

**S-OIL**

Discovering the infinite possibility of oil



# **4Q 2021 Earnings Release**

---

**January 2022**

# DISCLAIMER

Financial results for 4Q 2021 and full year of 2021 are provisional and subject to change according to the outside independent auditors' review.

This presentation contains forward-looking statements that are based on our current expectation, assumptions, estimates and projections about S-OIL and the refinery industry. We caution you not to place undue reliance on any forward-looking statement which may involve various risks and uncertainties.

Please also note that although we believe that the assumptions on which our forward-looking statements are based are reasonable, any of those assumptions could prove to be inaccurate, and, as a result, the forward-looking statements based on those assumptions could be incorrect. Except as required by law, we do not undertake to release the results of any revisions of these forward-looking statements to reflect future events or circumstances.

## 4Q 2021 Performance

4Q 2021 Financial Result	4
Financial Status	5
Performance by Business Segment	6
CAPEX & Operation	7

## Market Environment & Outlook

Refining	8
Petrochemical – Polymer	9
Petrochemical – Aromatics	10
Lube Base Oil	11

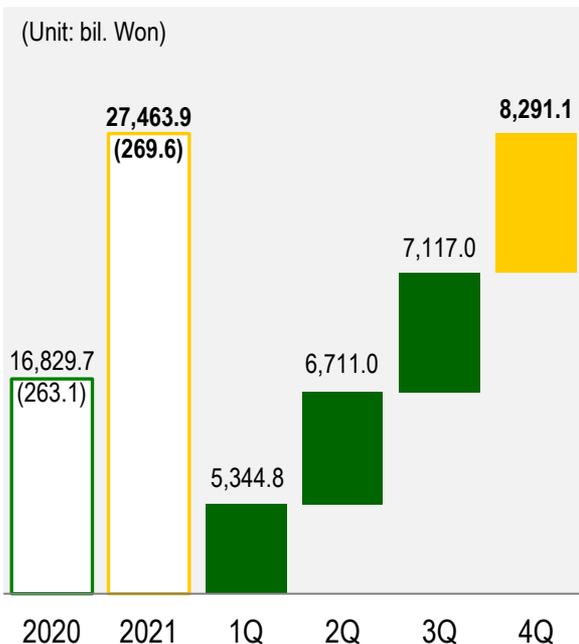
## Appendices

Summarized Income Statement	12
MOU with Saudi Aramco on Low Carbon Energy Solutions	13
Investment for New Business Opportunities	14
Updated Carbon Reduction Target & Roadmap	15
Quarterly Trend of Sales by Region	16
S-OIL's Petrochemical Product & Value Chain	17
Long-term Margin Trend	18



