



# CSC

## CSC Group Joint Conference

November 24, 2021





# Agenda

- 1 Carbon Neutrality & Sustainable Development
- 2 CSC Operation and Development Strategies
- 3 Steel & Raw Material Dynamics
- 4 Appendixes:  
Sales Analysis, Financial Performance  
and Dividend Policy

## Safe Harbor Statement

This presentation may contains forward-looking statements. All statements other than historical and current fact, without limitation, including business outlook, predictions, estimates, are forward-looking statements.

Such statements are based upon management's current beliefs and expectations and are subject to various risks, uncertainties and other factors that could cause actual outcomes and results to differ materially.

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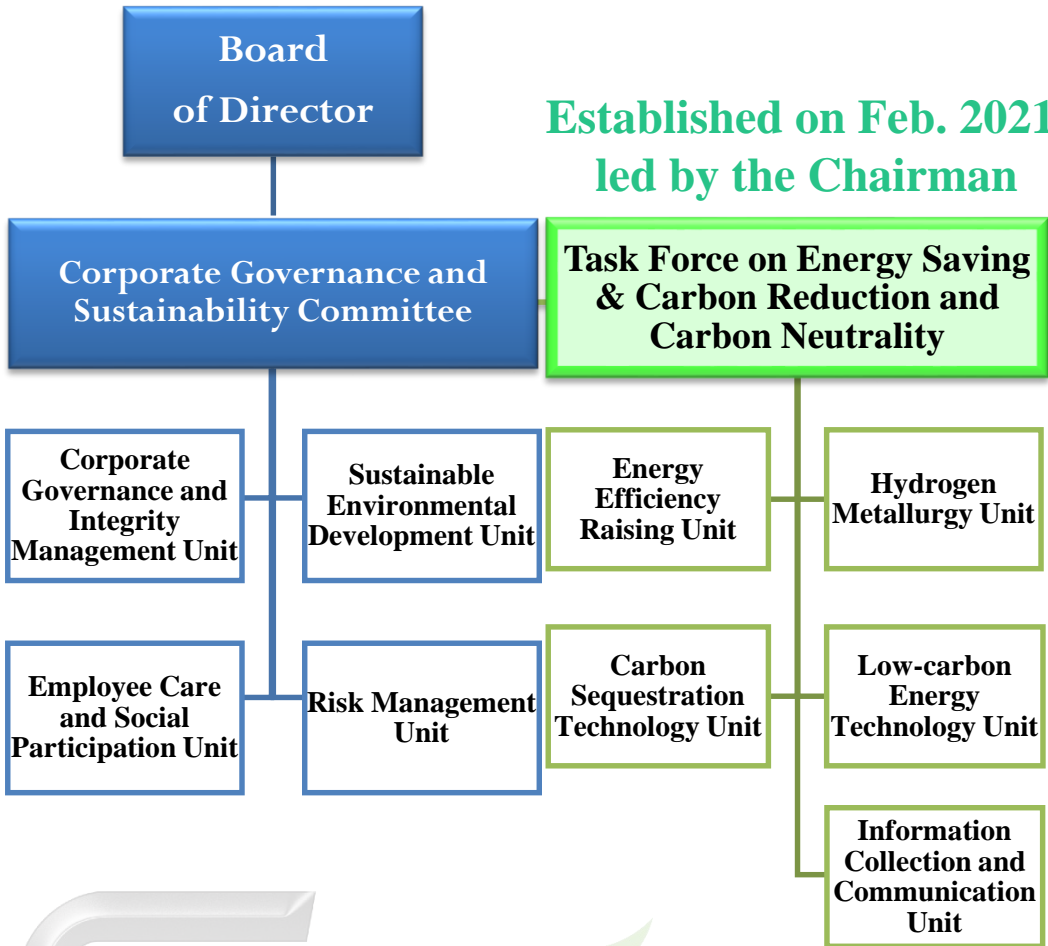
This cautionary statement is applicable to all forward-looking statements contained in this presentation.

# 1

# Carbon Neutrality & Sustainable Development

1

# Dedicated Unit to Promote Decarbonization



Established on Feb. 2021, led by the Chairman

- Commit to take practical actions on environmental protection and climate change
- Set the short, mid, and long term target for carbon reduction
- Action plan for 2025 carbon reduction: 314 scheduled action plan for carbon reduction with total reduction reaching 880,988 tons CO<sub>2</sub>e/yr
- Plan for 2050 Carbon Neutrality Pathway
- Cultivate in the Green Industry

- Green Power (offshore wind farm & solar energy)
- Circular Economy (Co-production of steel and chemicals & District Energy Integration)
- Green transportation (MRT & LRT)

**Do ESG well → Get good EPS !**  
 (CSC was included in the Emerging Market Index of Dow Jones Sustainability Index (DJSI) for the 10th consecutive year)

1

# Carbon Neutrality Pathway

Base year: 2018

2025

2030

2050

7% reduction

22% reduction

Carbon Neutrality

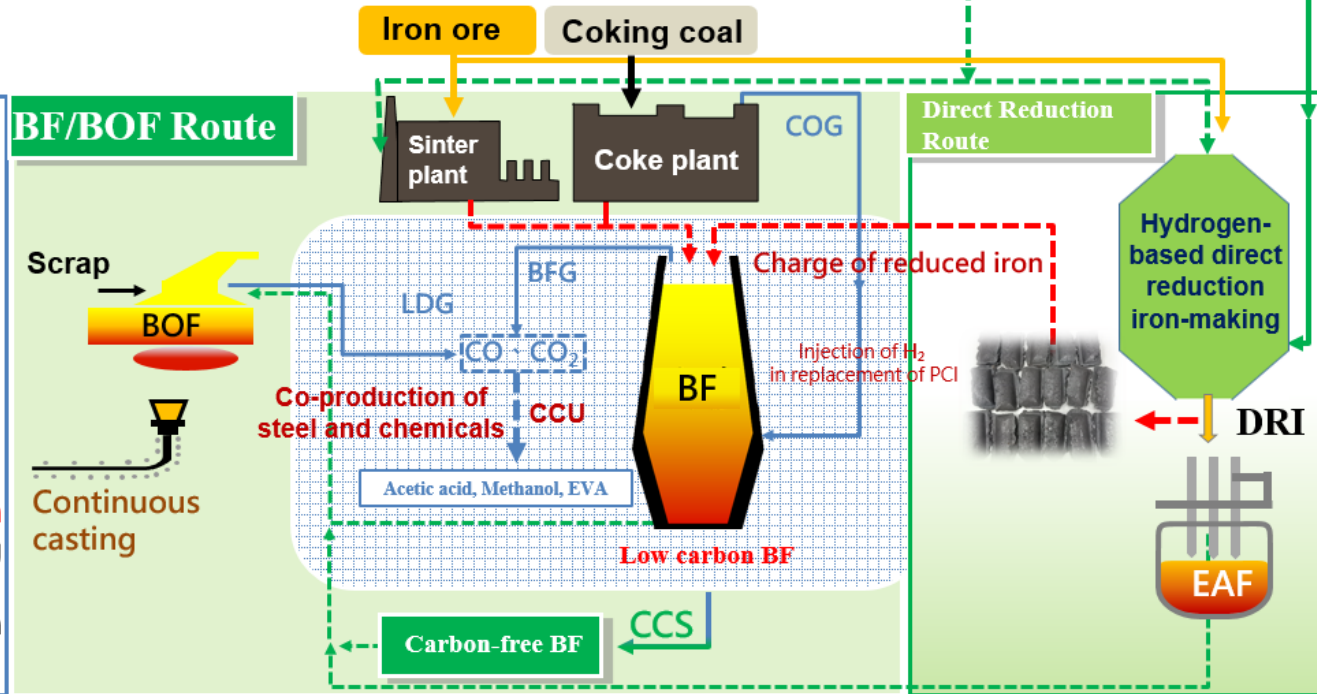
Ultimate pathway: Green power + Substitute hydrogen for carbon + CCUS

Required external support: Green Power

Green Hydrogen

- 2030 : Low carbon BF**
- ① Substitute  $H_2$ -rich gas for PCI as the auxiliary fuel for BF
  - ② Charge hydrogen-reduced iron with ferrous burden.
  - ③ Convert CO and  $CO_2$  from steel production process into chemicals.
- 2050 : Carbon Neutrality**
- ① Shift BF from low carbon operation into net zero using CCS
  - ② Adopt DRI/ EAF route with hydrogen metallurgy

BF/BOF Route



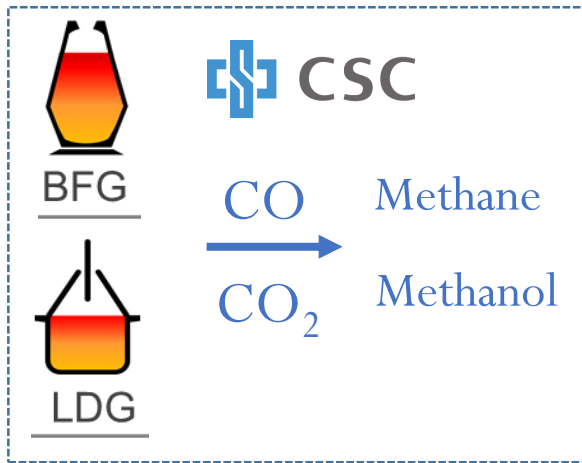
- Facing the challenges of **technology, resource, and capital**, resulted from the lack of mature technology and green hydrogen resources, as well as the required equipment modification.
- Currently evaluating the possibility of investment in the production of **hot briquetted iron (HBI) through green hydrogen in Australia** in order to cut  $CO_2$  emissions.
- Established a **hydrogen metallurgy research center** at National Cheng Kung University with **10 academia and research institutions** such as NCKU, NTU, NTHU, etc. and **18 scholars and experts** for the **basic research** for mid-term carbon reduction programs.

