

Investor Relations 2020

Doosan Solus

1Q, 2020 Earnings Report

2020. 5



Disclaimer

The information herein is provided for your information purposes only and contains preliminary figures which may be materially different from the final figures.

Forecasts and projections contained in this material are based on current business environments and management strategies, and they may differ from the actual results upon changes and unaccounted variables. We make no guarantees and assume no responsibility for the use of information provided. We trust your decisions will be based on your own independent judgment.

Financial data in this presentation is based on an IFRS-basis consolidated financial statements.

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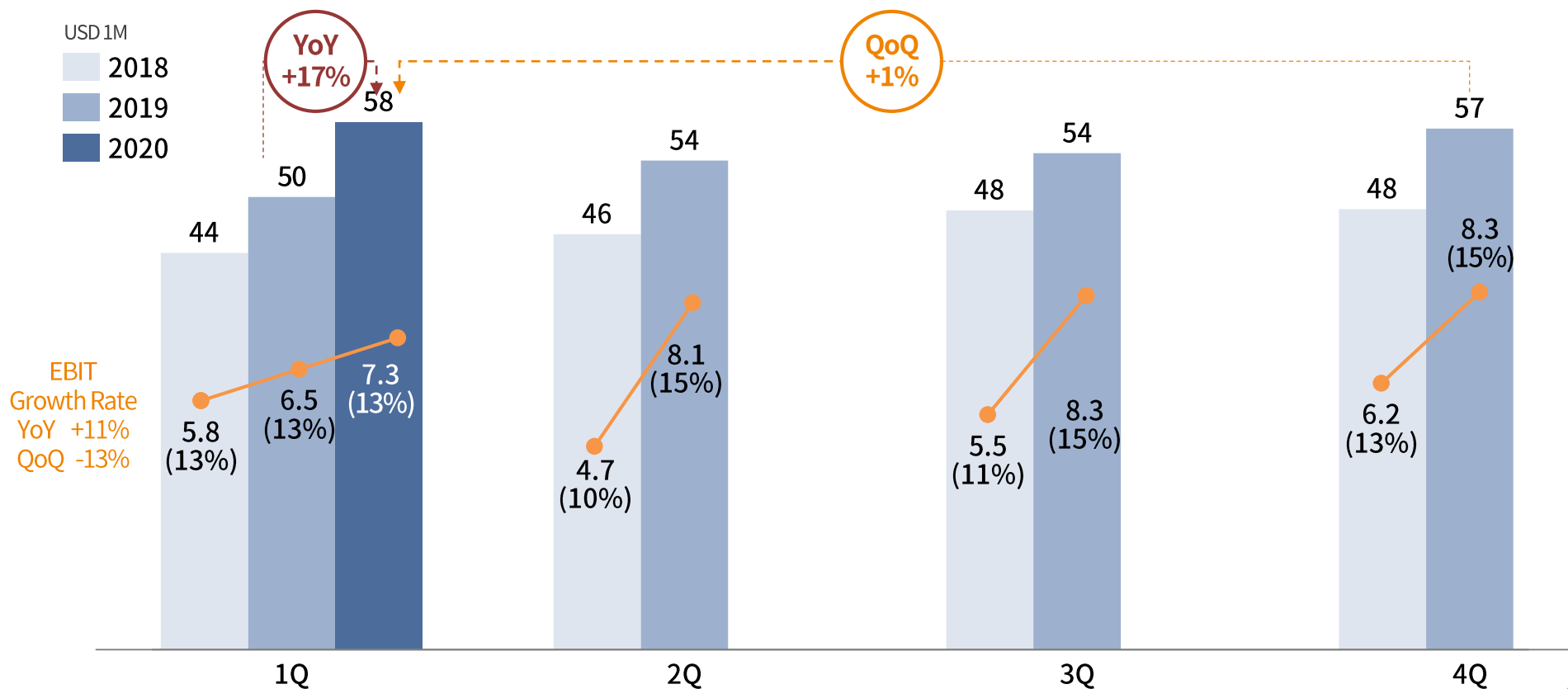
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1Q20 Earnings

