

3Q 2021 Earnings Release

HYUNDAI OILBANK



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I. 3Q 2021 Earnings

II. Investment Highlights

III. Appendix

I. 3Q 2021 Earnings

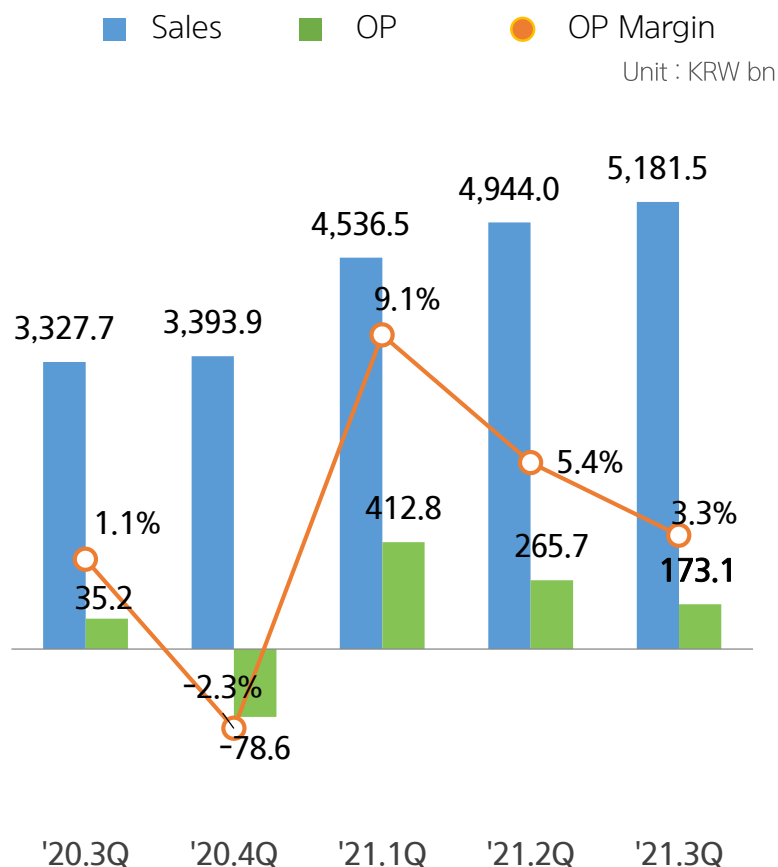
1. Consolidated Earnings
2. Earnings by Business Segment
3. 3Q 2021 Market Conditions
4. Market Outlook by Business Segment

1. Consolidated Earnings

Hyundai Oilbank recorded an operating profit of KRW 173.1 bn in 3Q.

Oil price and product spread has improved due to demand increase during summer season, but after August the increment slowed down as the delta variant spread and possibility of economic slowdown.

3Q 2021 Consolidated Earnings



• 3Q 2021 Operating Profit KRW +173.1 bn

- As the refining margin improved, the operating profit reached 173.1 bn in 3Q, 851.6 in year total.
- QoQ decrease : - KRW 92.6 bn (QoQ inventory effect ↓)
- YoY increase : + KRW 137.9 bn

• Refining Margin improved as oil price & product crack rose

- Demand supported by OPEC+ supply adjustment and high vaccination rate across US and Europe
- Product crack rose due to demand recovery and alternative demand for natural gas
- Oil Price : (QoQ) 66.9 → 71.7 \$/B
- Cracks : (QoQ) Gasoline 8.1 → 9.7 \$/B, Gasoil 6.9 → 8.1 \$/B

2. Earnings by Business Segment

3Q 2021 Earnings

Unit : KRW bn

Business	'21.3Q			'21.2Q			'20.3Q		
	Sales	Operating Profit	OP Margin	Sales	Operating Profit	OP Margin	Sales	Operating Profit	OP Margin
Refining	5,159.4	62.8	1.2%	4,751.1	90.9	1.9%	3,178.4	-19.4	-0.6%
Petrochemical	1,047.5	46.0	4.4%	982.5	73.7	7.5%	692.8	42.3	6.1%
Lube Base Oil (Newly consolidated*)	231.1	59.9	25.9%	281.7	92.1	32.7%	-	-	-
Others/Adjustments	-1,256.5	4.4		-1,071.2	9.0		-543.5	12.3	
Consolidated Earnings	5,181.5	173.1	3.3%	4,944.0	265.7	5.4%	3,327.7	35.2	1.1%

※ Lube base oil business (Hyundai Shell Base Oil, HSB) has been newly consolidated since Nov 2020 (HSB 2020 OP : 94.9 KRW bn)

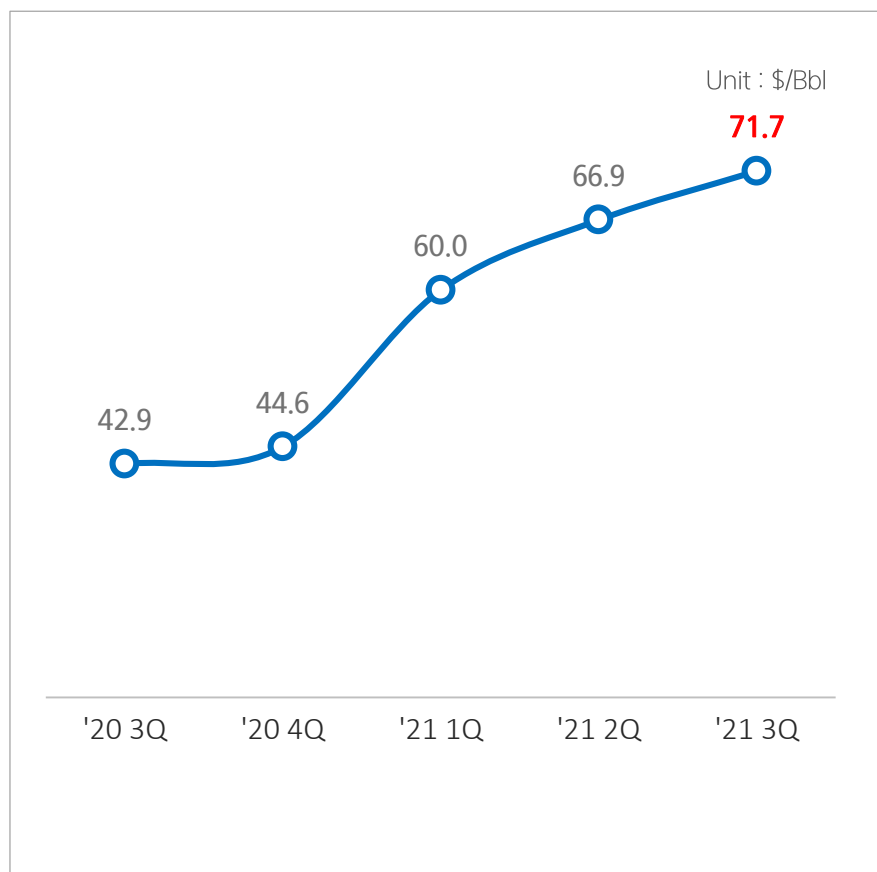
※ Please refer to *Appendix* section for non-consolidated subsidiaries

