

Doosan Enerbility Co., Ltd.

# 2022 3Q Earnings Release



November 2022

# Disclaimer

This presentation was prepared for the convenience of investors. The financial figures contained in this presentation are K-IFRS consolidation and Doosan Enerbility managerial consolidation<sup>1)</sup> basis.

Also, this presentation has been prepared prior to the completion of external audit, only for the convenience of investors. Accordingly, it may be subject to change during the final audit process.

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1) Doosan Enerbility managerial consolidation : Doosan Enerbility separate + Overseas Subsidiaries

# Contents



## **1. 2022 3Q Business Results**

## 2. Major Business Progress Status

# '22 3Q Doosan Enerbility\_Business Results Summary

- Order achieved KRW 4.8T, increased 62% YoY, thanks to Saudi Aramco Casting and Forging Plant/Shuaibah 3 desalination, and Guam Ukudu CCPP
- Sales increased by 34.1% YoY driven by sales growth of large EPC PJTs, and sales recognition from new orders in '21
- EBIT and EBIT margin ratio decreased YoY due to global raw material price increase
- Net debt decreased by KRW 1.4T YoY, L/E ratio improved by 57%p thanks to continued financial structure improvement

## Summary

(Unit : KRW B, %)

	'21.3Q (Cumulative)	'22.3Q (Cumulative)	YoY	'22.2Q	'22.3Q	QoQ
Orders	2,957	4,790	+62.0%	2,408	1,528	-36.6%
Backlog	12,362	14,617	+18.2%	14,655	14,617	-0.3%
Sales	3,331	4,467	+34.1%	1,539	1,567	+1.8%
EBIT	219	148	-32.6%	37	38	+3.5%
%	6.6%	3.3%	-3.3%p	2.4%	2.5%	+0.1%p
EBITDA	352	277	-21.3%	81	79	-2
Non-OP	-18	-223	-205	-82	-55	+26
Interest Balance	-156	-116	+40	-25	-41	-15
Others	138	-107	-245	-56	-14	+41
Net Profit	150	-205	-355	-238	54	+293
Net Debt*	3,914	2,507	-1,406	2,698	2,507	-191
Liability/Equity ratio*	171.6%	114.6%	-57.0%p	120.1%	114.6%	-5.5%p