- Revenue : Quarterly revenue increased by 17%(YoY) and 1%(QoQ) due to increased sales of high-end copper foils for 5G , OLED materials, and entry of new customers for Bio materials
- EBIT: Quarterly EBIT increased by 11%(YoY) due to increased demands of high-end copper foils for 5G, expanded application of OLED materials for mobile devices, and increased sales of natural cosmetics materials. However, Quarterly EBIT decreased by 13%(QoQ) due to cost increase related to Hungary battery copper foil business preparation and negative impact of COVID-19 on logistics activities

[Quarterly Revenue & EBIT Trend]



• FX Rate: Based on finally notified basic exchange rate of Hana Bank on 31 March 2020(KRW 1,224.00/USD)

Battery Copper Foils_1Q20 Achievements & 2Q20 Business Strategy

Hungary Plant
(10K t production capa.)



[1Q20 Achievements]

- **Construction completion of Hungary –battery copper foil plant**
 - Gradual production line set-up in progress (Total 8 lines & 10K t production capacity)
 - Completed first production line set-up and sample shipments
 - Expected to start mass-production in 2H20
- **More mid-to-long term supply contracts**
 - Secured 80% of 10K t production capa.
 - 2 Global major battery providers
 - Completion of supply contracts for the next 4 to 5 years
- **Mass production of 6um high-elongation battery copper foil in progress (CFL)**
 - For global major clients producing batteries in Europe

[2Q20 Business Strategy]

- **Preparation for mass-production and adjustments for clients**
 - Quick quality approval process from major clients is in progress
 - Secure more clients and contracts for mass-production
- **Preparation for Phase 2 production capa. increase**
 - Construction design in progress, expect to start construction in 2H20

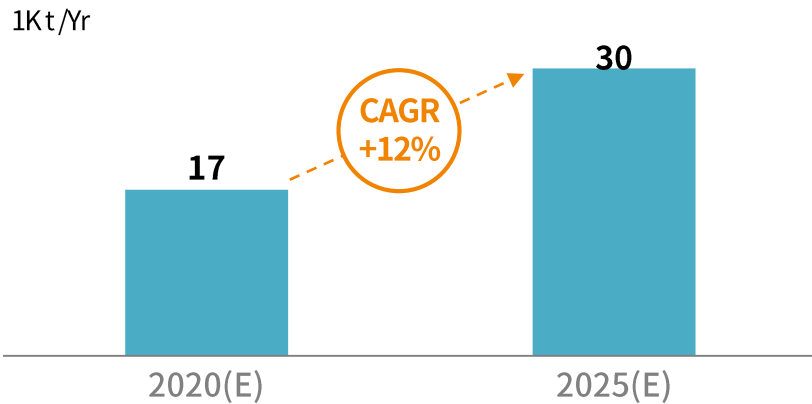
Appendix : Hungary Battery Copper Foils Plant Location & Competitiveness



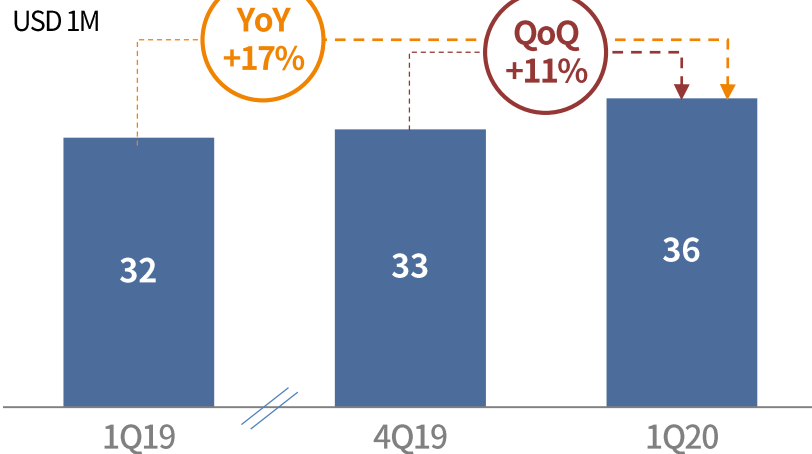
- Geographical Advantages for Europe EV market & Battery Manufacturers
 - Location : Tatabánya, Környe, Üveggyár u., Hungary
 - Same-day delivery to leading battery clients in Europe
 - Minimize quality risk from delivery and storage, and maximize production efficiency from JIT systems
 - Provide customer-friendly supports such as real time technical supports and its customer exclusive lines
- Plan to flexible capa. increase to deal with future market situations
 - Area : 14.37ha (Land) & 2.91ha (Plant)
 - Phase 1: Completed plant construction (Capa: 10K t)
 - Phase 2: To increase capa. (Additional capa: 15K t)
 - Construction design in process, expect to finish construction in 2022
 - Secure additional land to prepare for further capa. Increase (Estimated total capa: 75K t)