3. 3Q 2021 Market Conditions (Refining)

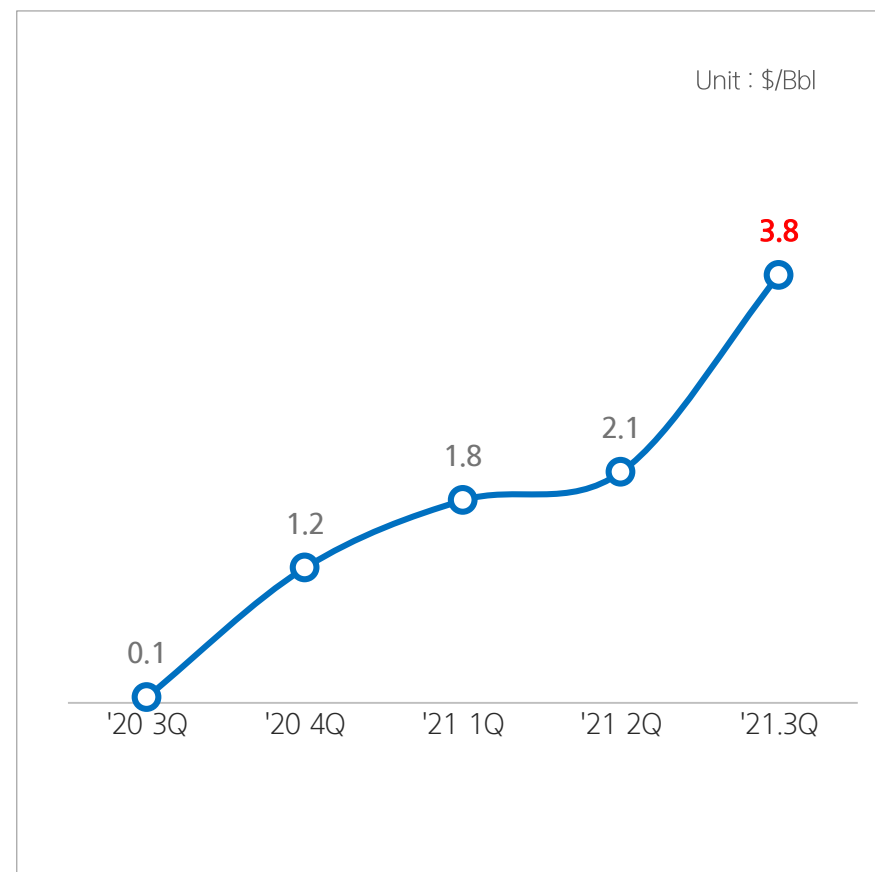
Oil price rose due to demand increase during summer season, but after August the increment slowed down as the delta variant spread and fear of economic slowdown.

Refining margins are continuously improving as demand for products rise.

Dubai Oil Price



Singapore Refining Margin

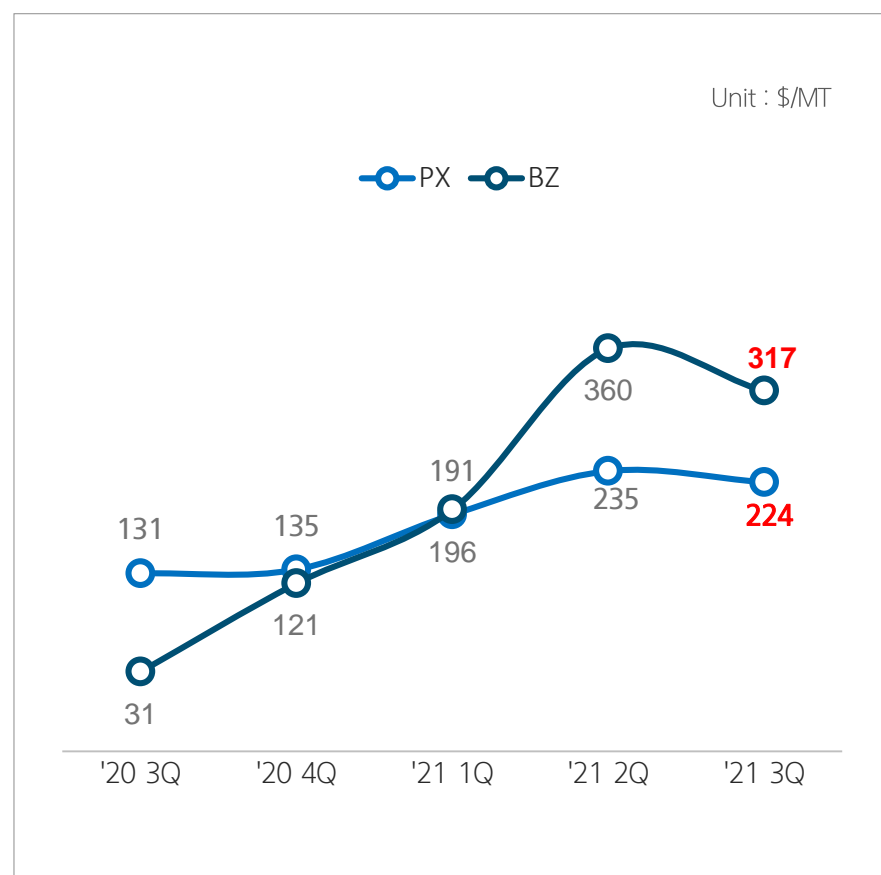


3. 3Q 2021 Market Conditions (BTX/Base oil)