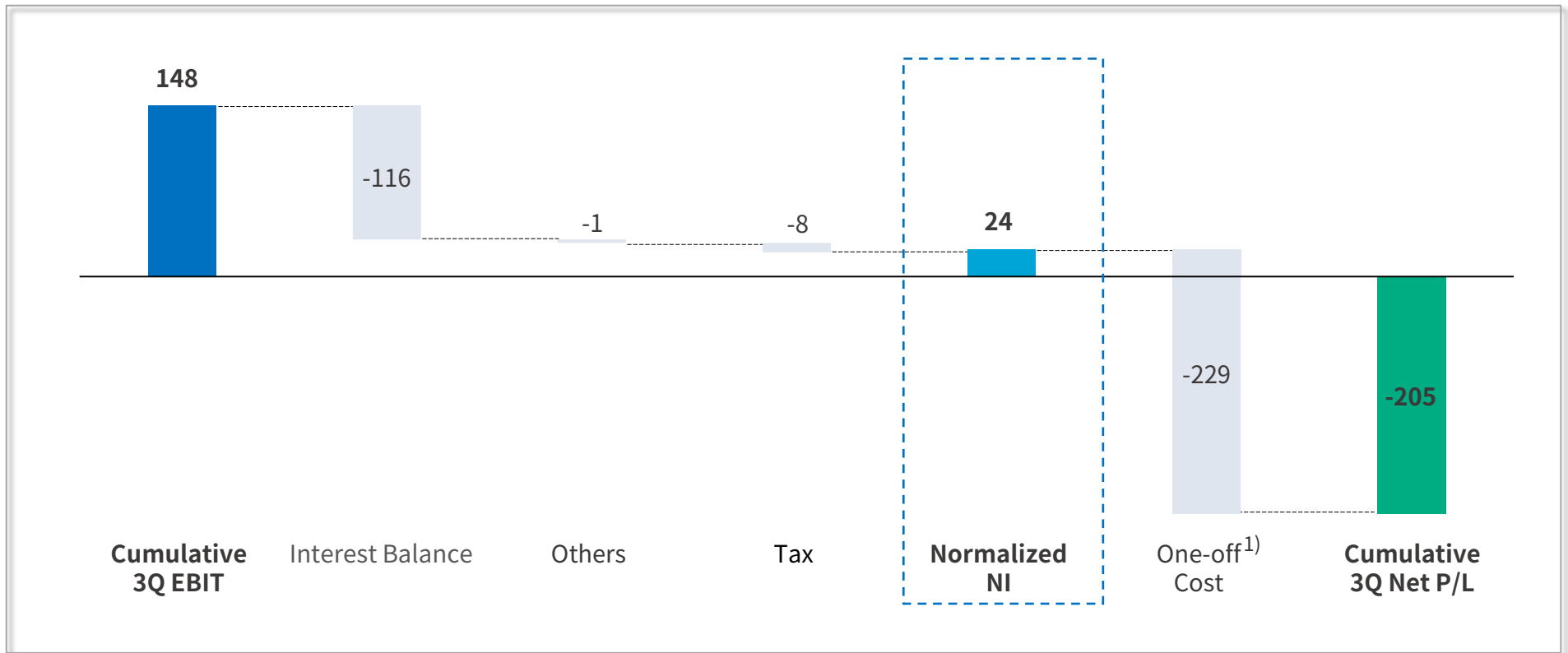
\* B/S : Compared to the end of '21

## '22 3Q Net P/L

- Despite improvement in non-operating P/L and a decrease of interest costs, cumulative 3Q net loss recorded due to one-off costs consisting of loss of Doosan Bobcat PRS and discontinued business & disposal loss of Doosan Mecatec & Doosan Babcock
- The one-off costs are expenses that do not result in a cash outflow

### Cumulative Net P/L

(Unit : KRW B)