Copper Foils_1Q20 Achievements and 2Q20 Business Strategy

Market Prospects of Specialized Copper-foils for 5G and Semiconductors



Sales



[1Q20 Achievements]

- 17% Revenue increase(QoQ) by minimizing COVID-19 Impact
 - Increased sales for base stations/data centers with 5G market expansion
 - Continuous increase of 5G-related products such as low-loss, high-frequency, and etc.
 - Accelerated Europe-oriented sales offset minor decrease of China-oriented sales in January and February
- Production capa. increase to capture rising demands of High-end copper foils
 - Luxembourg Plant(CFL: Circuit Foil) will increase additional 3K t production capa.
 - Started design and construction process since January 2020

[2Q20 Business Strategies]

- Improve Sales of High-end copper-foils
 - 5G market is expected to expand continuously
 - Increasing use of digital devices and rapidly rising data volume due to spread of un-tact culture
 - Minor limited production caused by COVID-19 pandemic in Europe, but will be resolved by increasing portion of high-end copper foils to maximize profitability

Appendix : Competitiveness of Specialized Copper-foils for 5G/Semiconductors

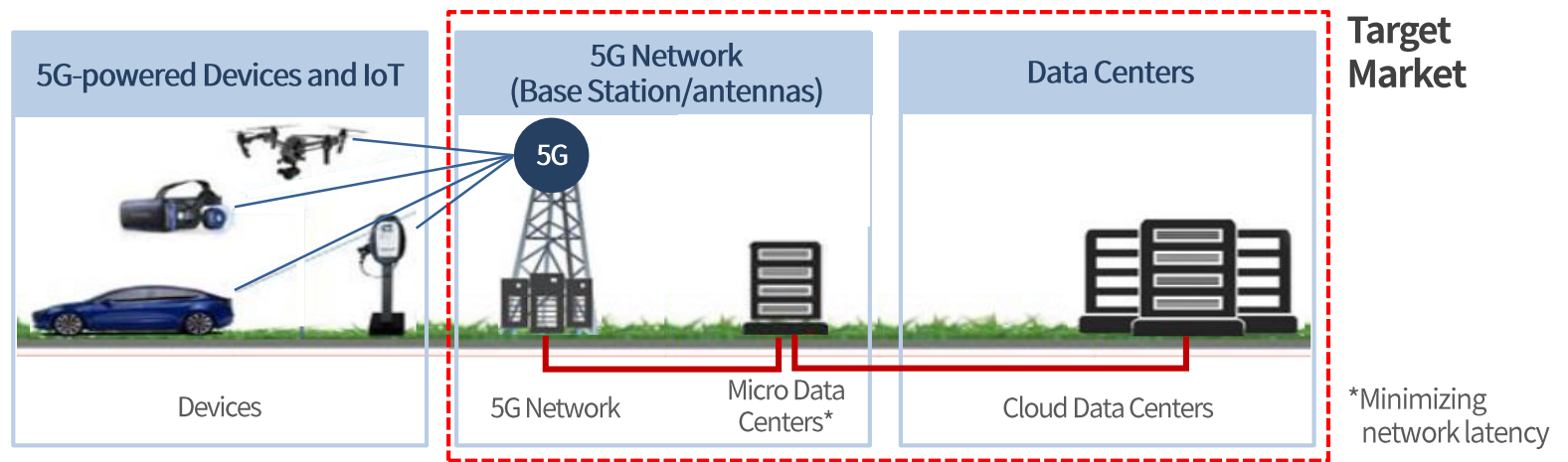
- Distinctive Technical Competitiveness Leading High-end Market