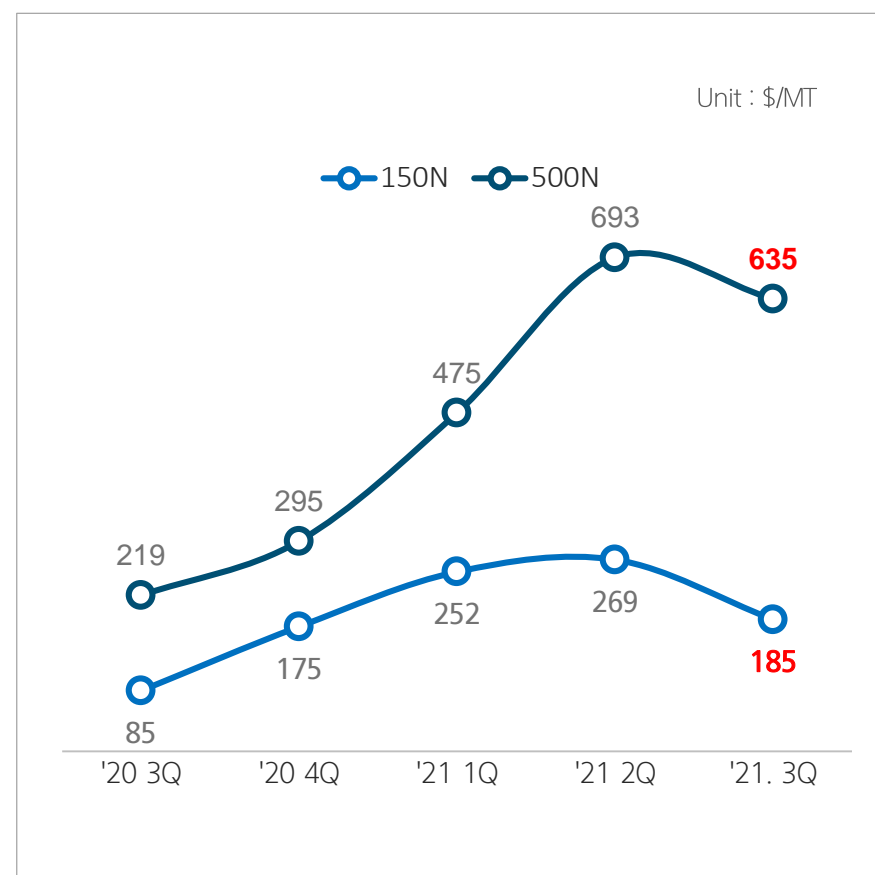
3Q BTX spread narrowed QoQ due to the completion of the Zhejiang PC expansion in China.

For base oil, the QoQ spread narrowed QoQ as supply increased due to an increase in oil refinery run rate and the end of regular maintenance.

BTX Margin



Base Oil Margin



4. Market Outlook by Business Segment

21. 4Q Outlook

2022 Outlook

Refining

- Oil price will remain stable around 80~85\$/B due to tightness in winter, alternative demand for natural gas, and OPEC+ supply adjustment.
- Gasoline crack is expected to remain strong due to increase in vaccination rates and domestic travel demand.
- Kerosine/Gasoil crack is expected to rise due to increase in replacement demand caused by surge in LNG prices

- Oil demand outlook (IEA, Sep 2021)
: Demand recovery 2021 96.3m → 2022 99.6m BD
- Cracks outlook
: '22 Gasoline 10\$/B, Gasoil 14\$/B
- Refining margin will gradually improve as demand recovers.

Petro-chemical (BTX)

- PX demand expected to increase due to PX production adjustment and recovery of PTA utilization after the initial decline due to drop in PTA operation due to power shortage in China.
- BZ-N spread is expected to narrow in 4Q due to decrease in demand caused by power usage restrictions in China and SM plant troubles in US

- PX is expected to improve gradually as demand recovers due to a decrease in large-scale capacity additions in China and as Covid situation eases.
- BZ is expected to remain flat due to the recovery of global demand including China and the increase in BZ supply following the recovery of the PX market.

Lube Base — Carbon Black

- Lube base oil margin will remain bearish due to strong raw materials and seasonality
- Carbon black margin will stay firm as increase in feedstock price is reflected to product price.

- Lube base oil margin is expected to improve due to the increased demand as a preparation for spring season, which is traditional peak season.
- Carbon black margin will maintain 2021 level due to tire company utilization rate recovery.

II. Investment Highlights

1. HPC Project
2. MTBE plant expansion
3. Green Energy Business

1. HPC Project – Progress

Heavy-feed Petrochemical Complex (HPC) uses naphtha, T-DAO and residue gases to produce polyethylene (850 KTA) and polypropylene (500 KTA). HPC has completed its construction and the commercial operation target is this December.

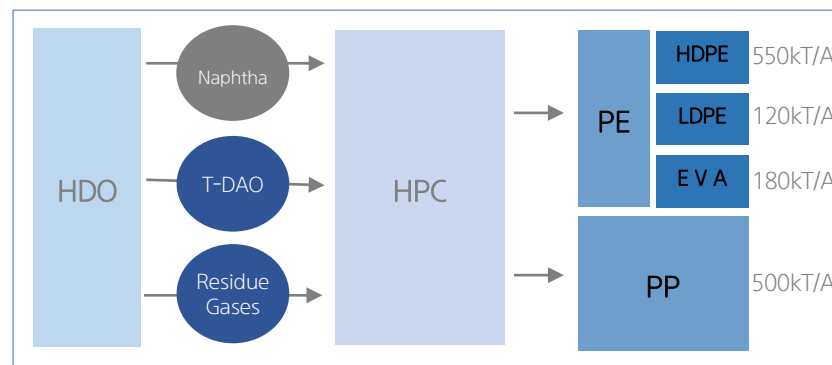
HPC Project (Hyundai Chemical)

- Overview : Unlike NCC using naphtha as a main feed, HPC uses multi-feed (T-DAO, Naphtha, LPG) to maximize ethylene production economics
- Shares : HDO 60%, Lotte Chemical 40%
- Product : Polyethylene 850KTA, Polypropylene 500KTA
- Schedule : Completion & Test Run (Sep~Nov 2021)

Commercial Operation (Dec 2021)

※ T-DAO: Treated De-Asphaltene Oil

• Plant and product summary



• Completion Rate : 100% (as of Sep 2021)



1. HPC Project – Competitiveness and material business

HPC uses T-DAO and residue gases cheaper than naphtha, which enables HPC to secure solid cost-competitiveness compared to other NCCs. We are planning expansion of eco-friendly, profitable chemical/material downstream business such as solar module production after HPC commercial operation.

HPC competitiveness

• Feedstock Comparison with NCC

- 1) T-DAO and residue gases are cost-competitive feedstock as they are cheaper than naphtha.
- 2) Feedstock composition can be flexibly adjusted in response to market variation.

Feedstock	NCC	HPC
LPG / Refined Gas	0 ~ 10%	26%
T-DAO	-	34%
Light Naph	90 ~ 100%	40%

• Integration with the Refinery business

- Utility linkage, save transportation cost, share man power/ancillary equipment

• Flexible adjustment to market variation

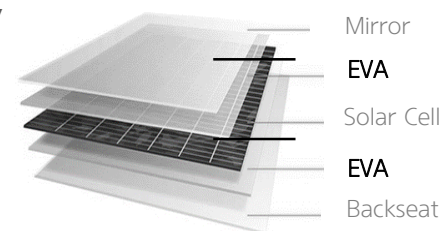
- Feedstock substitution of products(Gasoline/Gasoil) in case the product demand decreases

Eco-friendly energy material business

EVA

[Solar Module]

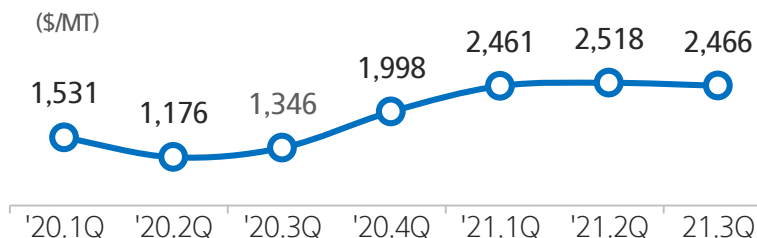
Outstanding permeability
and adhesiveness
(Solar cell protective film)



* EVA : Ethylene Vinyl Acetate

• EVA market

- Market is strong in 21.3Q and we plan to produce 180 KT/A upon the completion of HPC Project.