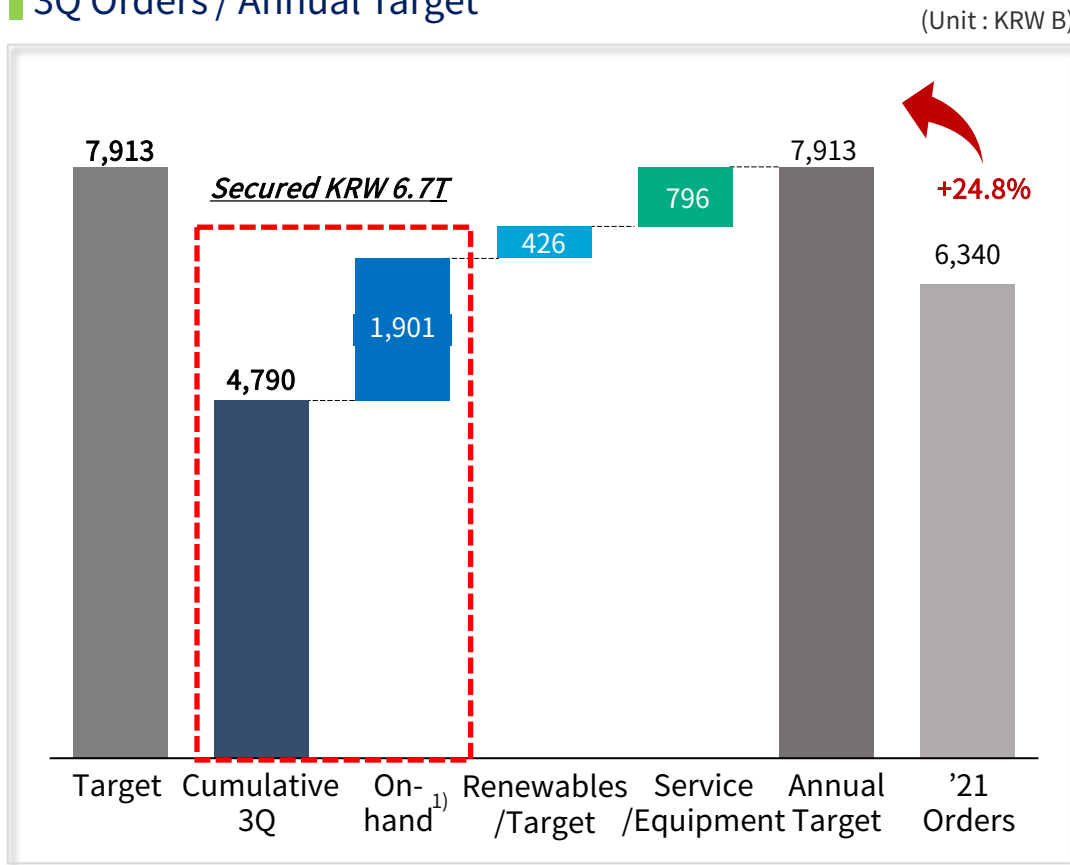


1) One-off cost : Doosan Bobcat PRS loss KRW -107B, Doosan Mecatec / Doosan Babcock discontinued business & disposal loss KRW -122B and etc

# '22 3Q New Orders / Annual Target

- 3Q cumulative order recorded KRW 4.8T thanks to Saudi Aramco Casting and Forging Plant, Guam Ukudu CCPP, and Saudi Shuaibah 3 desalination
- Maintain the annual order target of KRW 7.9T through realization of on-hand/target PJTs

## 3Q Orders / Annual Target



(Unit : KRW T)

3Q cumulative order and on-hand PJTs account for 85% of the annual target	
Saudi Jafurah CCPP (EPC contract : 22 Sep '22)	0.5
Egypt El Dabba Nuclear	1.3

Renewables and Target PJTs	
Domestic large gas turbine demonstration	0.3
SMR/ ESS/ Renewables	0.1

Service/Equipment/Others	
Domestic/overseas nuclear change order /Nuclear service/equipment/others	0.2
Domestic/overseas recurring service / equipment retrofit	0.3
Overseas subsidiaries, Civil & Architecture	0.3

1) On-hand : Projects that are likely to recognize orders by acquiring a preferred bidder or equivalent status

# '22 3Q Consolidated Results Summary

- Sales increased by 41.6% YoY driven by Doosan Enerbility and Doosan Bobcat's sales growth
- EBIT increased by 20.9% YoY driven by Doosan Bobcat's EBIT growth despite the impact of raw material price hikes
- Net Profit decreased due to Doosan Bobcat PRS revaluation loss and Doosan Mecatec's discontinued business loss

## Summary

(Unit : KRW B, %)

	'21.3Q (Cumulative)	'22.3Q (Cumulative)	YoY	'22.2Q	'22.3Q	QoQ
Sales	7,625	10,799	+41.6%	3,834	3,960	+3.3%
EBIT	690	834	+20.9%	328	314	-4.2%
%	9.1%	7.7%	-1.4%p	8.6%	7.9%	-0.7%p
EBITDA	933	1,125	+20.5%	426	409	-16
Non-OP	-197	-446	-249	-177	-137	+39
Interest Balance	-204	-174	+29	-47	-60	-13
Others	6	-272	-278	-130	-76	+53
Net Profit	562	31	-531	-124	144	+269
Net Debt*	4,776	3,559	-1,216	3,759	3,559	-199
Liability/Equity ratio*	169.3%	128.1%	-41.2%p	130.7%	128.1%	-2.6%p

\* B/S : Compared to the end of '21

# Contents



## 1. 2022 3Q Business Results

## 2. Major Business Progress Status

- Zero-Carbon Power Market Business
- Lithium Recovery Business
- 3D Printing Business



# Zero-Carbon Power Market Environment and Propelling Status

## Doosan Enerbility's Business Status

### Korean Standard Combined Power

- Developing Korean Standard Combined Cycle Power by following the national assignment
  - Passed review of the national assignment by achieving 'excellent' on the plan (Jun., '22.06)
  - **Propelling to make contract for the 1<sup>st</sup> unit of Korean Standard Combined Cycle Power Plant in '22**