- Securing specialized copper-foil portfolios for 5G/semiconductors (i.e. low-loss, high-frequency copper foils for 5G equipment and ultra-thin copper-foils for semiconductors), 5G base stations/repeaters, data centers, semiconductors, military, and Global no.1 market share

- Distinctive Technical Competitiveness of Copper-foils

- Technology such as ①Low roughness ②Superior peel strength ③Thermal Reliability ④Production of Ultra-thin copper foils + Drum-related technology such as exclusive design, production, and maintenance

[Set Application for 5G]



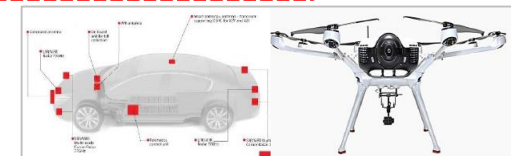
High-frequency circuits (Antenna, etc.)



High-speed digital transmission & low loss (5G communication equipment, base station radar, etc.)

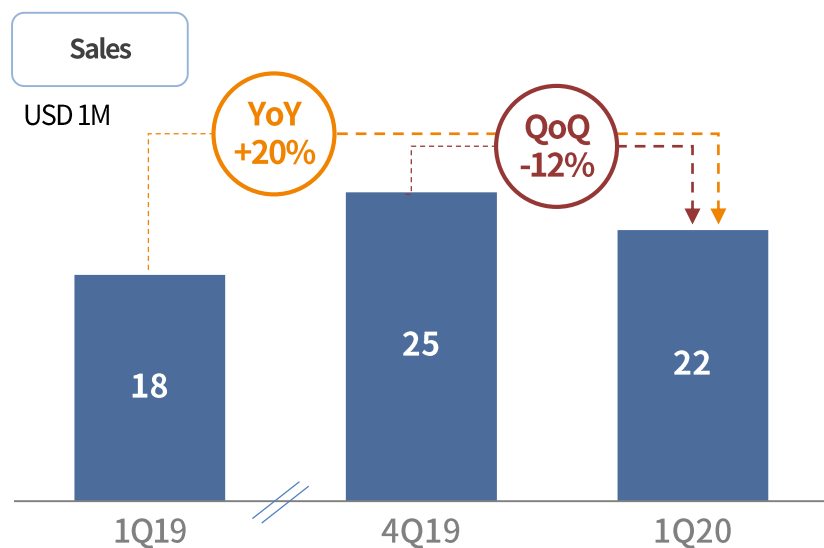
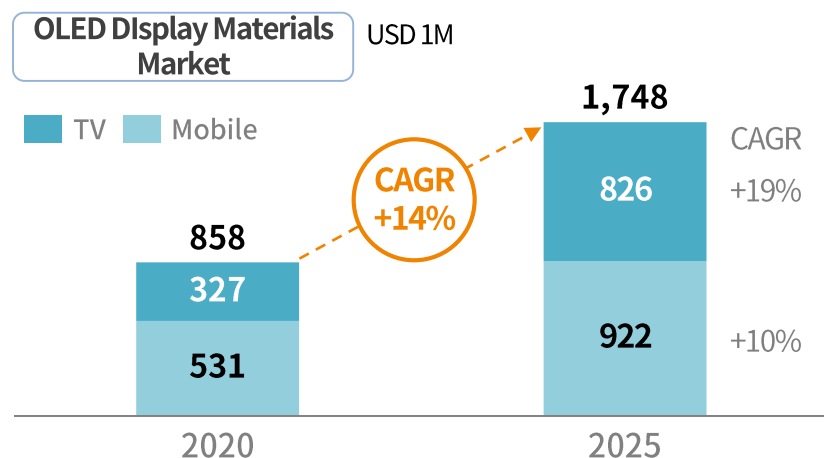