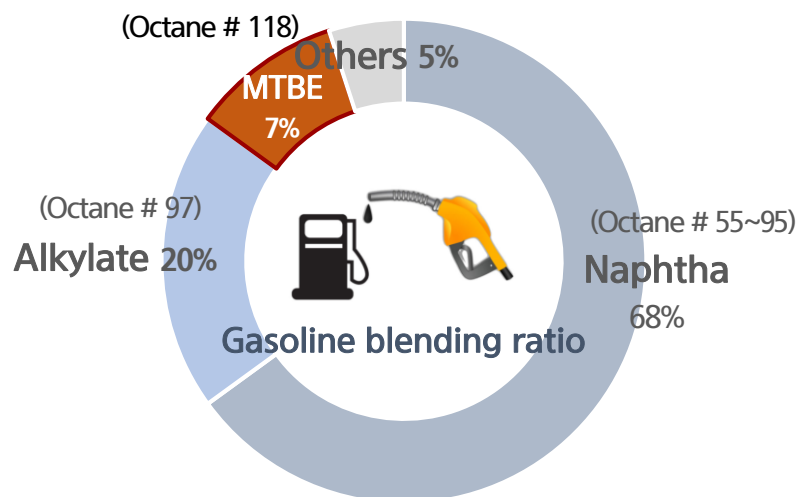


2. MTBE plant expansion

From Dec 2021, MTBE plant will be in operation to directly produce MTBE used as a compounding material for gasoline octane adjustment, which we expect to improve gasoline manufacturing cost as MTBE has higher octane number and cheaper price compared to other gasoline components.

Gasoline blending ratio (Octane Adjustment) MTBE plant expansion

- High octane MTBE blending is required to meet the octane standard of gasoline products (88~98 RON).



- Reduction of gasoline manufacturing cost through MTBE plant expansion
 - MTBE has higher octane number and cheaper price compared to other high cost gasoline components such as alkylate.
 - MTBE will be directly produced with C4 raffinate feedstock from HPC after its completion in 4Q.

[Investment Summary]

Investment	KRW 88.0 bn
Capacity	200 KT/A
Estimated Return	KRW 31.2bn/annum
Commercial Operation	2021.12

3. Green Energy Business (Progress Status)

HDO has selected Blue Hydrogen / White Bio / Eco-friendly Chemicals and Materials as three major eco-friendly future businesses. HDO is in cooperation with partners in various business field and plan to settle eco-friendly future projects in advance through additional cooperation.

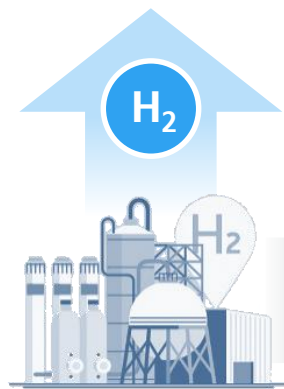
	Partner	Content	Date
1 Blue Hydrogen		<ul style="list-style-type: none"> Signed Eco-Friendly Hydrogen business MOU By sharing Air Products manufacturing tech, we will secure hydrogen production cost competitiveness. 	'21.04
		<ul style="list-style-type: none"> Signed MOU regarding joint development of Renewable Energy business Promote fuel cell generating business in cooperation with Korea Energy corporation 	'21.05
		<ul style="list-style-type: none"> Held groundbreaking ceremony of construction of liquid carbonic acid plant Manufacture dry ice / carbon dioxide by supplying 200KT/year of CO2 	'21.06
		<ul style="list-style-type: none"> signed MOU regarding the project utilizing the FBC boiler by-product and CO2 Currently designing 100KT plant, will be done by mid-Nov. 	'21.08
2 White BIO		<ul style="list-style-type: none"> Signed MOU for BIO jet fuel production / utilization production/commercialization of standard products, establishment of refueling infrastructure in airports Investigate on constructing BIO jet fuel production plant 	'21.06

3. Green Energy Business – Carbon Capturing and Utilization

To enter the blue hydrogen business, we are preparing a CCU business for the production of blue hydrogen, and are promoting the carbon dioxide commercialization business such as producing eco-friendly building materials, manufacturing of paper/plastic additives, and dry ice.

Carbon utilization plan for self-production of blue hydrogen

Blue Hydrogen 100KT



Hyundai Oilbank
Daesan Plant



Monetization of CCU through carbon dioxide commercialization



Eco-friendly construction material

- 2022 1H commence construction of plant
- Capacity expansion plan: 100KT → 600KT



Paper/plastic additives

- ~2021: Pilot completion
- 2022 2Q: Prototype release



Dry ice

- 2021: sales volume 160 KT
- 2022: sales volume 360 KT

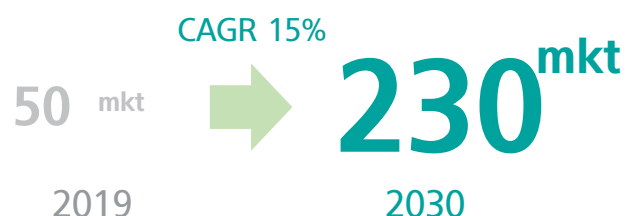


3. Green Energy Business – Bio-diesel Plant

In preparation for the carbon net zero policy, we will enter the bio-diesel business, which is expected to be highly profitable as a first step. We are building a 130KTA plant with supercritical process which is cost competitive, with the expected mechanical completion in 2023.

Demand & Margin Forecast

- Global demand due to policy changes



- Higher margin compared to oil products



Supercritical bio-diesel business status

- Supercritical process characteristics



Supercritical Process

- Processing of low-cost/quality non-edible raw materials such as waste oil
- Manufactured by low-cost raw materials and methanol synthesis
- Mix with light oil (up to 5%)

- Timeline

- '21.10 : Detailed design in progress
- '21.12 ~'23.1Q : Plant construction
- '23.1Q : Mechanical completion (130 KTA)