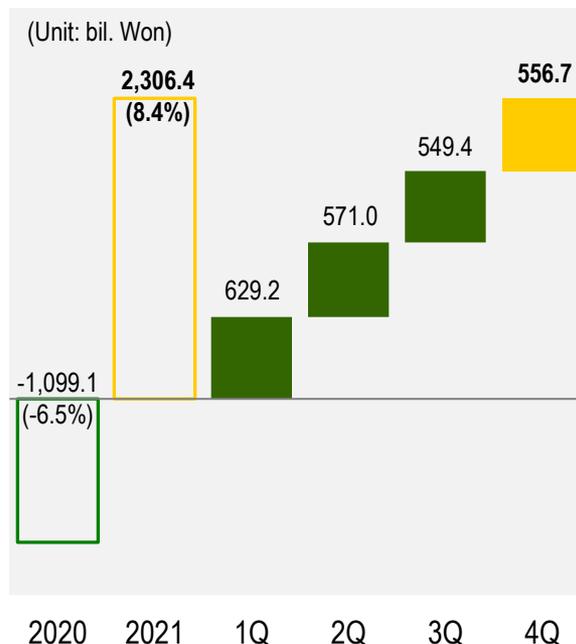
# Contents

## Revenue



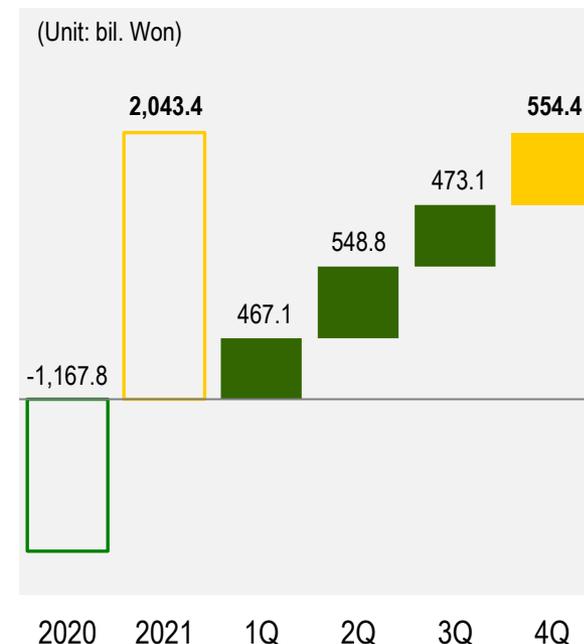
( ): Sales volume in million bbl

## Operating Income



( ): Operating income margin

## Income before Tax



**Increased 16% QoQ  
on rise in average selling price  
and sales volume**

- Quarterly average selling price: 10.3% ↑, QoQ
- Sales volume: 5.7% ↑, QoQ

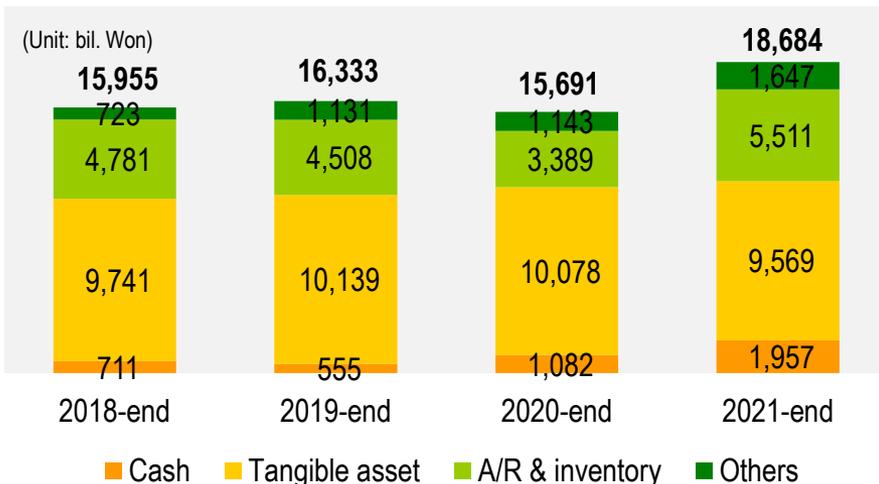
**Maintained solid earnings  
due to hike in refining margins**

- Singapore complex margin(\$/bbl): 4Q 2.2 (2.9 ↑, QoQ)
- Inventory-related gain: 84 bil. Won (Inventory-related gain in 3Q : 88 bil. Won)

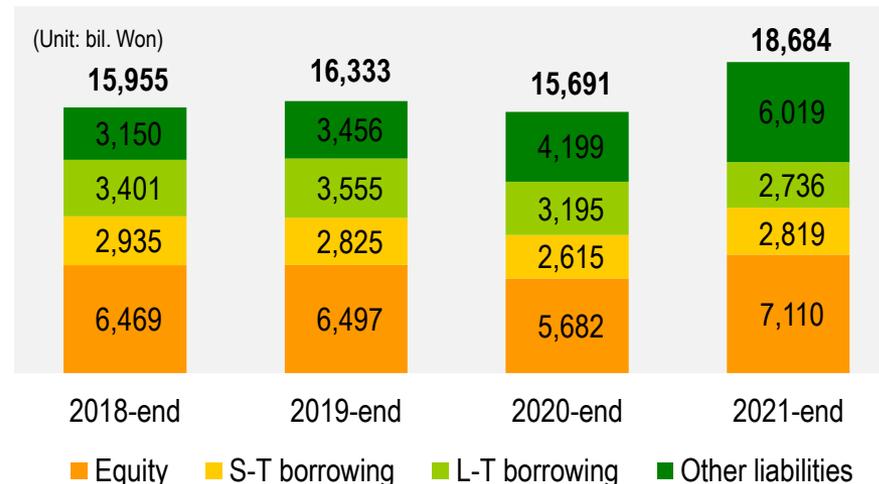
**Increased 81.3 bil. Won QoQ  
amid FX rate stability**