# Co-production of Steel and Chemicals

2023

## Phase 0 : Pilot Line

Build and run the pilot line for feasibility study during 2021~2023



2025

## Phase 1 : Demo Line

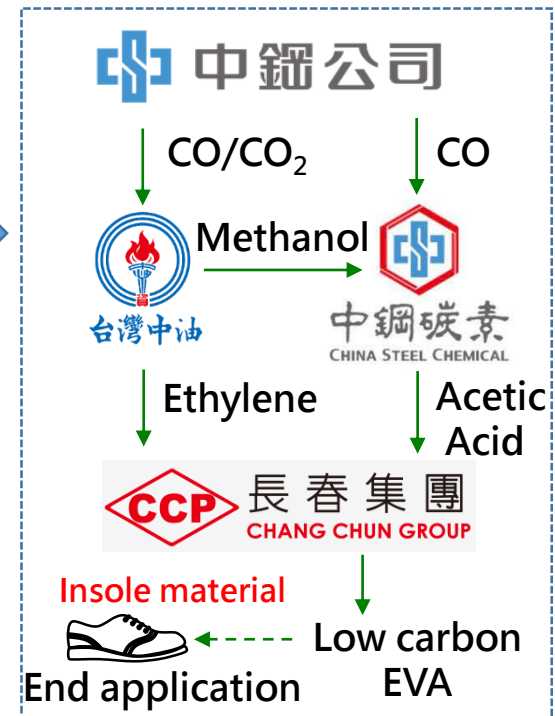
Construct the Demo line with CPC/CSCC in 2025



2040

## Phase 2 : Commercial Line

Build the commercial line at Dalinpu Industrial Park in 2040.



➤ A co-production strategy with chemical industry which is to produce **chemicals** by **capturing and purifying CO/CO<sub>2</sub>** in BF & BOF gases from CSC and to achieve a “win-win goal” for **reducing carbon emission** as well as **production cost** and creating **80 billion of production value**.

# Sustainable Development - Green transportation



CSC Group holds 51% of shares

- The Kaohsiung MRT Red and Orange lines started regular service from 2008.
- CSC contracted light rail projects to increase the usage rate of public transportation, thereby achieving the goal of carbon reduction.
  - ✓ 2014 turnkey project for Danhai Light Rail & 2016 turnkey project for 2<sup>nd</sup> phase of Kaohsiung Light Rail
  - ✓ 2017 construction project for mechanical and electrical system of Ankeng Light Rail

	Inauguration	2020 Transport volume (passengers)
Kaohsiung MRT	2008.03	48.57 million
Kaohsiung LRT	2015.10	2.32 million
Danhai LRT	2018.12	3.49 million
<b>Total</b>		<b>54.38 million</b>

CO<sub>2</sub>

- 2020 Carbon reduction performance
- ✓ Carbon reduction reached **46 thousand tons CO<sub>2</sub>e.**
- ✓ Equivalent to the CO<sub>2</sub> absorption of **118 Taipei Daan Park.**

Note: KRTC provides O&M service to Kaohsiung Light Rail and Danhai Light Rail; the carbon reduction is calculated based on the total transport volume, the average length of the travel, and the difference in carbon emissions per kilometer between public transportation and automobiles.

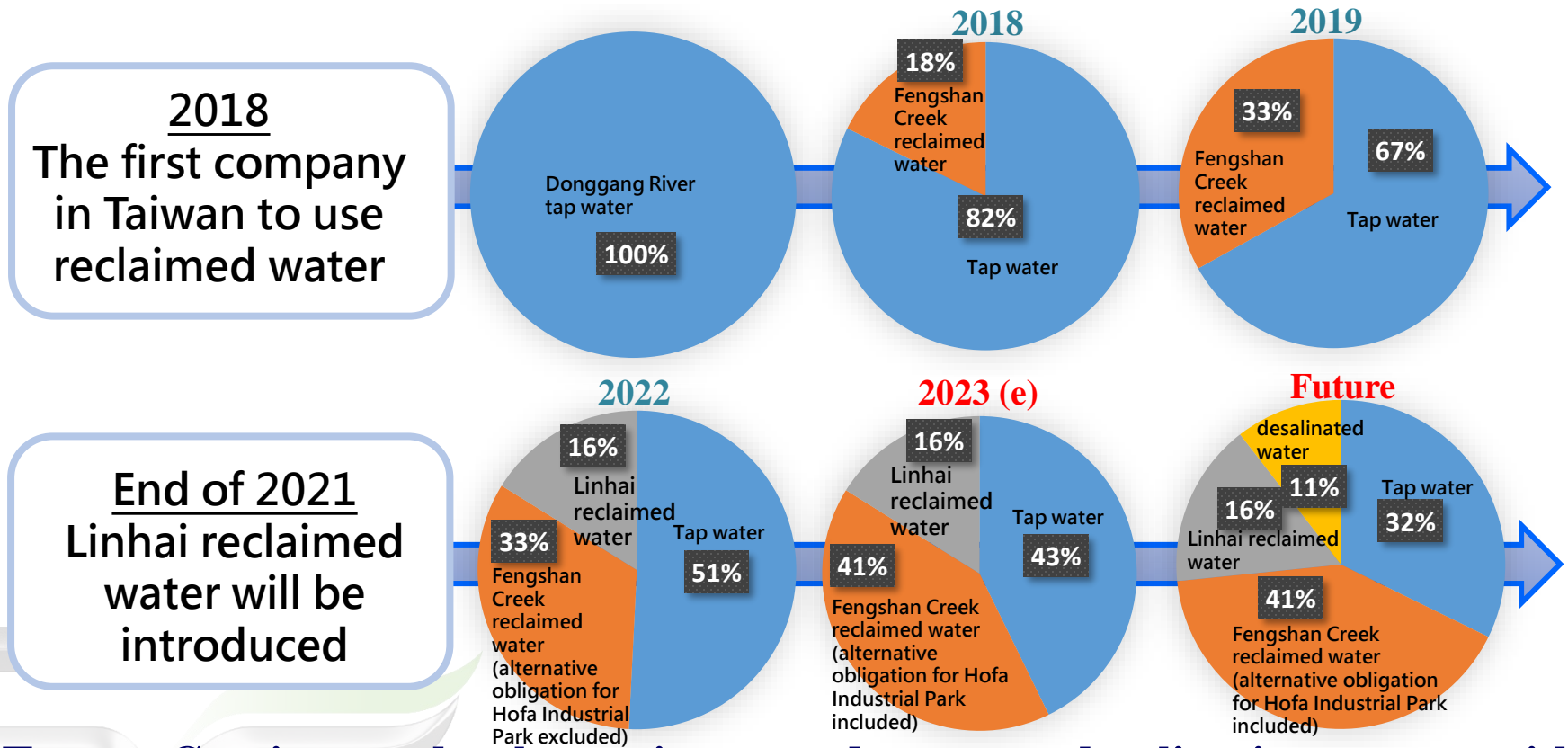




## Sustainable Development - Water diversification strategies

» Water recycled rate **98.4%** (higher than the 65% required by the government)

» Diversify water sources: **Tap water, Reclaimed water, Desalination**



» Target: Continue to develop an integrated seawater desalination process with low costs and evaluate the possibility of using 13,000 cubic meters of desalinated water/day.

# ESG Performance

Strengthen the disclosure of ESG and climate related information.  
Got distinguished result in evaluation.

- ✓ CSC was included in 108 ESG funds according to the statistics by Bloomberg.
- ✓ CSC has the **highest** environmental score **among Asian steelmakers** in Bloomberg's ESG evaluation which was also ranked 6<sup>th</sup> among global steelmakers.

- ✓ Enhance R&D and continue the efforts towards enhancing differentiated advantages.
- ✓ As of the end of 2020, CSC has **874 of accumulated valid patents** and was ranked top 10 among domestic companies and 1<sup>st</sup> in traditional industry in the patent acquirement for the 7<sup>th</sup> consecutive year by Intellectual Property Office, Ministry of Economic Affairs.

Ranked 1st in the patent acquirement in the traditional industry for the 7th consecutive year

Passed TIPS verification  
Complete the intellectual property management system

- ✓ In order to effectively manage intellectual property resources and reduce intellectual property risks, CSC introduced the Taiwan Intellectual Property Management System (TIPS), which effectively **improves the patent quality, protects R&D results, and reduces the risk of business secret leakage and intellectual property infringement.**

Note: CSC has passed the review and the list is expected to be officially announced on the TIPS website at the end of December.