- Location

- Hyundai Oilbank Daesan Complex

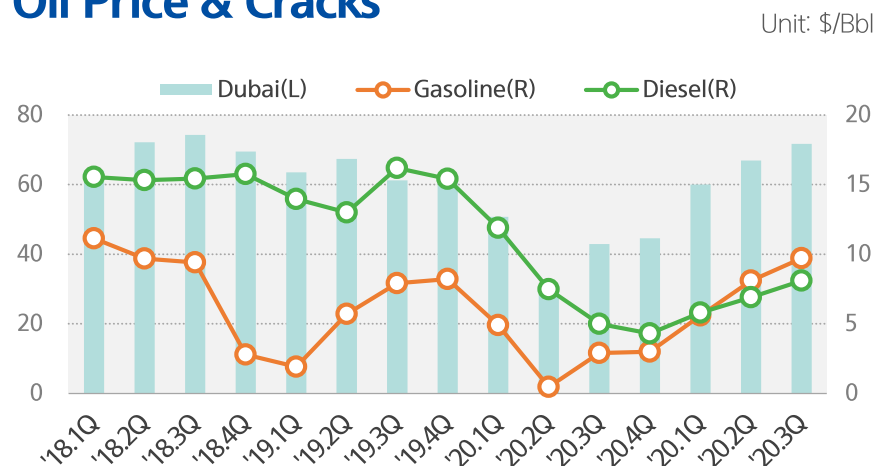
III. APPENDIX

1. Hyundai Oilbank
2. Hyundai Chemical
3. Hyundai Shell Base Oil
4. Hyundai OCI
5. Hyundai Cosmo (Equity Method)
6. Financial Ratios
7. Financial Statements



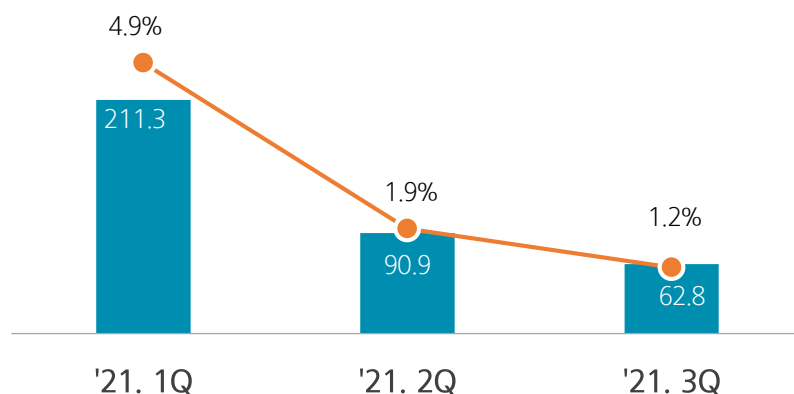
1. Hyundai Oilbank Key Indicators & Results

Oil Price & Cracks



Hyundai Oilbank Operating Income (Separate)

Unit : KRW bn.



• 3Q Analysis

- Oil price rose due to demand increase during summer season, but after August the increment slowed down as the delta variant spread and fear of economic slowdown.
- Gasoline bullish among high vaccination rate, economic recovery, and seasonality.
- Diesel/Kero remains weak amid rising global refineries operation rate and stagnant demand of jet.

• 4Q Outlook

- Oil price will remain strong due to tightness in winter, alternative demand for natural gas, and OPEC+ supply adjustment.
- Gasoline crack is expected to remain strong due to increase in vaccination rates and domestic travel demand.
- Kerosine/Gasoil crack is expected to rise due to increase in replacement demand caused by surge in LNG prices

• QoQ Analysis

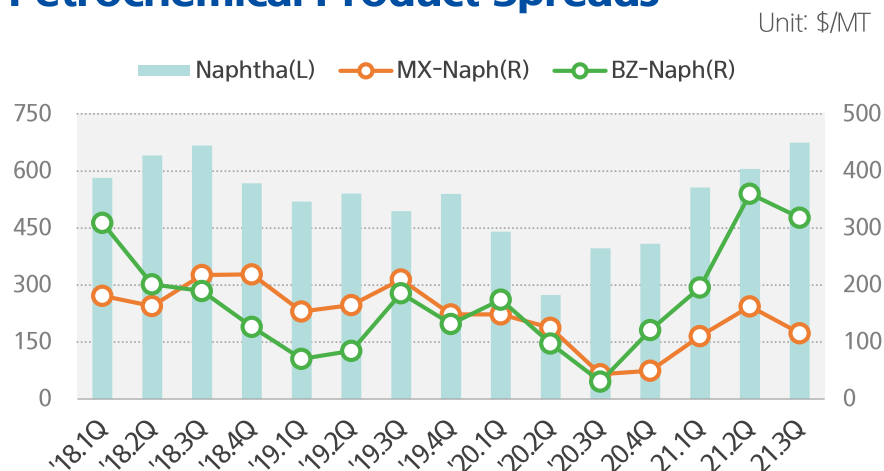
- Decrease of inventory effect

('21.1Q → '21.2Q oil price rose by 6.9 \$/B)

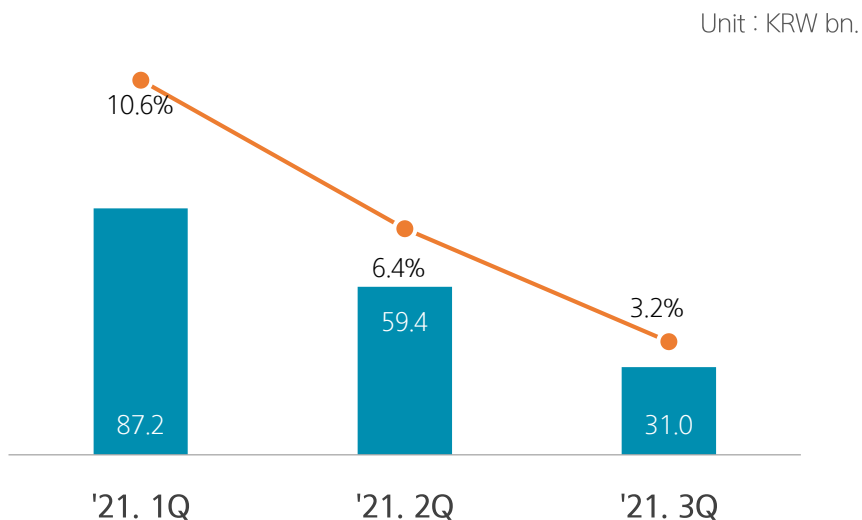
'21.2Q → '21.3Q oil price rose by 4.8\$/B)

2. Hyundai Chemical Key Indicators & Results

Petrochemical Product Spreads



Hyundai Chemical Operating Income



• 3Q Analysis

- MX spread dropped QoQ with ample supply due to MX plants maintenance end and China Zhejiang PC #2 run start.

• 4Q Outlook

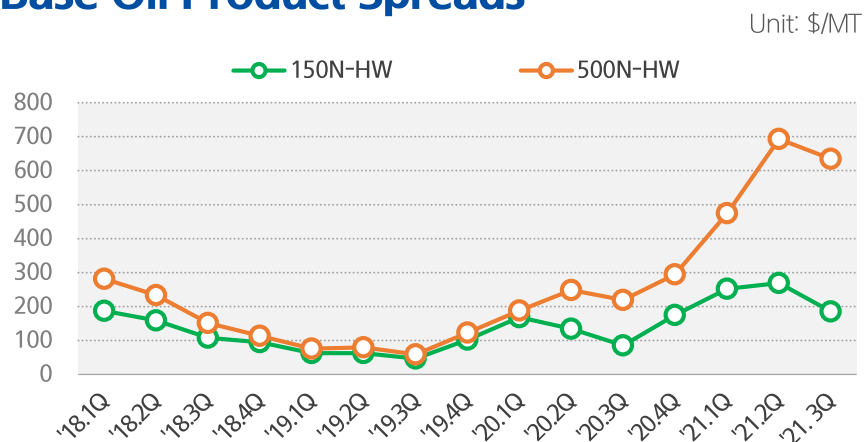
- MX spread is expected to drop due to PTA plant operation rate goes down as China restricts power generation and MX demand dwindles due to Oct~Nov PX plant maintenance.