- F/X gain: 2.7 bil. Won (3Q '21 F/X loss: 157.6 bil. Won)
- ₩/\$ rate: 4Q-end 1,185.5 (0.6 ↑, QoQ)

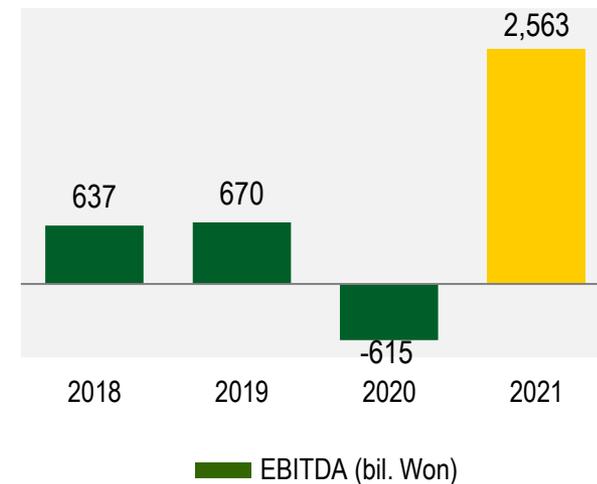
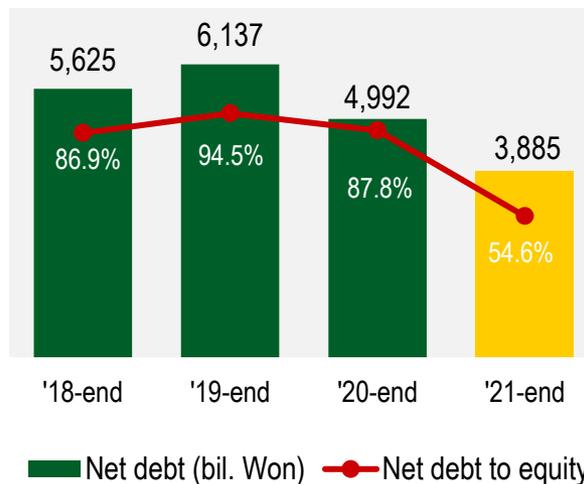
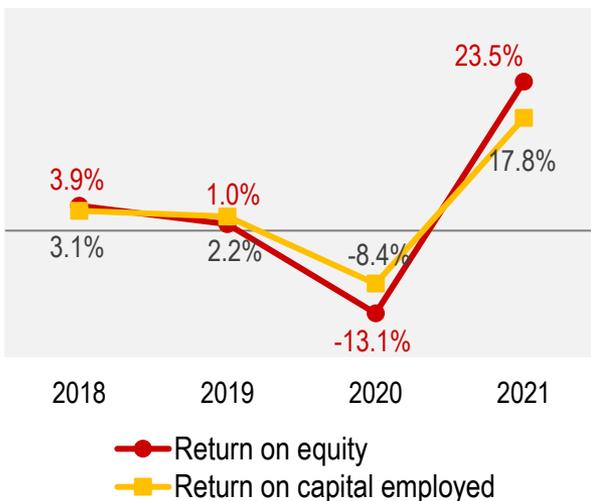
## Assets