### Gimpo Combined Heat & Power

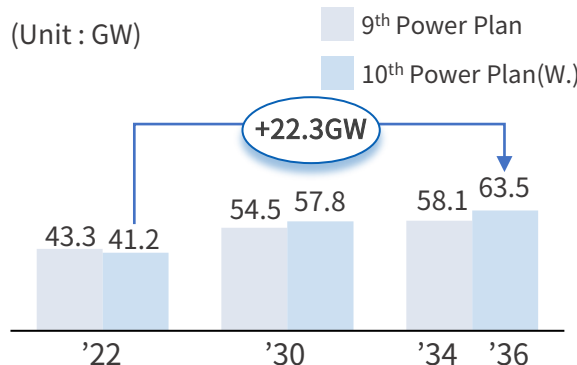
- Propelling the Gas Turbine(G/T) installation and trial-run plan On-Track
  - Completed shipment of the G/T (Mar., '22)
  - Completed the G/T's installation and preparing for trial-run

### Hydrogen Turbine/Ammonium Mixed Power Technology Development

- Carrying out the national assignment of hydrogen turbine burner development
  - Large-sized mixed, Small-sized single
  - Propelling to expand hydrogen test infra
- Carrying out the cooperation assignment of Ammonium mixed power technology development with KEPRI

## The 10th Power Supply/Demand (Working) Plan for LNG Power

### [Capacity Forecast for LNG Power Facility]



#### • Gas turbine Facility Capacity Expansion

- Facility capacity increase by 6.1% more than the 9th plan for '30(54.5GW → 57.8GW)
- Forecast increase of facility capacity of 22.3GW in '22~'36

#### • Maintain to replace the old coal-fired power to LNG power

- Replace 26 units(13.7GW) of old coal-fired power to LNG power until '36
- Reflect the scheduled facility of new LNG 5 units(4.3GW)

#### • Reflect zero carbon power to achieve NDC emission target\* in '30(New)

- Forecast 2.3% of hydrogen/ammonium mixed power
- The 1st reflection of hydrogen power in '30(1.2%)

## Implication

### Korean Standard Combined Power

- Maintain to expand Korean G/T Facility Capacity
  - **Expand our potential order pool** according to the facility capacity increase compared to the 9th Power Supply/Demand Plan
  - Expect import substitution effect through G/T's localization

### Hydrogen Turbine

- **Build Hydrogen Turbine Market Basis** through reflection of the 1<sup>st</sup> hydrogen power target on the Power Supply/Demand Plan
  - Secure of the in-house developed hydrogen turbine business basis

### Ammonium Mixed Power

- **Reflection of the Greenhouse Gas Emission Target** through the 1<sup>st</sup> Ammonium mixed power on the Power Supply/Demand Plan
  - Possible to commercialize Ammonium mixed power technology at early stage through the technology development target in '26
- Enter into Korean zero-carbon power market and lead through the in-house developed technology

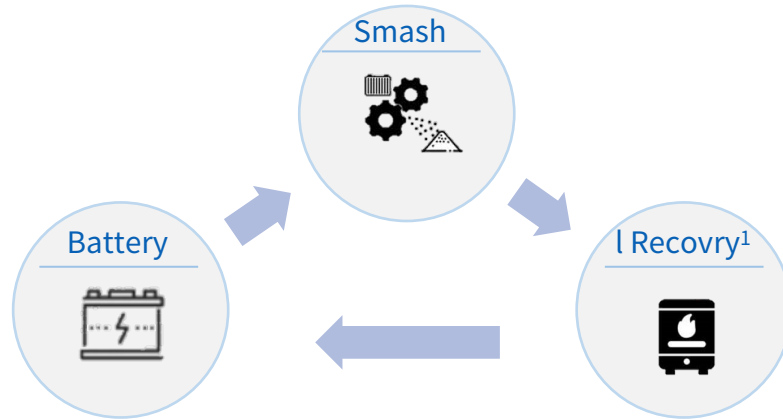
\* Proposed the Greenhouse emission target of 149.9Mn. tons at 『2030 NDC's(Nationally Determined Contribution) Upward Plan's energy transformation』 in Oct., '21

# Lithium Recovery Business Summary and Status

## Battery Recycling Business Summary

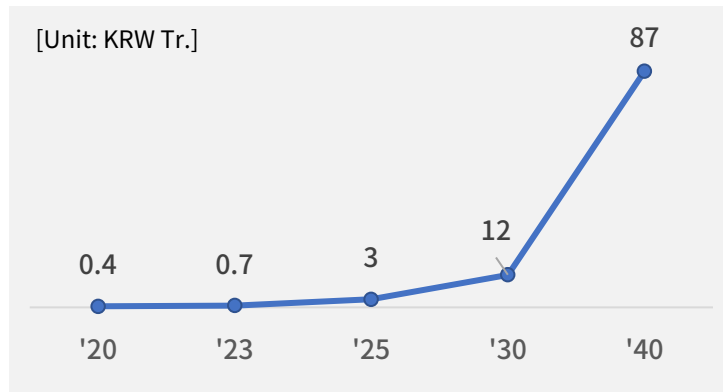
### Biz. Summary

- Metal extraction business from life-time ended, poor production battery and scraps produced in the process of battery production & material