• QoQ Analysis

- Decrease of Inventory effect
(2Q: 12.4 KRW bn / 3Q: 9.5 KRW bn)

3. Hyundai Shell Base Oil Key Indicators & Results

Base Oil Product Spreads



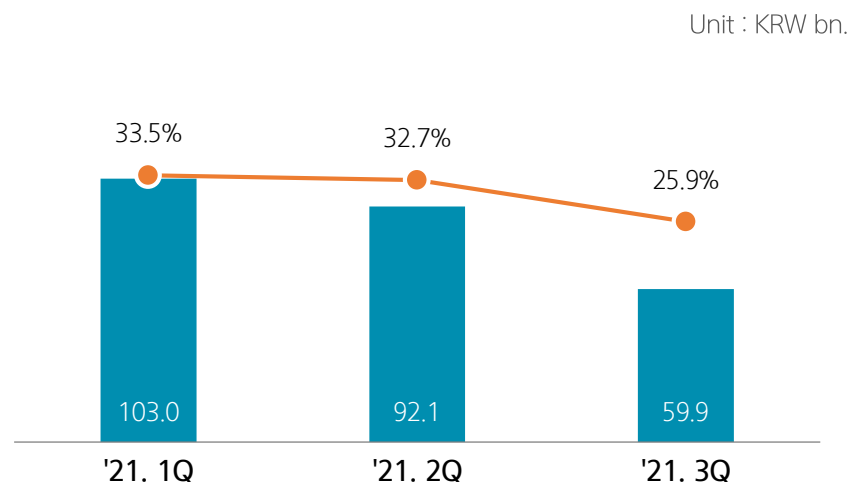
• 3Q Analysis

- Turned bearish due to an increase in base oil supply due to an increase in refinery run rate and the end of maintenance and a rise in raw material prices

• 4Q Outlook

- Lube base oil margin will remain bearish due to strong raw materials and seasonality

Hyundai Shell Base Oil Operating Income

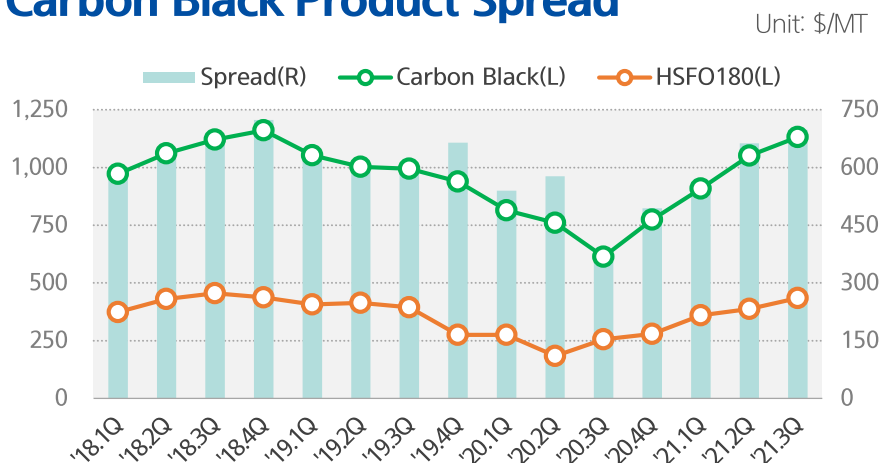


• QoQ Analysis

- Margin decreased due to refinery run rate increase, ample supply due to maintenance period end, and rise in raw material price

4. Hyundai OCI Key Indicators & Results

Carbon Black Product Spread



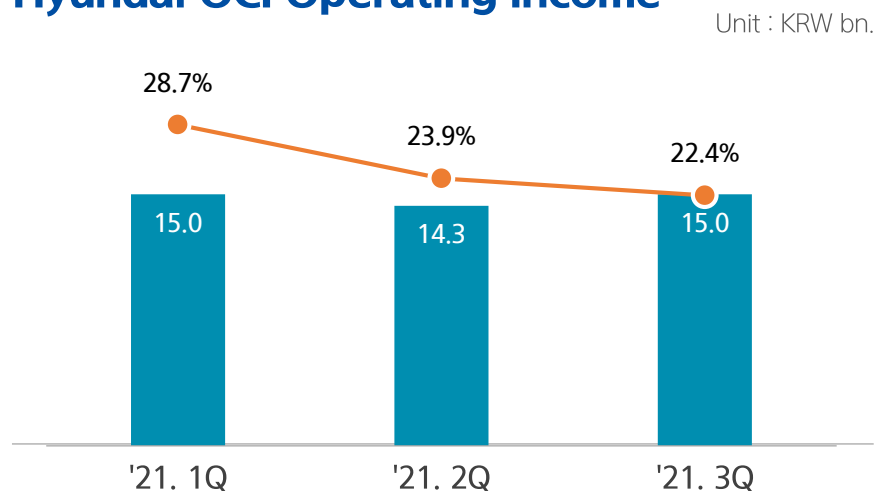
3Q Analysis

- Carbon black price in 3Q rose by \$81 / ton QoQ with oil price increase in the previous quarter. With the increase in raw material price, Carbon black-HSFO spread increased by \$36 / ton QoQ.

4Q Outlook

- Carbon black margin will stay firm as increase in feedstock price is reflected to product price.

Hyundai OCI Operating Income



QoQ Analysis

- While carbon black sales volume QoQ has not changed much, earnings rose slightly due to increase in product price.

