment	34,697	37,111	33,943	39,487	42,873
Other assets	14,078	20,056	34,395	30,823	38,518
<b>Total assets</b>	<b>96,586</b>	<b>94,852</b>	<b>150,645</b>	<b>169,496</b>	<b>175,971</b>

### Cash-related assets include:

(NT\$m)	Q123
Deposits in banks held for three months or more	13,008
Restricted assets	2,908
*Restricted cash is temporarily deposited for tax consideration, could be used when necessary.	

<b>Liabilities</b>					
Short-term loan	9,886	9,871	6,264	6,544	7,911
Account payable	3,837	3,895	4,340	4,176	4,993
Long term loan	-	-	45,125	42,780	45,235 <sup>3</sup>
Other liabilities	37,789	36,930	49,284	61,672	59,663
<b>Total liabilities</b>	<b>51,513</b>	<b>50,697</b>	<b>105,013</b>	<b>115,172</b>	<b>117,802</b>

<b>Shareholder equity</b>	<b>45,073</b>	<b>44,155</b>	<b>45,632</b>	<b>54,324</b>	<b>58,169</b>
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1. Increase in LTA prepayment and EBITDA  
2. Inventory: Increase mainly comes from Finished goods and raw material  
3. Long-term loan: mainly due to loans for capex to secure better terms though having enough cash on hand,



# 04

## Q&A



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# Thank You



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