## Liabilities & Equities



## Financial Highlights



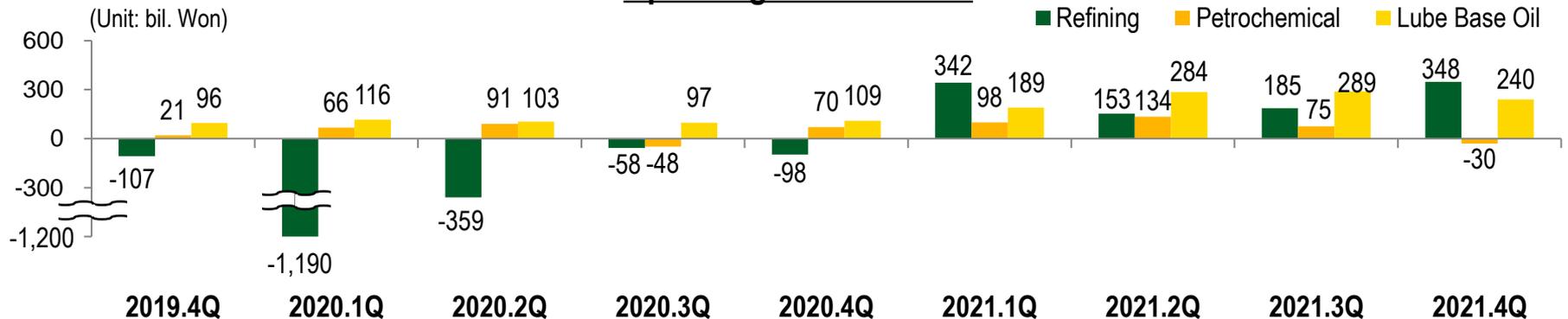
- Net debt: Short-term borrowing + Long-term borrowing + Lease obligation - Cash

\* EBITDA: Income before tax + Net interest expense + Depreciation(Excluding catalyst amortization cost)

# Performance by Business Segment

Segment	(Unit: bil. Won)	4Q '21	3Q '21	QoQ	2021	2020	YoY
Refining	Revenue	6,322.1	5,223.0	21.0% ↑	20,190.8	12,635.0	59.8% ↑
	Operating Income	347.6	185.5	87.4% ↑	1,027.7	-1,704.1	
	(Margin)	(5.5%)	(3.6%)		(5.1%)	(-13.5%)	
Petrochemical	Revenue	1,250.1	1,182.8	5.7% ↑	4,657.4	2,862.2	62.7% ↑
	Operating Income	-30.5	75.1		277.0	179.6	54.2% ↑
	(Margin)	(-2.4%)	(6.3%)		(5.9%)	(6.3%)	
Lube Base Oil	Revenue	718.8	711.2	1.1% ↑	2,615.8	1,332.5	96.3% ↑
	Operating Income	239.6	288.8	17.0% ↓	1,001.7	425.3	135.5% ↑
	(Margin)	(33.3%)	(40.6%)		(38.3%)	(31.9%)	
Total	Revenue	8,291.1	7,117.0	16.5% ↑	27,463.9	16,829.7	63.2% ↑
	Operating Income	556.7	549.4	1.3% ↑	2,306.4	-1,099.1	
	(Margin)	(6.7%)	(7.7%)		(8.4%)	(-6.5%)	

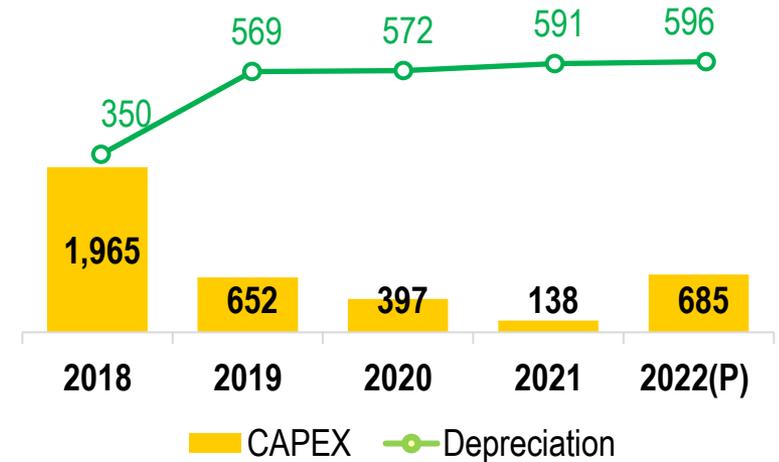
### Operating Income Trend



## CAPEX & Depreciation

(Unit: bil. Won)	2021	2022 Plan
Upgrade & Maintenance	97.6	487.1
Marketing related expenditure	21.8	49.8
Others	18.1	148.3
<b>Total CAPEX</b>	<b>137.5</b>	<b>685.2</b>
<b>Depreciation</b>	<b>590.8</b>	<b>595.8</b>