# 2

## CSC Operation and Development Strategies

# 2 1 Strategy Concept, 2 Operation Strategies, 3 Core Capabilities, 10 Measures

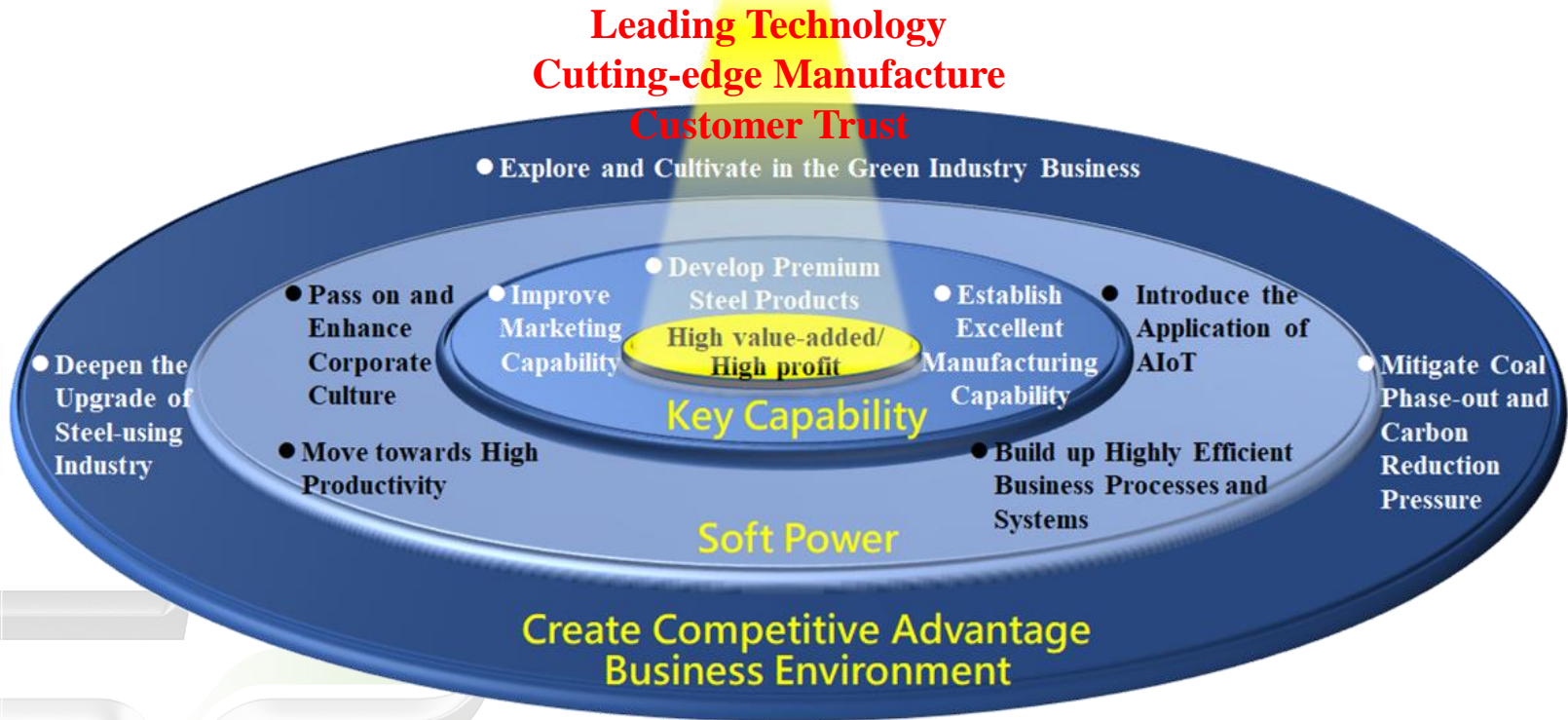
Establish specialized core competitiveness for the next 50-year development.

Promote to High Value-added Steel Mill

Develop Green Energy Business

Develop into a **high value-added steel mill** through intelligent innovation.

Expand new business opportunity in promising industry through engagement in the **green energy field**.





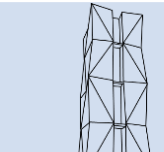





➤ **77 action projects** were proposed in accordance with the above-mentioned **10 measures**. Put effort in the **execution** to fulfill the **vision of becoming a high value-added steel mill**.

# Develop Advanced Premium Steel

## Definition of Advanced Premium Steel

Products with **”High Technical Content, High Profitability, High Industrial Benefit.”**

## Focus on 8 items (Meet customers' needs & Industry trend)

High-Quality Forging Steels	Superior Hand Tool Steels	High Performance Structural Steels	Steel for Green Energy	Ultra-High Strength and Toughness Steels	Advanced Alloy Steels	Cross-Generational Automotive Steels	Ultra-High Efficiency Electrical Steels
							
Year			2021	2022	2023	2024	2025
<b>Advanced Premium Steel proportion target (%)</b> <small>(APS sales volume target divided by total sales volume target, which does not include leeways, secondary and salvage products, and semi-products)</small>			4.2%	5.5%	6.9%	8.4%	10.0%

- Sales volume of the 8 items of **APS** to achieve **10% in 2025** and **20% in 2030**.
- Become the customer's **favorite** material and establish an **irreplaceable trust relationship**.
- **In 2021Q1~Q3**, the sales volume of APS reached 461.1 thousand tons, accounting for **7.31% of total orders** (target 4.2%), **9.00% of sales revenues**, and **12.83% of gross profits**.

## Ultra-High Efficiency Electrical Steels

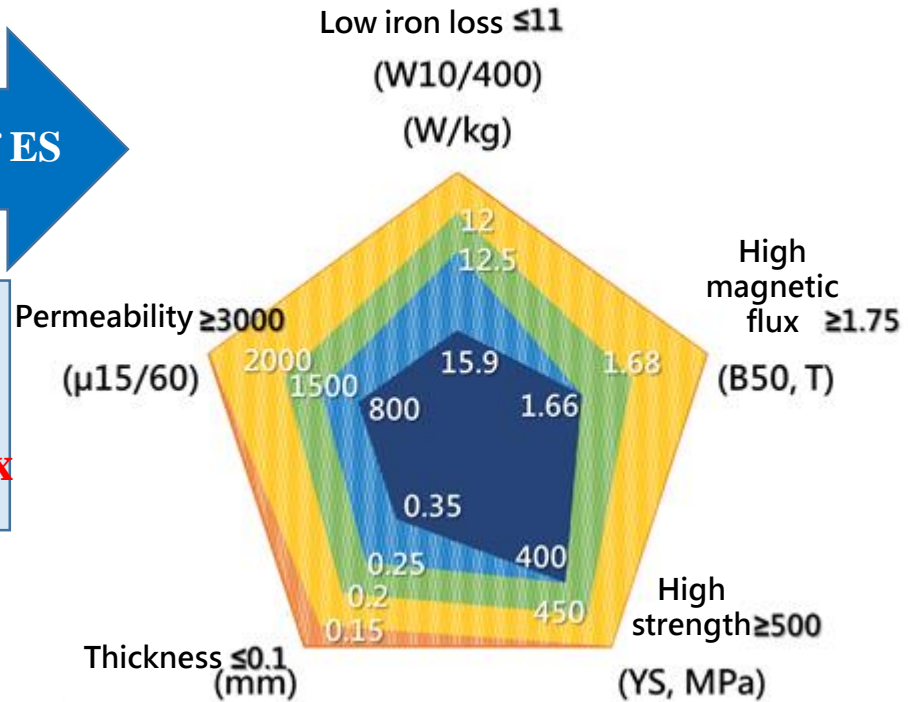
Performance requirement of motor

Quality requirement of ES

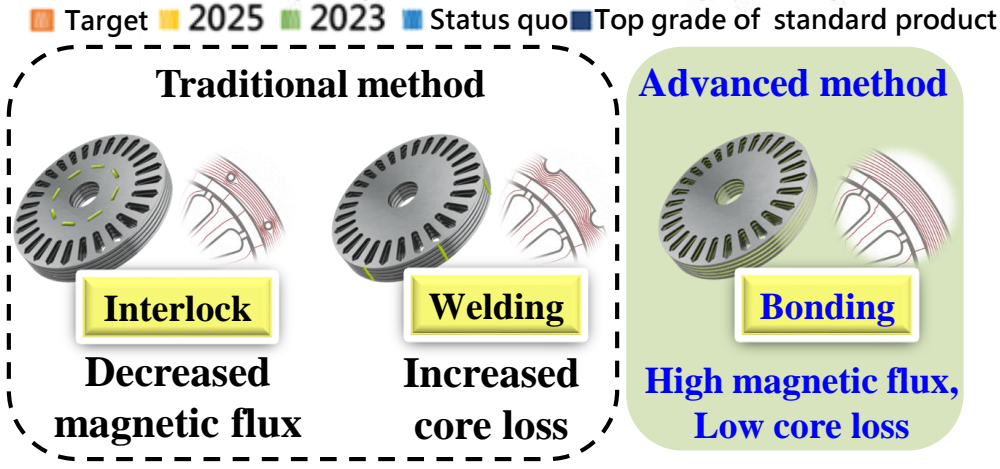
Energy saving  
Small volume  
High horsepower



Low iron loss  
Thin thickness  
High magnetic flux



- Key material supplier to the motor of EV.
- Mainly supplies to **American and European EV makers**, actively contacts the **supply chain of European, Chinese and Japanese makers**, and cooperates with domestic customers to enter the supply chain of commercial electric bus.
- Expected shipments to the global EV market is **over 100 thousand tons** in 2021.
- Developed **self-bonding electrical steel (SBES)** with thin film thickness and rapid cure features, 2,000 tons of which is supplied as materials for new EV motor to an American EV maker. Expected usage is 3,000 tons in 2021, which is expected to double or triple year by year.