Sophisticated Multi Layer Board (Network board)



Smart Car/Device (automobile sensors,)

Advanced Materials(OLED, Bio)_1Q20 Achievements & 2Q20 Business Strategy



[1Q20 Achievements]

- **20% Revenue growth (YoY)**
 - OLED : Application expansion of mobile devices and TV-oriented products development
 - Increases in OLED adaption rate of low/mid-priced mobile devices and production volumes
 - TV-related products development and client evaluation in process
 - Bio: Supply expansion of pharmaceutical/functional food materials
 - New supply for global leading customers, etc.

[2Q20 Business Strategy]

- **Secure Growth Engine for 2H20 & Upcoming Years**
 - OLED: Develop new materials for mobile devices and clients approval for TV-oriented products
 - Securing mid-to-long term growth foundation from increasing adaption rate of OLED and developing new materials, despite of the pandemic-affected mobile display market
 - Bio : Increases in expected revenue of natural cosmetic materials by capturing new global leading clients

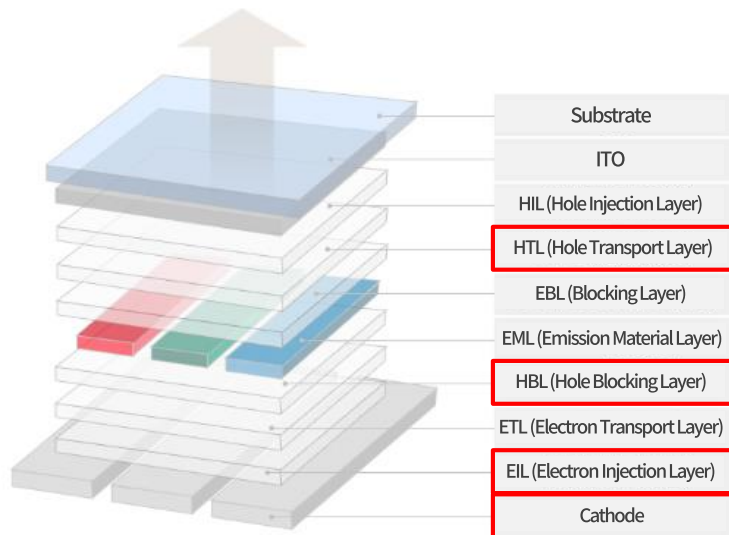
• FX Rate(2019, 2020): Based on finally notified basic exchange rate of Hana Bank on 31 March 2020(KRW 1,224.00/USD)
 • FX Rate(Projection): Internal materials (2020(P)) :KRW 1,150.00/USD

Appendix : Competitiveness of OLED & Bio materials

- **OLED materials : Continuous development of exclusive OLED materials and new functional materials**
 –With developing new materials and continuing improvements, increasing application and layer in devices
- **Cosmetic, Pharmaceutical & Functional food: Owns a self-developed fermentation host and highly purified natural materials portfolios**
 - Ceramide (found more than 40% in human skin lipid): Premium material functions as a moisturizer enhancer for skincare products
 - Phytosphingosine (A component of human skin, physiologically active- multifunctional substance with a strong efficacy): Cosmetic material used for anti-inflammation and moisturizing.
 - Hydrogenated phosphatidylcholine (A core precursor for liposome formation, facilitating an absorption of main cosmetics ingredients into skin): Lecithin, extracted from soybean and further hydrogenated, with its capability of acting as a natural emulsifier for cosmetic products.