(Unit: bil. Won)



## Maintenances

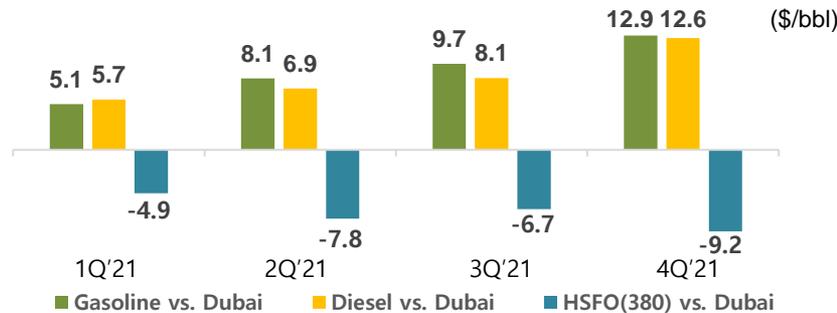
	2019	2020	2021	'22 Plan
Refining	#3 CDU CFU	#1 CDU	-	#2 CDU
	#1,2RFCC HYC FH	#2 RFCC	-	#1 RFCC
Petrochemical	#2 PX	PP/PO	-	#1 PX/PO
Lube Base Oil	HYC SH	#1 HDT	-	-

## Utilization Rate

	2019	2020	2021	4Q'21
CDU	95.4%	96.1%	97.8%	98.7%
RFCC/HYC	86.8%	91.9%	101.3%	102.0%
PX Plants	75.6%	88.0%	91.6%	88.6%
PP/PO Plants	75.4%	78.0%	109.4%	112.4%
Lube Plants	88.7%	88.4%	100.6%	102.4%

## 4Q '21 Market Environment

- **Regional refining margins** soared thanks to continuous demand recovery driven by increasing economic activities and mobility amid eased Covid-19 restrictions.



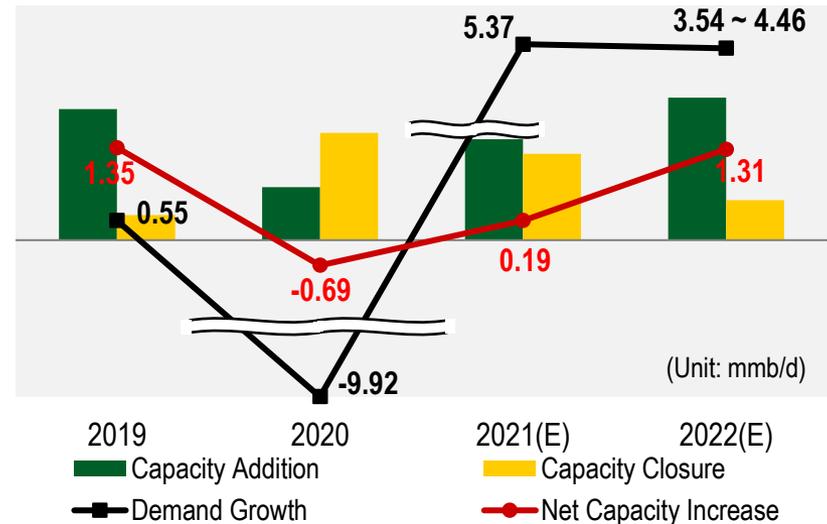
## 2022 Outlook

- **Regional refining margins** are forecast to be on the rising trend as market becomes more tightened due to demand growth consecutively outpacing refining capacity additions with multi-year low inventory.