# 2

## Cross-Generational Automotive Steels

High Strength

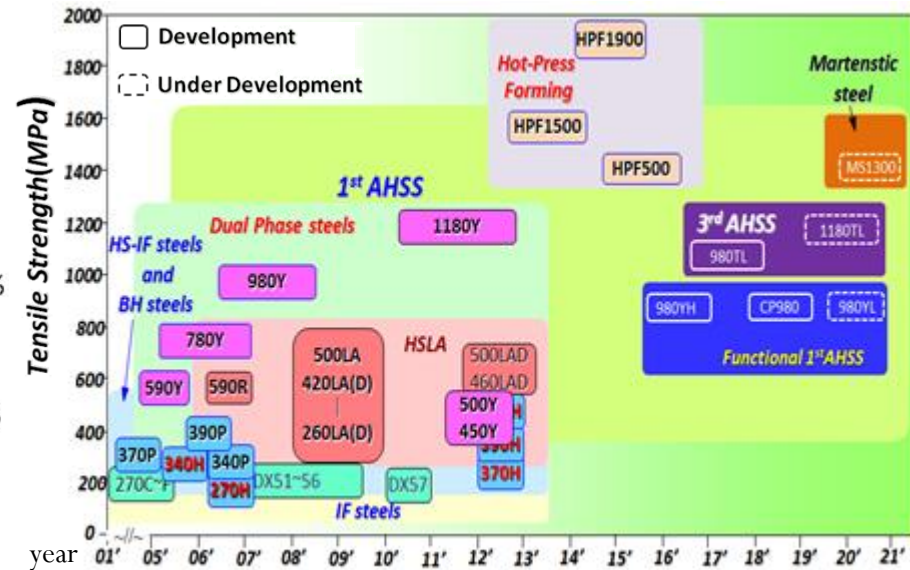
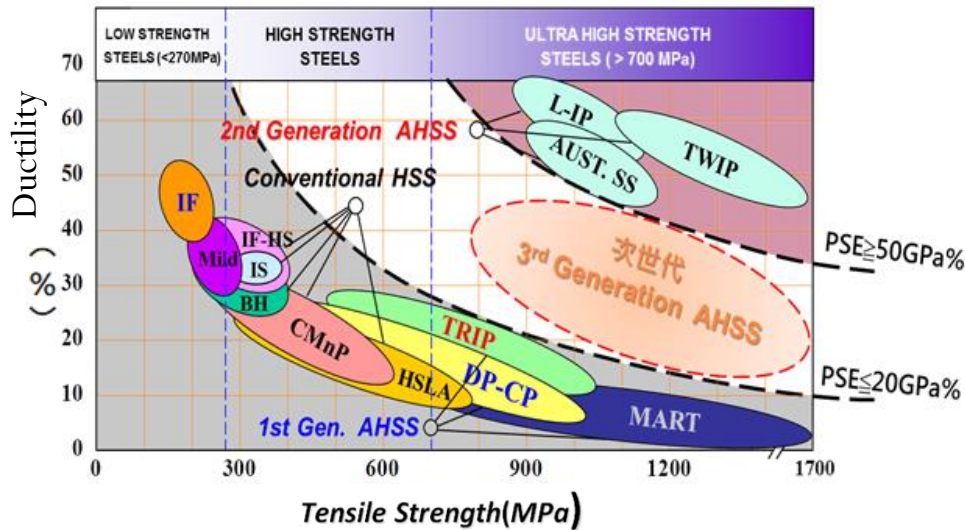


Weight-reducing and energy saving

High Ductility



Easily processing



➤ CSC has developed a series of **high-strength** automotive steels: **BH steel, HSLA, DP and AHSS**, whose strength is **4.3 times** of the regular mild steel and able to **decrease the vehicle weight by 35%**. **254 verifications from 27 automakers** has been acquired. The sales volume of auto steel in 2020 reached 430 thousand tons.

➤ Keep developing the **cross-generational AHSS** with higher strength and ductility to improve the **energy saving** and **crashworthiness** of vehicles.

## Introduce AIOT - BF Iron-making Smart Center

### BF

- Core process of steel mill
- Large volume, **high temperature and high pressure**
- V:3400 m<sup>3</sup>
- T>2000 °C
- P>3.4 atm
- Reduction reaction of iron ore is **unobservable**.

AI calculations, smart modules, decision-making assistance

Big data collection

Decision

Data

Instrument

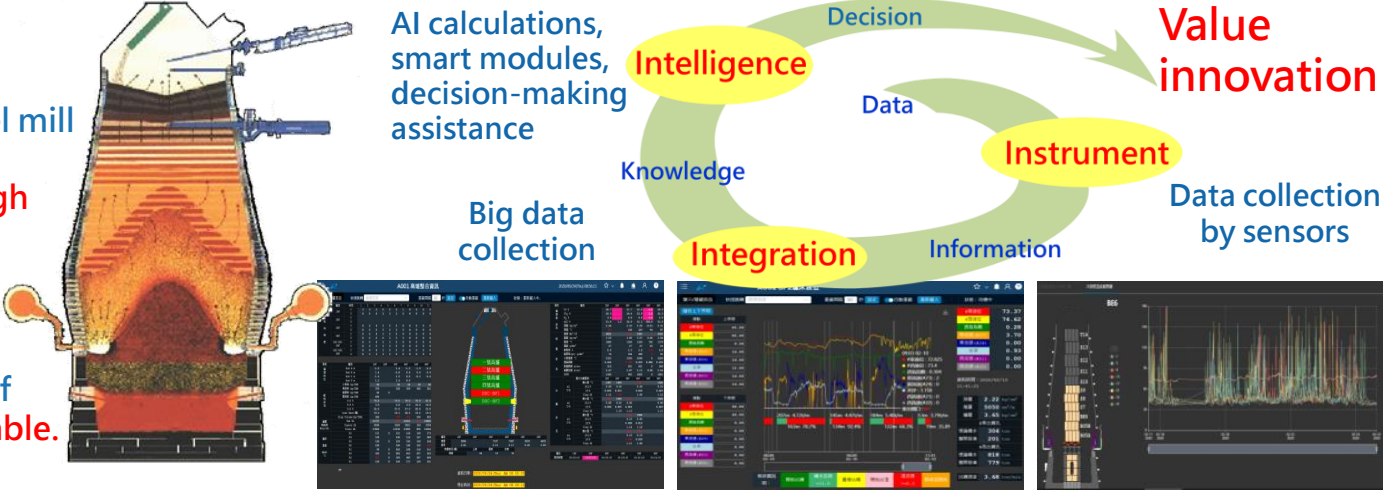
Information

Integration

Knowledge

Value innovation

Data collection by sensors



### 8 smart instructions

Channeling treatment, Equipment condition, Smart burden charging, BF operation, etc.

Developed **27 AI models**

Decreasing fuel cost **13million NTD/y**

Decreasing GHG **2,200 tons/y**

### 5 smart condition monitoring system

Main conveyor monitoring, Burden profile, BF equipment monitoring, Level gauge monitoring, etc.

### 5 smart indices

Energy Balances, BF condition index, Channeling index, Thermal index, etc.

### 9 AI prediction model

Tuyere image, Hot metal temperature, Smart hot stove, Stave thickness, etc.

➤ Turn the **black box** system into a **visible, predictable and easily controlled** progress by introducing AIOT to **improve the stability of blast furnace condition, process efficiency and energy saving benefit**. The Smart Center will be introduced horizontally to the **6** blast furnaces in CSC group.

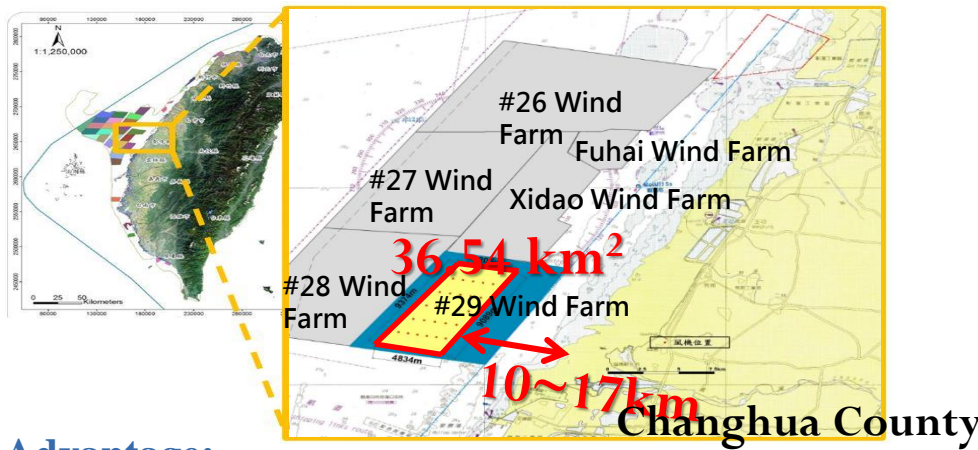


# 2 Cultivate in Green Industry Business –Substructure

- » CSC Shareholding : 100%
- » Total investment : NTD 6.842 billion
- » Progress:
  - Officially **commenced operation in Jan, 2020.**
  - Currently producing the substructures for Orsted - Greater Changhua Offshore Wind Farm Project. **The first 100% domestically made substructure** was completed **in July, 2021.** 4 substructures are completed and 2 sets of upper and lower jackets are being welded.
- » **Future order:** Signed a contract to produce **31 substructures for Zhongneng Wind Farm.** Started production of components in Oct.



## Cultivate in Green Industry Business–Zhongneng Wind Farm



Location	Off the coast of Changhua
Offshore Distance	10 ~17 km
Area	36.54 km <sup>2</sup>
Depth	27 ~ 40 m
Annual Average Wind Speed	9.66 m/s

### ➤ Advantage:

- #29 Wind Farm is **close to the coast, at shallow water, with decent wind resources**, and away from the fault and ecologically sensitive area, leading to **easier construction and better operation outlook**.

### ➤ Total investment: NTD 55 billion

### ➤ Total installed capacity: 300MW

### ➤ Progress:

- Obtained preparatory permit , signed power purchase agreement (PPA) with Taipower, and being expected to **connect to the grid in 2024**.
- Signed the **contract with Sing Da Marine Structure** to procure jacket substructures needed in the wind farm.
- A syndicated loan will be signed with banks recently to ensure the funds for wind farm development.