[OLED Structure and Layer]

(Mobile OLED Structure)



※ : Layer (Provided by Doosan Solus)

[Bio Materials Portfolio]

(Cosmetics)

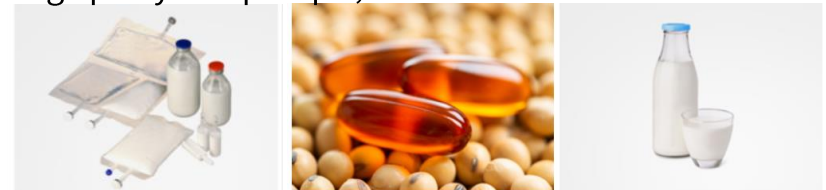
Natural Ceramide



Skincare Make-up OTC Cosmetics Liposome sauce

(Medicine / Health function)

High-purity Phospholipid, Natural Emulsifier



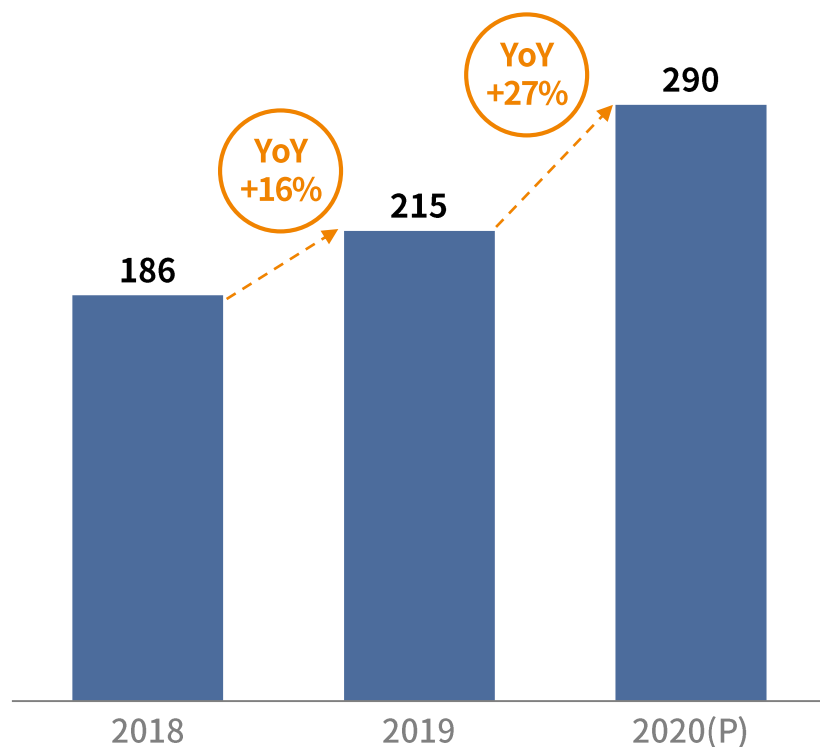
Fat Emulsion Functional Food Food for Nutrition Support

Appendix : 2019 Annual Performance & 2020 Business Plan

- 2019 Results: Sales and EBIT have increased by 16% (YoY) and 40%(YoY) respectively with the growth of copper-foils, OLED materials, and Bio materials businesses evenly
- 2020 Plan: Projected revenue is expected to increase more than 25%(YoY) by increasing revenue from OLED materials, improving revenue portion due to High-end copper foils, and initiating battery copper foil production.
EBIT margin of existing businesses is expected to increase, however, the companywide EBIT margin is expected to be decreased by rising costs due to preparation for the initiation of battery copper foil business