### Market<sup>2</sup>

- Forecast recycling market growth due to battery demand increase backed by electric car market increase, natural resource's finitude and the environment issue, if reclaimed

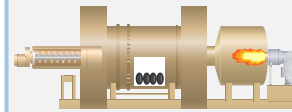


## Lithium Recovery Tech./Biz. Status

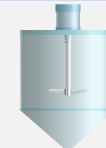
### Tech.

- In-house development of “Lithium Recovery Process” at battery recycling process
  - Formed in heat treat.-water leaching-electron adsorption crystallization process
  - Applied new tech. of using none of hazardous chemicals in the process of heat treat. and crystallization
- Possible to achieve eco-friendly, hyper-pure and hyper recovery rate

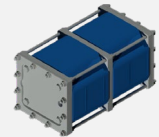
### Heat Treatment



### Water Leaching



### Electron Adsorption Crystal



### Biz.

- “Pulmonary Anode Material Recycling Business Cooperation” MOU with L&F Co., Ltd., an anodic material company(Oct. 31<sup>st</sup>, '22)



- Supply pulmonary anode material, produced in the process of anodic material production



- Produce lithium carbonate by extracting lithium from pulmonary anode material

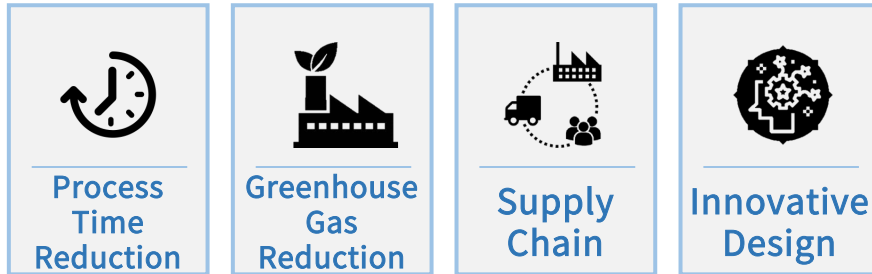
- Form a virtuous circle business of battery recycling by the raw material supplier's cooperation and participate actively in lithium market, growing rapidly high

# 3D Printing Business Summary and Status

## 3D Printing Business Summary

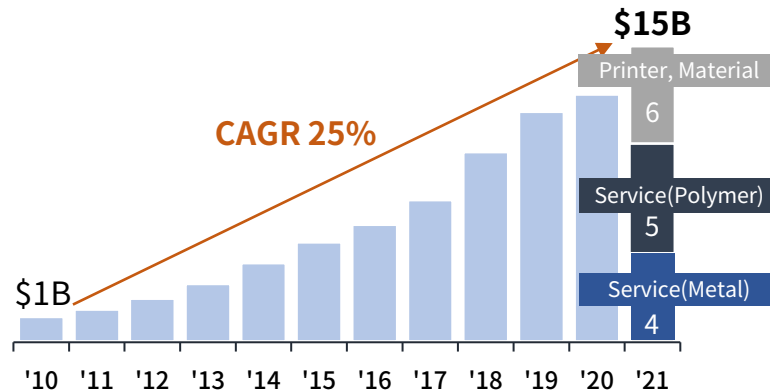
### Biz. Summary

- Innovative manufacturing method by layering materials and so, possible to fabricate in shape, not possible with the existing manufacturing methods



### Market<sup>1</sup>

- Participate into massive production system according to technology advancement thanks to market growth and 3D printing component development, etc. caused by aerospace business invigoration



## 3D Printing Business Status

### Doosan' Capa.

- Secure the technology in whole cycle to carry out the business (End2End Service)
- The only one metal 3D printing service company, entered in the commercialization level, in Korea