### ➤ Power generation(e) : 1.1 billion kwh/yr

# 2 Cultivate in Green Industry Business – solar power


- **CSC group shareholding: 100%**
- **Total investment: NTD 4.36 billion** (until the end of 2021)
- **Capacity Installed: 84.8MW** (until the end of 2020)
- **Operating performance:** (until the end of Sep, 2021)


■ CSC 55%    ■ CSCC 15%  
■ CEC 20%    ■ DSC 10%



  
**Electricity output**  
**308**  
**million kwh**

  
**Revenues from electricity sales**  
**1.418 billion**

  
**Carbon reduction**  
**around 155k tons**

  
**Equivalent to the CO2 absorption of**  
**397**  
**Taipei Daan Park**

\*Estimated based on the 2020 Taipower electricity carbon emission factor, 0.502 kg CO2e/kwh

Year	2017~2019	2020	2021	Total
Actual Capacity Installed (MW)	83.2	1.6	Under installation	<b>84.8</b>
Electricity Output (100m kwh)	1.25	1.04	0.79(until Sep.)	<b>3.08</b>

- **Future installation: 3~5MW / yr ; installation target: over 100MW**
  - Keep developing rooftop PV Systems in CSC group supply chain based on the regulation on users with high power consumption in Renewable Energy Development Act.
  - Transform from Type III to Type I renewable energy facility to obtain a license for selling green energy, increasing renewable energy usage of CSC group companies.

# 3

## Steel & Raw Material Dynamics

# Major Steel Market Dynamics & Outlook



## US & EU

- ✓ **Inflation higher than expected:** Supply chain bottlenecks driven by port congestion, China's power rationing, and chip shortages, coupled with rising wages and the recovery of consumer demand, have caused inflation to be higher than market expectations.
- ✓ **Supply chain instability drags down demand:** EU steel demand is stagnated and buyers stay on the sidelines; Steel price in the US remains high, but the uptrend is not as strong as previously seen.
- ✓ **Tariff agreement:** The US replace Section 232 tariff for EU with quota, benefiting EU's export to the US and steel price in EU.



## Japan

- ✓ **Inventory increases:** The newly announced inventory of flat steels increased to 4.318 million tons, higher than the normal level of 4 million tons, due to the traditional low season and the production cut of automakers.
- ✓ **Stable domestic demand in 2022:** Japanese automakers has planned to resume production in January, 2022. Overall, domestic demand in Japan is stable, but the slightly declining global price may bring uncertainty to the steel market in Japan.



## China

- ✓ **Continuous tight steel supply:** Under the backdrop of carbon neutrality and dual control system on energy consumption and energy intensity policies, the reduction of steel production exceeds expectations. The latest winter production cut policy in 2+26 cities shows that the restriction will not be relaxed going forward.
- ✓ **Cost remains supported:** The costs of coking coal and iron ore remain at a high level, and the end demand is stable. However, it remains to be seen how the government's price curb policy affects the steel price and market confidence.



## Southeast Asia

- ✓ **Pandemic is easing and the downstream is resuming production:** The COVID-19 pandemic in Southeast Asia is easing. Countries like Vietnam and Malaysia adopted policy that coexists with the coronavirus. Downstream industries such as auto, motorcycle and home appliances have resumed production, driving up the steel demand. The market appears to have stabilized, but the outlook remains to be seen due to the fluctuation of international price.

# Major Steel Market Dynamics & Outlook



## Taiwan

- ✓ **Steady domestic demand and sustained economic growth:** With relatively stable pandemic situation in Taiwan, demand for steel structures will be driven up by various constructions such as TSMC's Kaohsiung plant and approximately 75 billion of investments from the urban renewal project in the No.3 special economic zone in Asia New Bay Area; in addition, the demand for 3C also remains strong, driving up the consumption of galvanized steel. Overall, the economic growth in Taiwan remains steady, supporting the momentum of steel market.



## Prediction on 2022 steel market by international agencies : Demand keeps growing, steel price remains rangebound

- ✓ According to the World Steel Association (worldsteel), 2021 has seen a stronger than expected recovery in steel demand. Global steel demand outside China is expected to return to its pre-pandemic level this year. With further progress in vaccinations, steel demand may see an increase of 2.2% to 1,896.4 million tons in 2022.
- ✓ According to the report by World Steel Dynamics (WSD), in order to ensure the air quality during the Beijing Winter Olympics in Feb. 2022, the steel production cut policy will be continued until early 2022. The price is expected to rise in 2022Q1 thanks to the steel shortage driven by the supply restriction; however, WSD believes that the market will no longer be in a shortage in the second half of next year, so the steel prices may curb in the second half.

# Major Steel Market Dynamics & Outlook

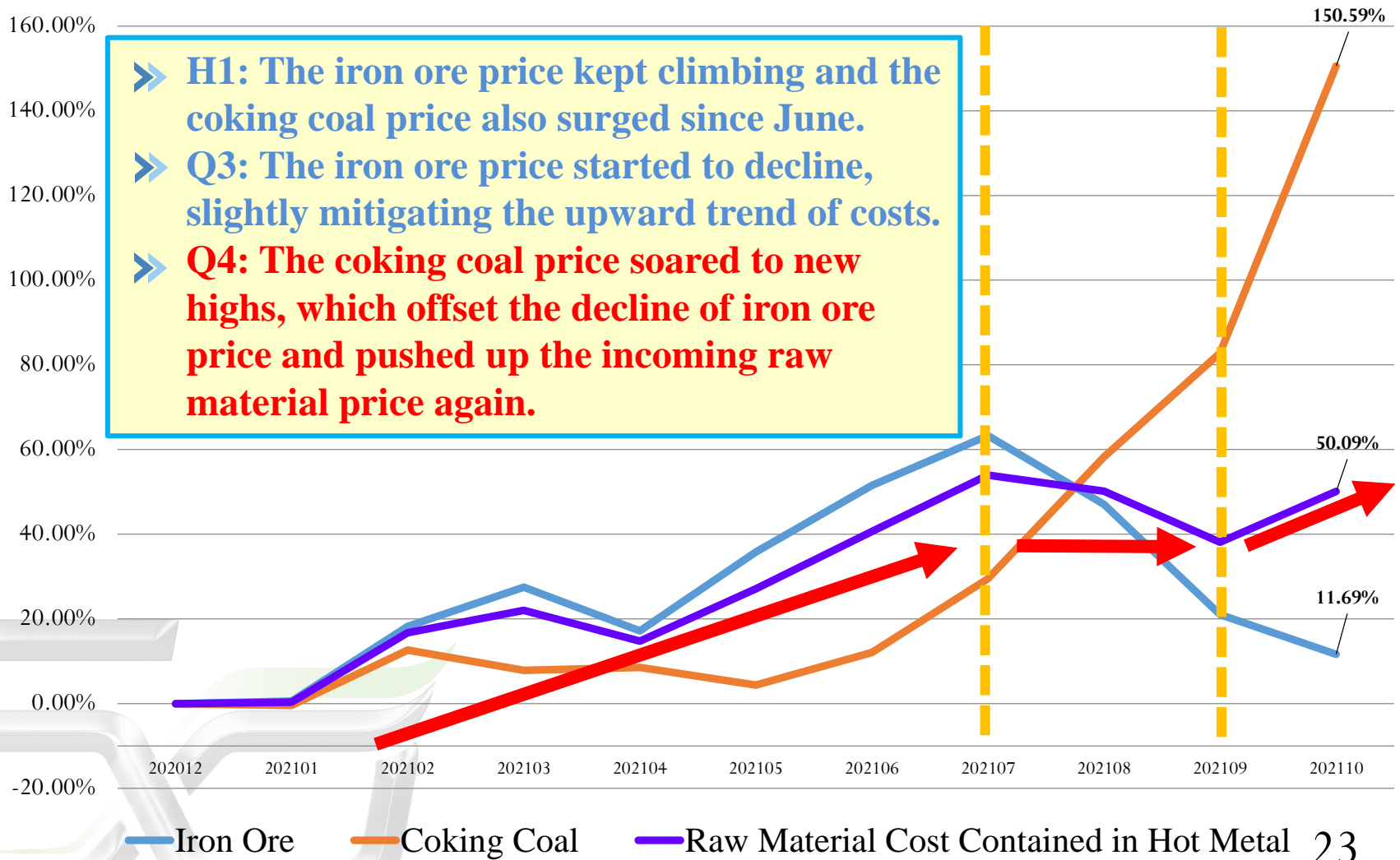


**Global steel market outlook: Demand remains steady; there is no need to be pessimistic about the future market.**

- ✓ The impact of pandemic gradually alleviates with the growing vaccination rates globally. Considering that the downstream demand for steel is getting steady with the roll-out of infrastructure plan, and the price of raw material remains at a high level, the steel price is expected to be supported.
- ✓ With the consistent policy on carbon neutrality, dual control system on energy consumption and energy intensity and steel production cut, steel supply in China is expected to be more constrained. However, the Chinese market is declining recently, and Baosteel also decreased the price in its latest December pricing, impact of which to other Asian markets remains to be seen.
- ✓ The steel demand is affected by the supply chain bottleneck driven by port congestion and the chip shortage in this year. The shipping capacity and supply of key components is expected to be improved, boosting the steel consumption outlook.
- ✓ Overall, the global steel markets have stabilized from the pandemic impact, and the medium to long-term outlook are promising, but there are still uncertainty in the short-term.