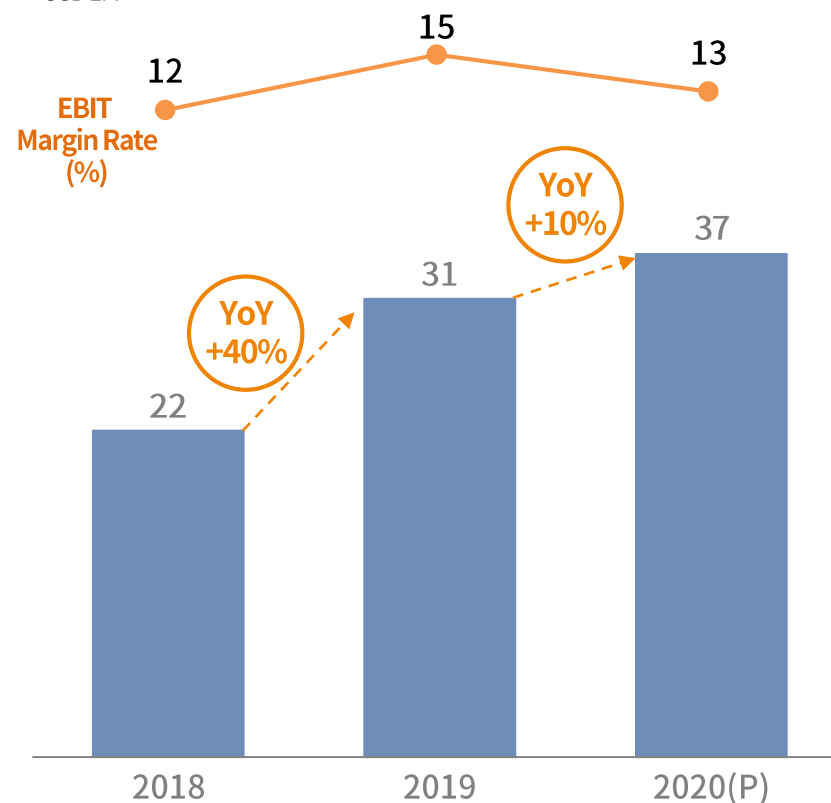
[Annual Sales Trend]

USD 1M



[Annual EBIT Trend]

USD 1M



- FX Rate(2018, 2019): Based on finally notified basic exchange rate of Hana Bank on 31 March 2020(KRW 1,224.00/USD)
- FX Rate(Projection): Internal materials (2020(P)) :KRW 1,115.00/USD

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Summary Financial Statements

[Summary Balance Sheet]

USD 1M

Items	Consolidated	
	4Q19	1Q20
Current Asset	188.4	160.5
Non-current Asset	215.4	264.4
Total Asset	403.8	424.8
Current Liabilities	150.3	137.3
Non-current Liabilities	138.6	162.4
Total Liabilities	288.9	299.8
Capital Stock	3.3	3.3
Total Equity	114.9	125.1
Debt-to-Equity Ratio	251%	240%
[Loan Payable]		
Loans Payable	150.1	173.7
Cash	77.3	48.7
Net Debt	72.8	125.0

[Summary Statement of Comprehensive Income Statement]

USD 1M

Items	Consolidated	
	4Q19	1Q20
Revenue	58.6	59.3
COGS	38.8	39.5
Gross Profit	19.7	19.8
SG&A	11.2	12.4
EBIT	8.5	7.4
EBIT Margin(%)	15%	13%
Interest Expense	0.8	0.8
Earnings before Taxes	5.8	7.1
Net Income	3.8	4.5

- Based on Unaudited financial statements
- FX Rate(B/S): Based on finally notified basic exchange rate of Hana Bank on 31 March 2020 (KRW 1,224.00/USD)
- FX Rate(I/S): Based on finally notified basic exchange rate of Hana Bank between 2 Jan 2020 and 31 March 2020 (KRW 1,195.48/USD)

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Company Profile & Business Introduction

[Company Profile]

<u>Name</u>	Doosan Solus
<u>C.E.O.</u>	Lee, Yun-Seok
<u>Establishment</u>	1 Oct. 2019
<u>Listing Date</u>	18 Oct. 2019(KSOPI)
<u>Capital Stock</u>	USD 3.3M
<u>Employees</u>	760(As of April. 20)
<u>Location (HQ)</u>	Jeollabuk-do Iksan
- <u>BatteryCopperFoil</u>	Hungary ¹⁾
- <u>Copper Foil</u>	Luxembourg ¹⁾
- <u>OLED, Bio</u>	Yoing-in ²⁾ , Iksan ³⁾

[Business Introduction]

 Battery Copper Foil Division	Battery Copper Foil	Copper foil for EV batteries	
	Copper Foil	Copper foil for electronic devices (PCB)	
 Advanced Materials Division	OLED	OLED and display materials for smartphone, TV, laptop, etc.	
	Bio	Natural-based materials for cosmeceutical, pharmaceutical and nutraceutical	

1) Development/Production/Sales
 2) Development
 3) Production

Location of Major Sites