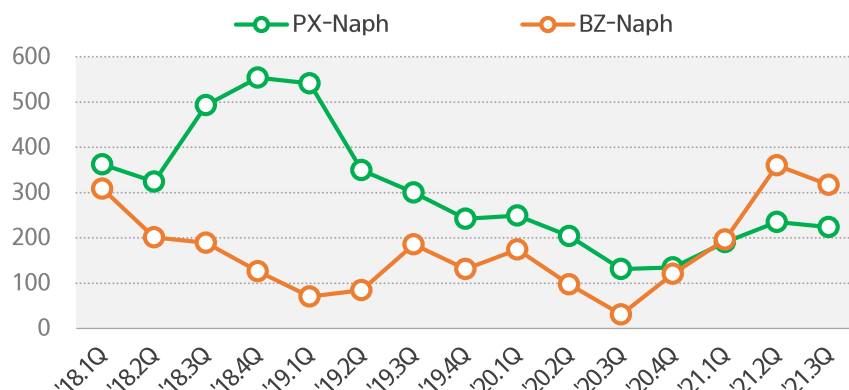
Unit: KT, \$/T

	21.2Q	21.3Q	Change
sales volume	36	35	-1
margin	663	699	+36

5. Equity Method Company (Hyundai Cosmo)

BTX Product Spreads

Unit: \$/MT



• 3Q Analysis

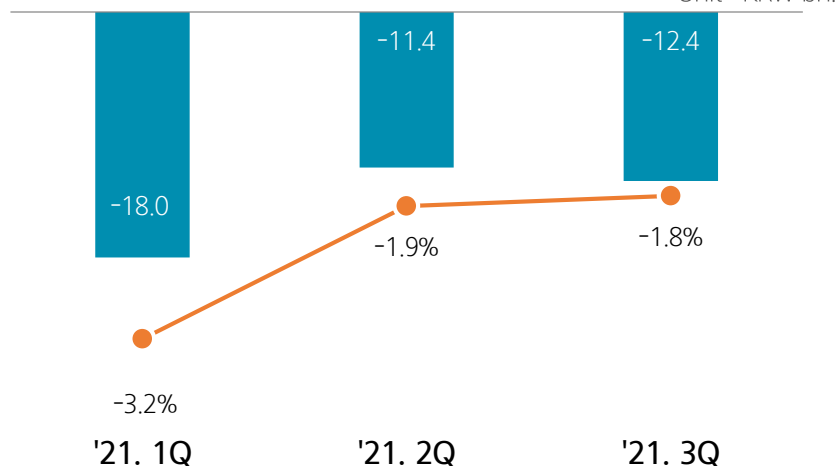
- PX remained weak due to PTA expansions of 2.5 million ton in China(Zhejiang PC #2-1)
- BZ weak due to Chinese expansion of Zhejiang PC capacity of 1.2 million ton

• 4Q Outlook

- PX is expected to recover gradually due to production adjustment of PX makers and recovery of PTA utilization rate after initial decline due to lower PTA process operation due to power shortage in China
- The BZ-Naphtha spread is expected to narrow due to the Chinese government's electricity consumption regulations and the decrease in demand due to the troubles at the SM factory in the US.

Hyundai Cosmo Operating Income

Unit : KRW bn.



• QoQ Analysis

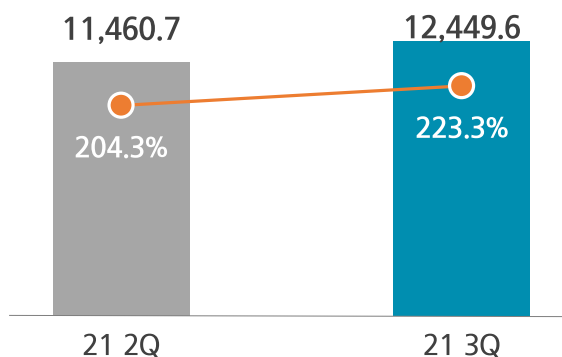
- PX and BZ spread narrowed.

6. Financial Ratios

Consolidated Financial Ratios

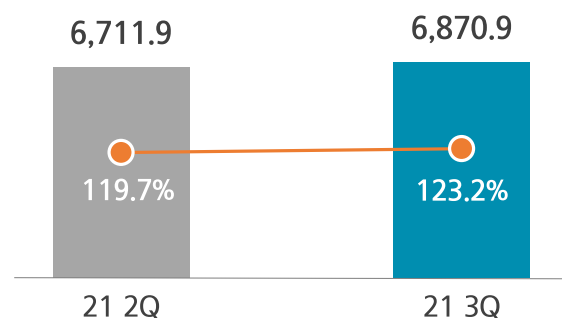
- Debt to Equity Ratio 223.3%

Unit : KRW bn.



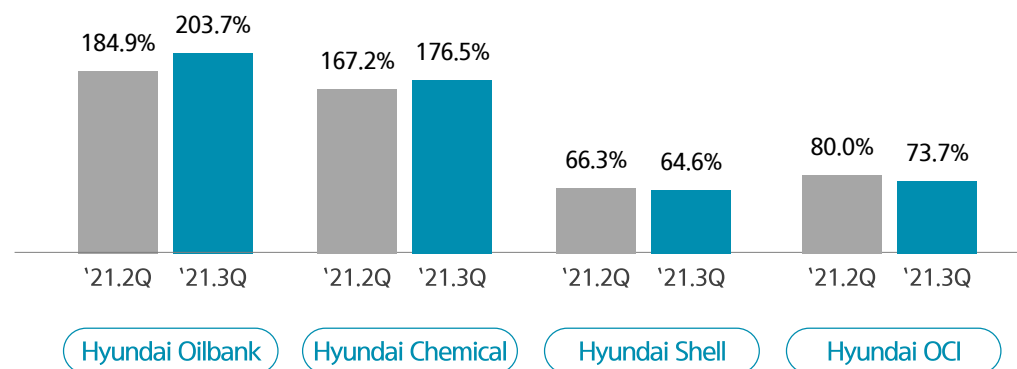
- Net Debt to Equity Ratio 123.2%

Unit : KRW bn.

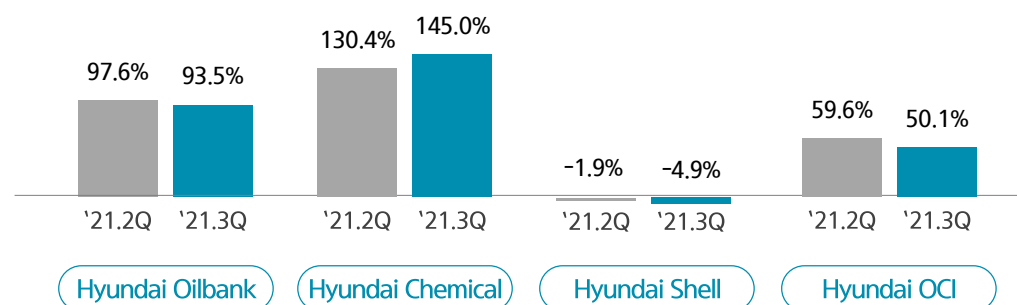


Separate Financial Ratios

- Debt to Equity Ratio



- Net Debt to Equity Ratio



7-1. Financial Statements – Hyundai Oilbank (Consolidated)

Consolidated Income Statement

Unit : KRW bn.

구 분	'21.3Q	QoQ	YoY	'21.2Q	'20.3Q
Sales	5,181.5	4.8%	55.7%	4,944.0	3,327.7
Cost of goods sold	4,877.2	7.2%	54.1%	4,549.5	3,164.8
Gross profit	304.3	(22.9%)	86.9%	394.5	162.8
Operating profit	173.1	(34.9%)	391.8%	265.7	35.2
OP Margin	3.3%	(2.1%p)	2.2p%	5.4%	1.1%
Non operating Income & expenses	(152.3)			(38.1)	23.0
Equity method gains	(5.7)	42.5%	32.6%	(4.0)	(4.3)
Profit before tax	20.8	(90.9%)	(64.3%)	227.6	58.2
Income tax	47.9			60.7	8.7
Net income	(27.1)			166.9	49.5

Consolidated Balance Sheet

Unit : KRW bn.