## Raw material trend – iron ore & coking coal

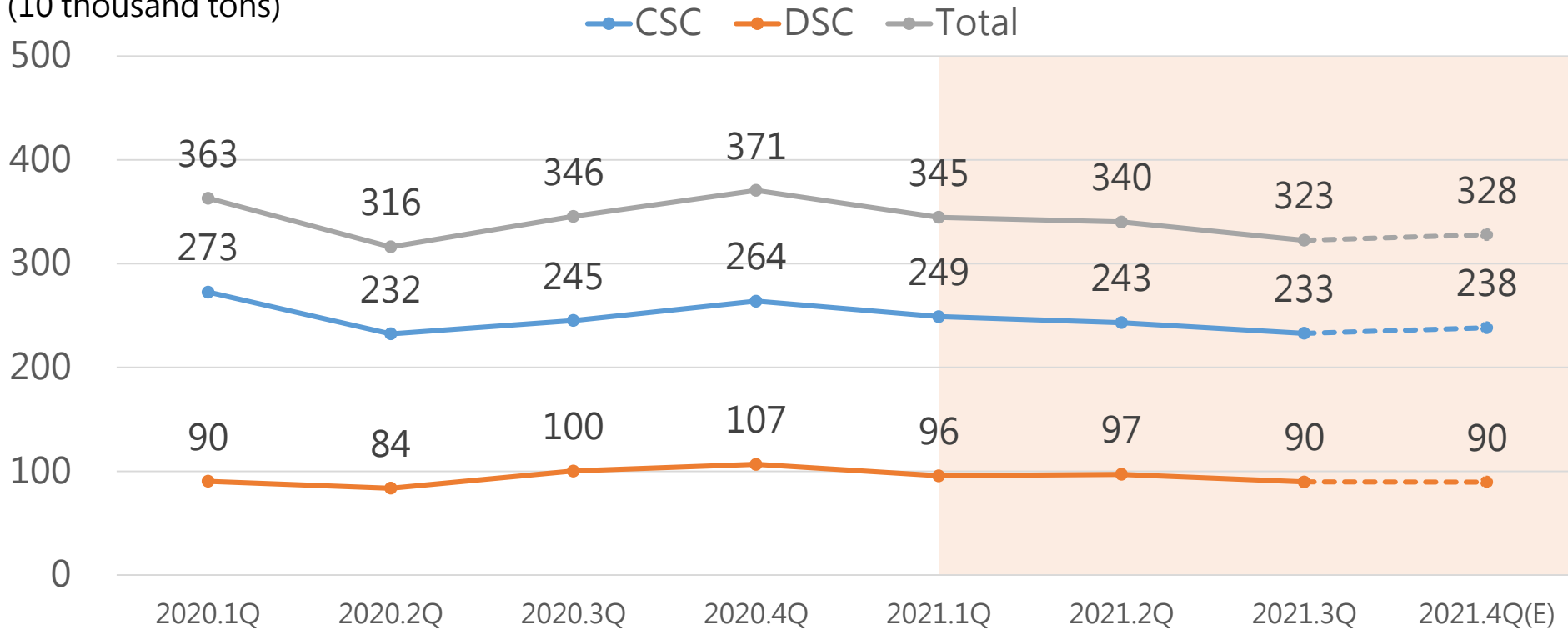
Percentage change of incoming raw material price  
(compared to Dec. 2020)





## Sales Analysis (CSC & BF Products of DSC)

Sales volume  
(10 thousand tons)



➤ As the supply of slabs from Nippon Steel’s Wakayama Steel Works reduced since 2021, CSC no longer arranges these slabs and the procurement shifted to Chung Hung Steel, leading to the decrease of CSC’s standalone sales of slabs. However, **the sales of finished steel products increased.**

➤ Steel **demand** in 2021 **remains at a high level.** The market saw correction during the traditional low season in Q3, and **remains cautiously optimistic in Q4.**

# Consolidated Financial Performance

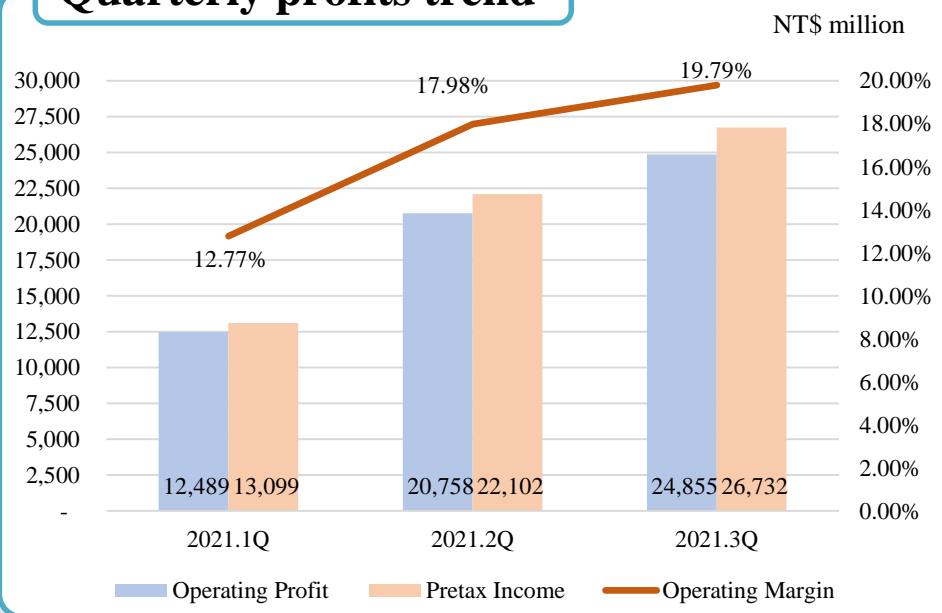
## Latest operating results

Amount: NT\$ million

Item	*2021.10	2021.9	MoM	2021.1~10	2020.1~10	YoY
Operating Revenue	43,199	41,982	3%	382,047	254,266	50%
Operating Income	7,861	8,200	-4%	65,964	(2,173)	3135%
Operating Income Margin	18.20%	19.53%		17.27%	-0.85%	
Income Before Income Tax	8,650	8,936	-3%	70,583	(2,138)	3401%

\*preliminary result

## Quarterly profits trend



- ✓ Thanks to the increase of both monthly and quarterly pricing, especially the significant price increase in Q2, the ASP increase was larger than that of ASC in the same period. As a result, the profit keeps growing from 2020Q4 to 2021Q3.
- ✓ EPS reached NTD 1.28 in Q3 and NTD 2.88 in Q1~Q3.



CSC

Thank you

Q & A

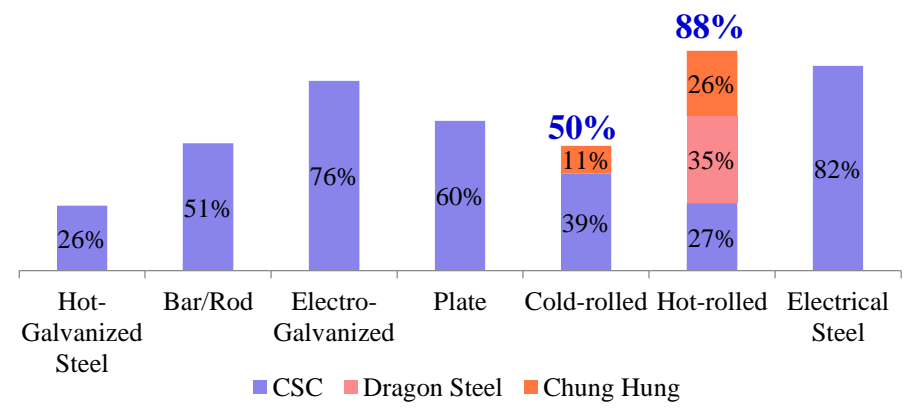
# 4

## Appendixes

## Company overview - Business snapshot

- CSC is the leading Taiwanese steel manufacturer with integrated production capabilities. Crude steel capacity of CSC Group reached about 16 mmt.
  - ✓ CSC: 9.9 mmt
  - ✓ DSC: EAF & No.1&2 BF around 6 mmt
- Dominant position in the domestic market
- Focus on Leading-edge Steel Mill & green energy business. Improve the percentage of high-end and high-margin products.

CSC Group domestic market share (2021.1~3Q)



### Steel

- CSC
- CHS
- DSC
- CSC Steel Sdn. Bhd.
- CSVC
- CSCI

### Engineering

- CSSC
- China Ecotek
- CSMC
- Info-Champ Systems
- SDMS

### Industrial Materials

- CSCC
- CHC Resources
- CSAC
- Himag Magnetic
- CSPM
- China Steel Resources

### Trading and Logistics

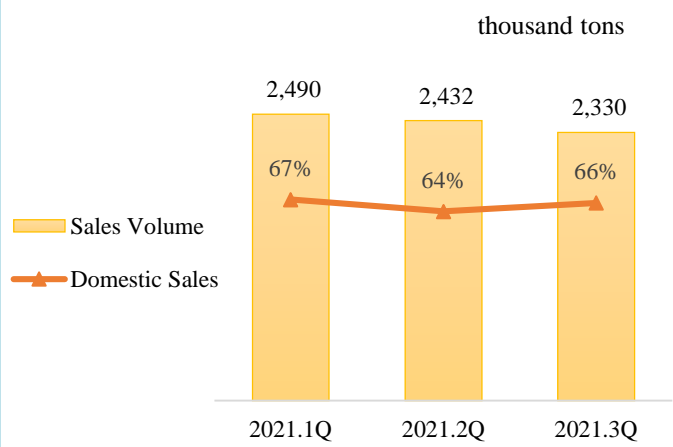
- CSE
- CSGT
- CSMQ
- CSMK

### Service and Investments

- Gains Investment
- China Steel Security
- CPDC
- CMC
- CSC Solar
- China Steel Power
- KRTC