Built the largest sized 3D printing FAB(1,100m<sup>2</sup>) in Korea

### Biz.

- Technology development and marketing MOU with EOS, the World's No.1 3D printer company in Germany(Oct. 25<sup>th</sup>, '22)

### DOOSAN

- Share 3D printer user's feedback and technology needs
- New product's beta-test
- Technology exchange and corporate in marketing



- Share 3D printing's newest technology
- (H/W, S/W, material, process)
- Introduce client network
- Technology exchange and corporate in marketing

- Hold position of the representative 3D printing company in Korea through securing client network construction and the global leading technology of metal component production by using 3D printing

1. Source: Wohler Report 2022, DE's business area is 3D printing service(metal)

# Appendix



- 1. Summarized Balance Sheet**
  - Managerial consolidation
  - Consolidated
  - Separate
- 2. 3Q Results Summary**
  - Separate

# Summarized Balance sheet \_ Managerial consolidation

(Unit : KRW B, %)

	2020	2021	'22.3Q	Compared to '21
Current Asset	4,298	5,230	4,934	-295
<i>cash equivalents</i>	741	1,417	942	-475
Non-Current Asset	9,472	11,047	11,275	+228
Total Asset	13,771	16,277	16,209	-67
Total Liabilities	9,715	10,284	8,657	-1,626
<i>Net Debt</i>	4,842	3,914	2,507	-1,406
Total Equity	4,055	5,993	7,552	+1,558
Total Liabilities and Equity	13,771	16,277	16,209	-67
Liability/Equity ratio	239.6%	171.6%	114.6%	-57.0%p

# Summarized Balance sheet \_ Consolidated

	2020	2021	'22.3Q	(Unit : KRW B, %) Compared to '21
Current Asset	9,946	8,417	8,917	+500
<i>cash equivalents</i>	<i>2,653</i>	<i>2,429</i>	<i>1,629</i>	<i>-800</i>
Non-Current Asset	15,620	15,302	16,253	+950
Total Asset	25,567	23,720	25,170	+1,450
Total Liabilities	18,460	14,912	14,134	-778
<i>Net Debt</i>	<i>7,407</i>	<i>4,776</i>	<i>3,559</i>	<i>-1,216</i>
Total Equity	7,106	8,807	11,036	+2,229
Total Liabilities and Equity	25,567	23,720	25,170	+1,450
Liability/Equity ratio	259.8%	169.3%	128.1%	-41.2%p

# Summarized Balance sheet \_ Separate

	2020	2021	'22.3Q	(Unit : KRW B, %) Compared to '21
Current Asset	2,970	3,684	4,155	+471
<i>cash equivalents</i>	397	872	584	-287
Non-Current Asset	8,177	10,347	10,493	+145
Total Asset	11,147	14,031	14,648	+616
Total Liabilities	7,686	8,330	7,633	-696
<i>Net Debt</i>	4,469	3,835	2,775	-1,059
Total Equity	3,460	5,701	7,014	+1,313
Total Liabilities and Equity	11,147	14,031	14,648	+616
Liability/Equity ratio	222.1%	146.1%	108.8%	-37.3%p

# '22 3Q Results Summary \_ Separate

(Unit : KRW B, %)

	'21.3Q (Cumulative)	'22.3Q (Cumulative)	YoY	'22.2Q	'22.3Q	QoQ
Orders	2,458	4,399	+78.9%	2,274	1,407	-38.1%
Backlog	9,636	12,402	+28.7%	12,228	12,402	+1.4%
Sales	2,539	3,680	+44.9%	1,320	1,233	-6.5%
EBIT	164	119	-27.5%	20	43	+109.7%
%	6.5%	3.2%	-3.3%p	1.6%	3.5%	+1.9%p
EBITDA	274	221	-19.1%	55	75	+20
Non-OP	11	-456	-468	-254	-133	+120
Interest Balance	-126	-85	+41	-25	-24	+1
Others	138	-371	-509	-229	-109	+119
Net Profit	127	-329	-457	-231	-85	+145
Net Debt <sup>1)</sup>	3,835	2,775	-1,059	2,864	2,775	-88
Liability/Equity ratio <sup>1)</sup>	146.1%	108.8%	-37.3%p	102.2%	108.8%	6.6%p

1) B/S : Compared to the end of '21