구 분	'19. 4Q	'20. 4Q	'21. 3Q
Current assets	4,565.4	3,294.6	5,593.1
(Cash & equivalents)	480.4	301.7	348.7
Non-current assets	8,290.5	11,383.6	12,432.5
Total assets	12,855.9	14,678.1	18,025.6
Current liabilities	4,086.7	3,239.4	5,190.1
(Short-term borrowings)	1,125.0	644.0	1,194.7
Non-current liabilities	3,327.6	6,167.8	7,259.5
(Long-term borrowings)	2,808.4	4,871.0	6,024.8
Total liabilities	7,414.3	9,407.2	12,449.6
Paid in capital	1,225.4	1,225.4	1,225.4
Others	443.6	707.1	670.0
Retained earnings	3,110.1	2,535.0	2,662.2
Non-controlling Interests	662.4	803.4	1,018.4
Total equity	5,441.6	5,270.9	5,576.0
Total liabilities & equity	12,855.9	14,678.1	18,025.6

Note : Consolidated in accordance with K-IFRS

7-2. Financial Statements – Hyundai Oilbank (Separate)

Income Statement (Separate)

Unit : KRW bn.

item	'21.3Q	QoQ	YoY	'21.2Q	'20.3Q
Sales	5,159.4	8.6%	62.3%	4,751.1	3,178.4
Cost of goods sold	4,968.0	9.5%	61.8%	4,537.5	3,071.3
Gross profit	191.5	(10.3%)	78.8%	213.6	107.1
Operating profit	62.8	(30.9%)	Turned a profit	90.9	(19.4)
OP Margin	1.2%	(0.7%p)	1.8%p	1.9%	(0.6%)
Non operating Income & expenses	16.3			(30.2)	24.3
Equity method gains	79.1	30.3%	1514.3%	60.7	4.9
Profit before tax	19.2			13.6	(1.9)
Income tax	59.9	27.2%	780.9%	47.1	6.8

Balance Sheet (Separate)

Unit : KRW bn.

구 분	'19. 4Q	'20. 4Q	'21. 3Q
Current assets	3,336.1	2,540.6	4,525.7
(Cash & equivalents)	37.5	71.3	61.6
Non-current assets	7,233.2	8,790.1	8,818.6
Total assets	10,569.3	11,330.7	13,344.2
Current liabilities	3,690.5	2,724.3	4,593.6
(Short-term borrowings)	985.4	329.9	1,027.8
Non-current liabilities	2,397.4	4,362.8	4,357.5
(Long-term borrowings)	1,875.3	3,251.9	3,141.7
Total liabilities	6,087.9	7,087.1	8,951.0
Paid in capital	1,225.4	1,225.4	1,225.4
Others	429.3	859.0	845.2
Retained earnings	2,826.7	2,159.2	2,322.6
Total equity	4,481.4	4,243.6	4,393.2
Total liabilities & equity	10,569.3	11,330.7	13,344.2

7-3. Financial Statements – Hyundai Chemical (Separate)

Income Statement (Separate)

Unit : KRW bn.

구 분	'21.3Q	QoQ	YoY	'21.2Q	'20.3Q
Sales	980.5	6.3%	50.5%	922.8	651.4
Cost of goods sold	945.5	10.0%	54.8%	859.3	610.9
Gross profit	35.0	(44.9%)	(13.6%)	63.5	40.5
Operating profit	31.0	(47.8%)	(14.1%)	59.4	36.1
OP Margin	3.2%	(3.2%p)	(2.3%p)	6.4%	5.5%
Non operating Income & expenses	(8.7)			(2.3)	4.8
Equity method gains	22.3	(60.9%)	(45.5%)	57.1	40.9
Profit before tax	5.6			14.6	10.0
Income tax	16.7	(60.7%)	(46.1%)	42.5	31.0

Balance Sheet (Separate)

Unit : KRW bn.

구 분	'19. 4Q	'20. 4Q	'21. 3Q
Current assets	1,314.3	615.1	998.9
(Cash & equivalents)	391.1	35.2	121.6
Non-current assets	1,492.1	2,852.4	4,177.7
Total assets	2,806.4	3,467.5	5,176.7
Current liabilities	533.5	580.1	564.1
(Short-term borrowings)	118.6	273.0	123.9
Non-current liabilities	784.3	1,426.8	2,740.2
(Long-term borrowings)	767.3	1,403.3	2,711.6
Total liabilities	1,317.7	2,006.9	3,304.3
Paid in capital	1,220.0	1,220.0	1,520.0
Others	(10.2)	(4.3)	(8.0)
Retained earnings	278.9	244.9	360.3
Total equity	1,488.7	1,460.6	1,872.3
Total liabilities & equity	2,806.4	3,467.5	5,176.7

7-4. Financial Statements – Hyundai Shell Base Oil (Separate)

Income Statement (Separate)

Unit : KRW bn.

구 분	'21.3Q	QoQ	YoY	'21.2Q	'20.3Q
Sales	231.1	(18.0%)	83.7%	281.7	125.8
Cost of goods sold	169.5	(9.6%)	56.5%	187.4	108.3
Gross profit	61.6	(34.7%)	254.0%	94.3	17.4
Operating profit	59.9	(35.0%)	279.1%	92.1	15.8
OP Margin	25.9%	(6.8%p)	13.3%p	32.7%	12.6%
Non operating Income & expenses	(0.4)			(0.6)	(0.6)
Equity method gains	59.5	(35.0%)	294.0%	91.5	15.1
Profit before tax	14.3			22.0	2.9
Income tax	45.2	(35.0%)	267.5%	69.5	12.3

Balance Sheet (Separate)

Unit : KRW bn.

구 분	'19. 4Q	'20. 4Q	'21. 3Q
Current assets	179.1	192.5	401.0
(Cash & equivalents)	44.8	110.3	119.5
Non-current assets	288.5	269.2	256.3
Total assets	467.6	461.7	657.3
Current liabilities	97.2	56.7	159.8
(Short-term borrowings)	25.0	9.9	9.9
Non-current liabilities	126.3	98.6	98.3
(Long-term borrowings)	119.9	89.4	89.5
Total liabilities	223.6	155.3	258.1
Paid in capital	13.0	13.0	13.0
Others	118.6	119.4	119.4
Retained earnings	112.5	174.0	266.8
Total equity	244.0	306.4	399.2
Total liabilities & equity	467.6	461.7	657.3

※ HSB was included as consolidated subsidiary from Nov 2020 onward. '20. 4Q includes both non-consolidated earnings of Oct 2020 and consolidated earnings from November.