## Singapore Margin



## Global Net Capacity Increase vs. Demand Growth



Source: IHS, OPEC, EIA, FACTS Global Energy, Wood Mackenzie, The Company

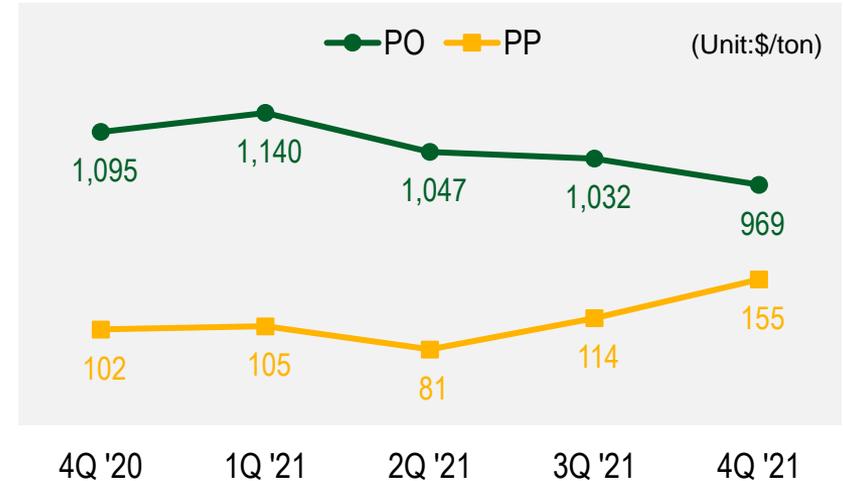
## 4Q '21 Market Environment

- **Propylene Oxide(PO) spread** was adjusted lower due to start-up of new PO plants in China and weakened demand amid resurgence of COVID variants.
- **Polypropylene(PP) spread** gained by tightened supply as coal and propane price hike lowered operation rate of suppliers in China, while COVID-induced demand from packaging and medical sectors continued to be steady.

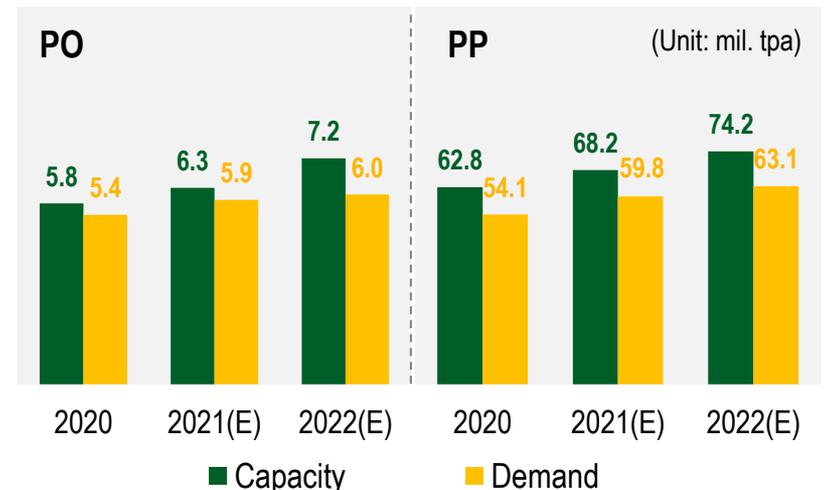
## 2022 Outlook

- **PO spread** is anticipated to come off from the record levels seen in 2021 due to downward pressure from new PO plants in China, but to remain well above pre-COVID level backed by sustained demand from downstream Polyol-PU chains.
- **PP spread** is expected to soften impacted by new capacities, while being shored up by solid demand growth from automotive and packaging sectors.