# Standalone Production / Sales Performance

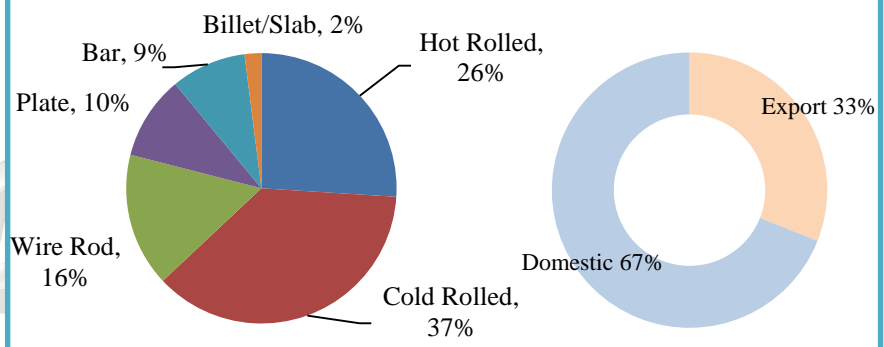
## Sales analysis



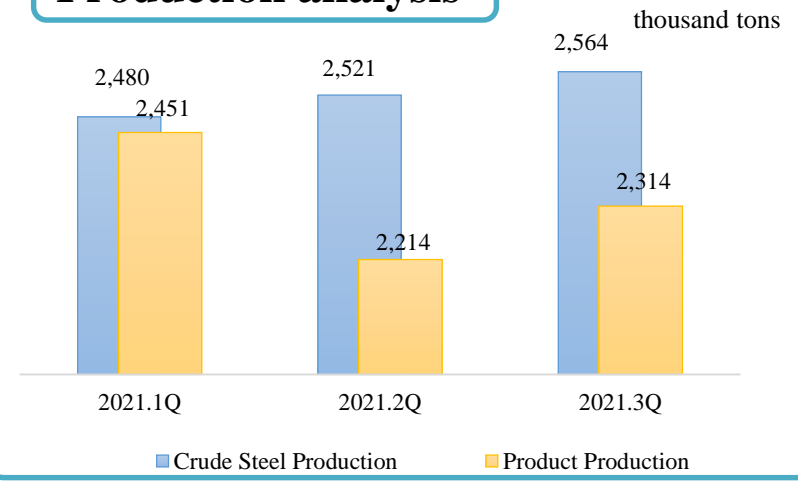
- ✓ CSC completed the revamping of No.2 blast furnace in advance at the end of 2020 and caught up with a wave of strong demand.
- ✓ CSC operated at full capacity because of the strong market demand in Q1 and Q2.
- ✓ The sales volume in Q3 declined slightly, partly because of the rainy season and delay of the export shipping schedule.

2020.1Q sales volume (outsourced slab excluded) is around 2.3 million tons.

## 2021.1~3Q Sales value breakdown

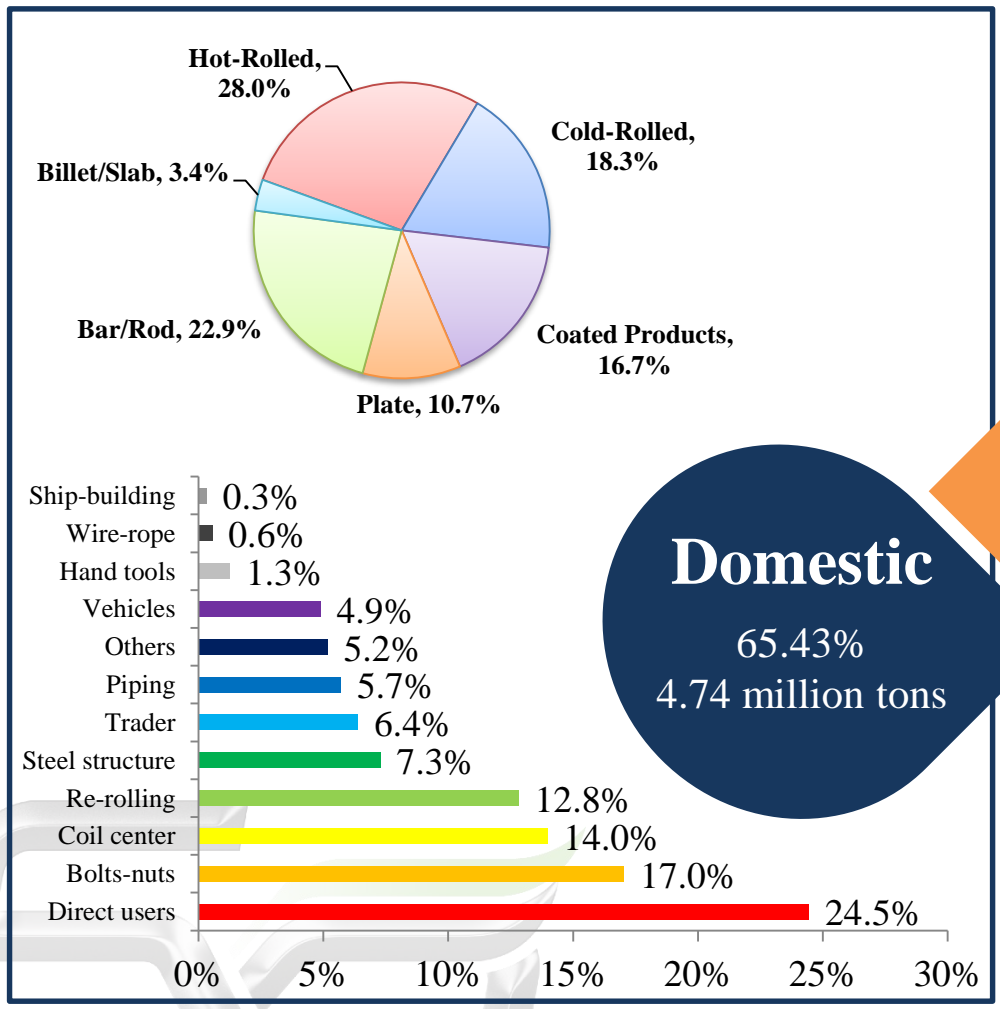


## Production analysis

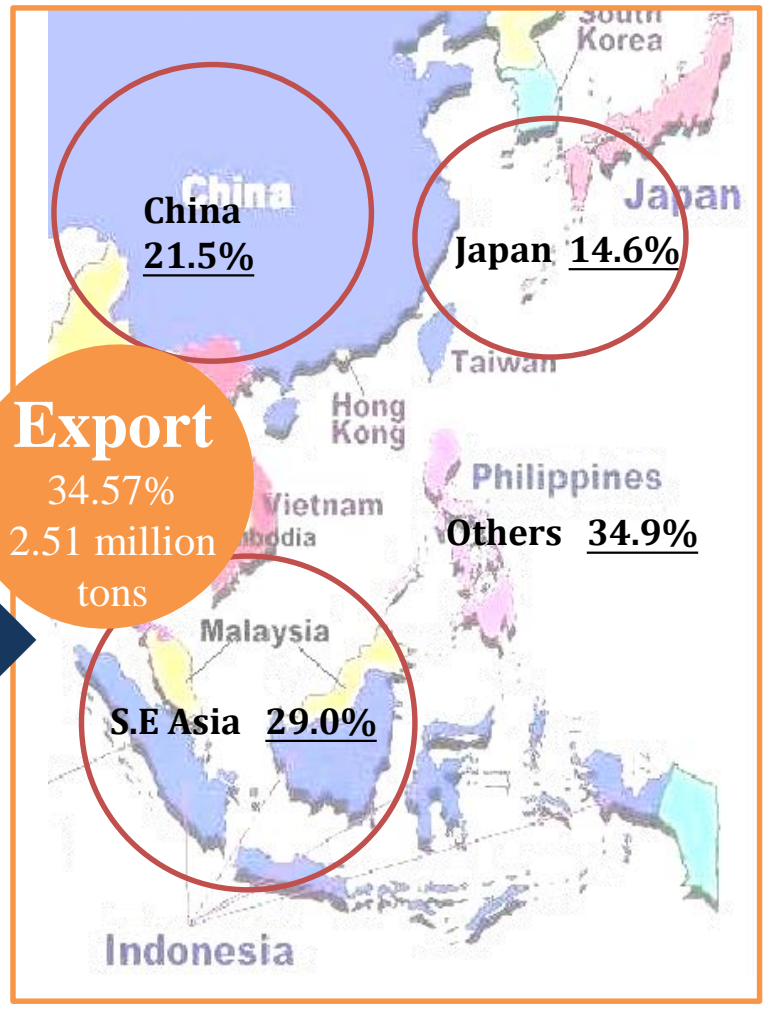


## Sales Analysis - CSC standalone

2021.1~3Q sales volume totaled 7.25 million tons - Sales Breakdown

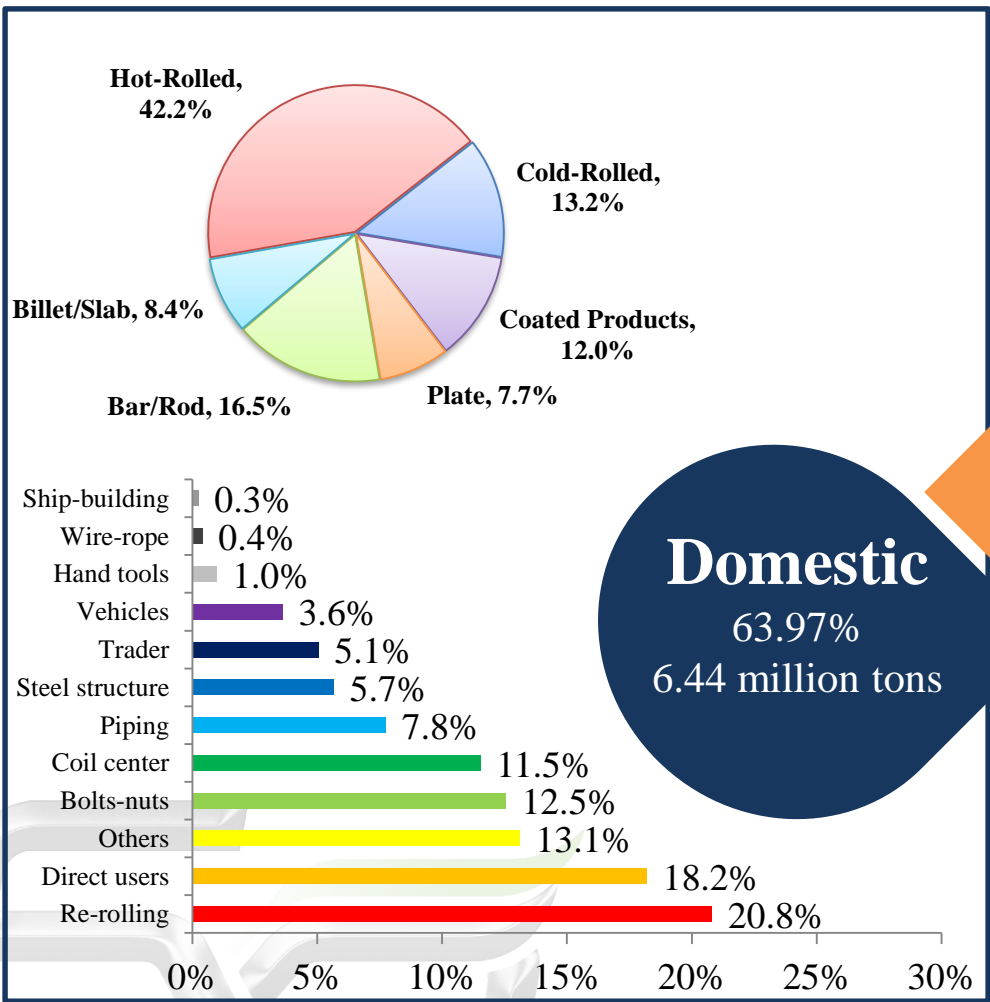


**Domestic**  
65.43%  
4.74 million tons

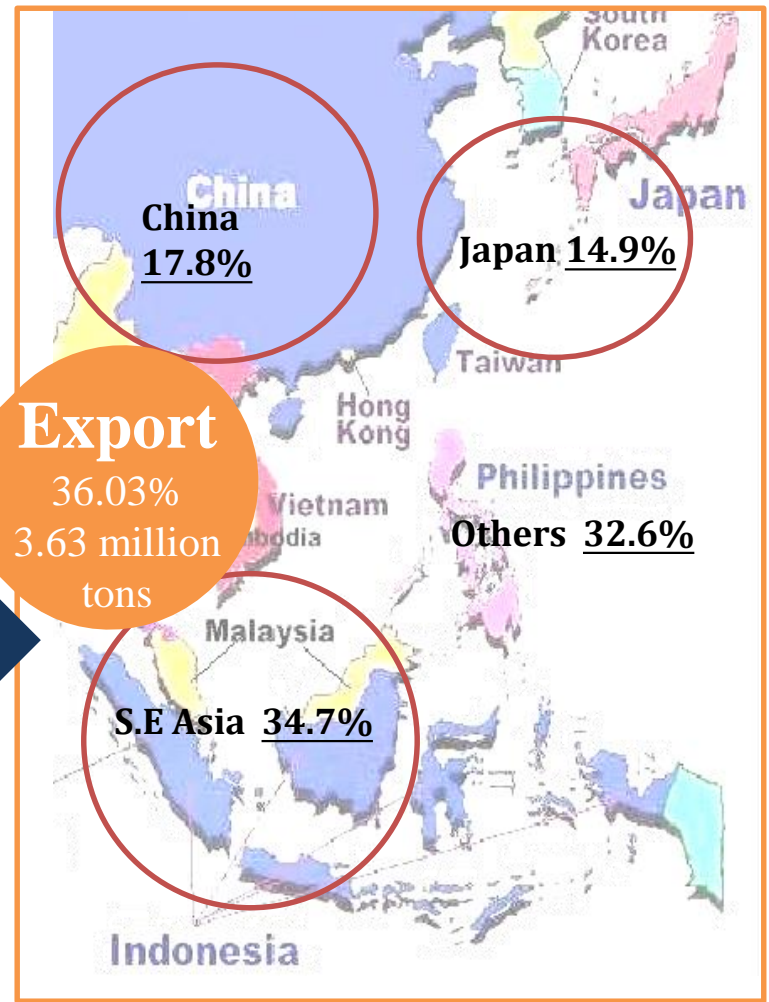


## Sales Analysis - CSC & BF products of DSC

2021.1~3Q sales volume totaled 10.07 million tons - Sales Breakdown



**Domestic**  
63.97%  
6.44 million tons





# Consolidated Income Statement

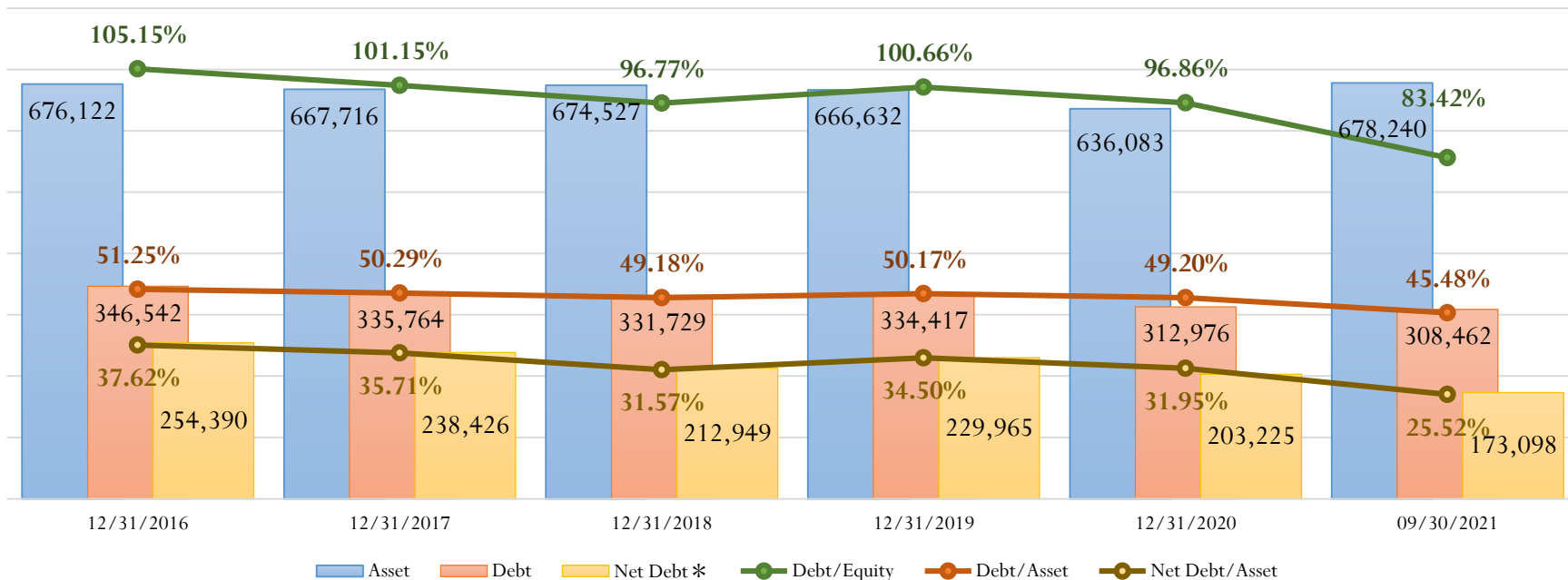
IFRSs

Units: NT\$ millions

	2021.1~3Q	2020.1~3Q	YoY
Revenues	338,848	227,177	+49%
Gross profit	69,246	5,860	+1082%
Gross margins	20.44%	2.58%	
Profit (loss) before tax	61,933	(3,492)	+1874%
<u>Net profit (loss)</u>	50,125	<u>(3,823)</u>	+1411%
Attributable to			
Owners of the corporation	44,498	(4,360)	+1121%
Non-controlling interests	5,627	537	+948%
Earnings Per Share (NTD)	\$ 2.88	(\$ 0.28)	+1129%

# Consolidated Financial Position

Units: NT\$ millions



- ✓ Cash flows from operating activities remains steady; keep paying back debts and reducing debt ratio.
- ✓ Keep reducing financial costs by issuing corporate bonds and paying back US dollar-denominated debt in recent years.
- ✓ Credit rating: Taiwan Ratings twAA- ; Outlook Stable (2021.04.23)  
Fitch Ratings AA (tw); Outlook Stable (2021.10.18)

\* 2014~2017 :

Net debt = Interest Bearing Debt – cash & cash equivalents – ( *financial assets at fair value through profit or loss-current+ available-for-sale financial assets-current +held-to-maturity financial assets-current+ derivative financial assets for hedging-current* )

\* 2018~ :

Net debt = Interest Bearing Debt – cash & cash equivalents – ( *financial assets at fair value through profit or loss-current+ financial assets at fair value through other comprehensive income-current* )

# Historical EPS and Dividends Paid

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Dividend payout(%)	85	132	86	70	102	82	81	63	88	600
Cash Dividend payout(%)	74	105	67	70	102	82	81	63	88	600