### Product Spread (Vs. Propylene)



### Total PP/PO Capacity & Demand (Asia & ME)



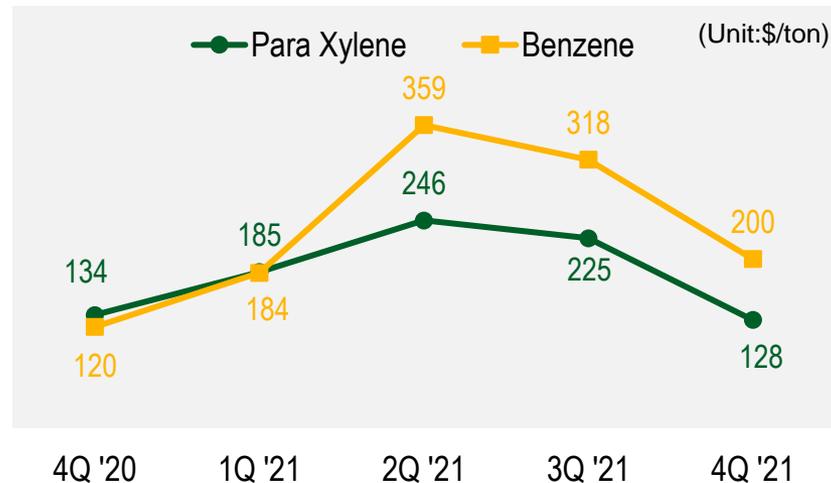
## 4Q '21 Market Environment

- **Para Xylene spread** declined due to increased operation of a new PX plant and weak downstream demand.
- **Benzene spread** stayed at firm level, but saw a downward correction caused by run cuts of regional Benzene derivatives plants under narrowed margin together with increased supply from new aromatics plants.

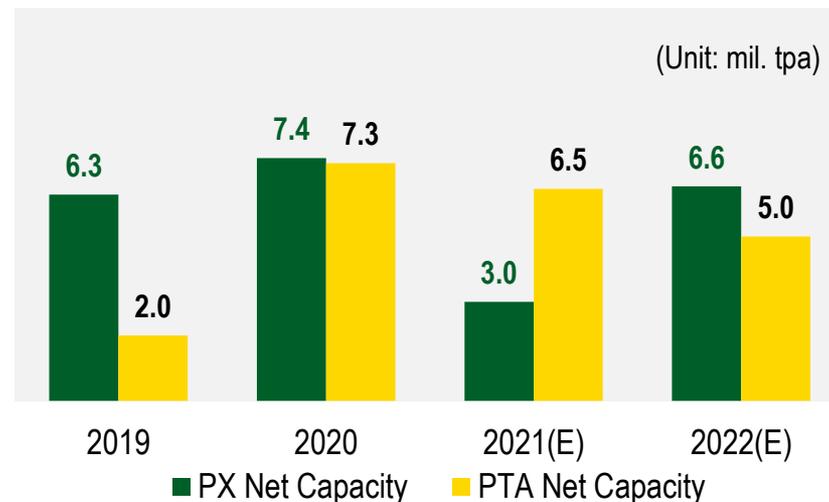
## 2022 Outlook

- **Para Xylene spread** is expected to gradually recover led by improvement of demand for polyester in line with easing social distancing measures while downward pressure from new capacities is to be mitigated by run cut or shut-down of unprofitable plants.
- **Benzene spread** would be adjusted down due to capacity additions in China, but be maintained at sound level by steady demand growth from new downstream plants.

### Product Spread (Vs. Naptha)



### Global PX & PTA Net Capacity Expansion



## 4Q '21 Market Environment

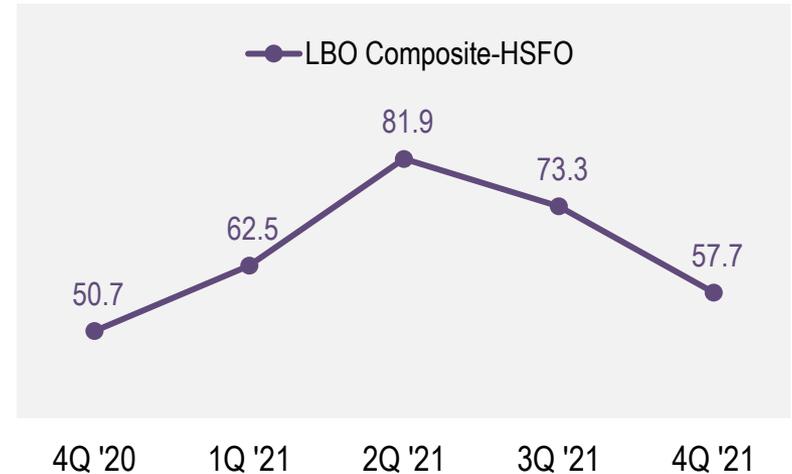
- Overall LBO spread remained at a high level compared to pre-pandemic level on the back of healthy demand for high-quality products although it retreated further from historic record level in 2Q amid eased tightness in supply.

## 2022 Outlook

- Overall LBO fundamental is expected to stay robust continuously thanks to strong demand for high-quality products, even though supply will increase as operation rates are likely to be higher.

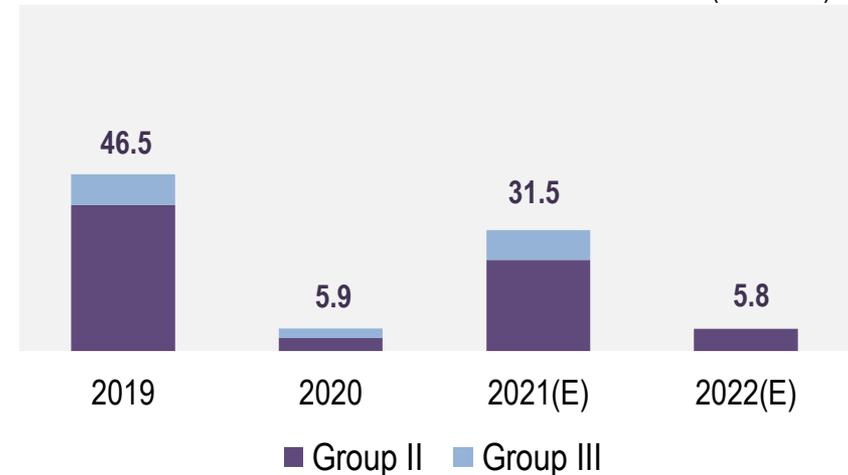
### Product Spread (Asia)

(Unit:\$/bbl)



### LBO Capacity Addition

(Unit: kbd)



Source: ICIS, Argus, Kline, The Company

## Summarized Income Statement

(Unit: bil. Won)	4Q '21	3Q '21	QoQ	2021	2020	YoY
<b>Revenue</b>	<b>8,291.1</b>	<b>7,117.0</b>	<b>16.5% ↑</b>	<b>27,463.9</b>	<b>16,829.7</b>	<b>63.2% ↑</b>
<b>Operating Income</b> (Margin)	<b>556.7</b> (6.7%)	<b>549.4</b> (7.7%)	<b>1.3% ↑</b> -	<b>2,306.4</b> (8.4%)	<b>-1,099.1</b> (-6.5%)	
<b>Finance &amp; Other Income</b>	<b>-2.7</b>	<b>-75.9</b>	-	<b>-264.7</b>	<b>-72.4</b>	
- Net Interest Gain	-22.9	-25.9	-	-100.8	-145.7	
- Net F/X Gain*	2.7	-157.6	-	-263.3	62.0	
- Others	17.5	107.5	-	99.4	11.4	
<b>Equity Method Gain</b>	<b>0.4</b>	<b>-0.4</b>	-	<b>1.8</b>	<b>3.7</b>	
<b>Income before Tax</b>	<b>554.4</b>	<b>473.1</b>	<b>17.2% ↑</b>	<b>2,043.4</b>	<b>-1,167.8</b>	
<b>Net Income</b>	<b>410.1</b>	<b>334.5</b>	<b>22.6% ↑</b>	<b>1,500.1</b>	<b>-796.1</b>	

\* Including gain/loss from F/X derivatives for hedging

## MOU with Saudi Aramco on Low Carbon Energy Solutions

On Jan. 18<sup>th</sup>, S-OIL signed four MOUs with Saudi Aramco to enhance mutual partnership and alignment in pursuing carbon neutral and eco-friendly energy business covering clean hydrogen, thermal crude-to-chemical(TC2C), venture investment, and R&D.



### Collaboration for Clean Hydrogen Business

- Conduct feasibility study for blue ammonia and blue hydrogen supply and distribution in Korea
- Evaluate potential partnership models, and development plans for cooperation of the production and supply of blue ammonia and blue hydrogen

### Deployment of the First Commercial Scale TC2C Technology

- Exchange information related to Saudi Aramco's TC2C technology
- Explore feasibility of potential collaboration related to Shaheen project's development & execution
- Explore Value Engineering opportunities and share operational experience

### Mutual Investment into Ventures in New Energy & De-carbonization Sectors

- Explore promising Korean ventures and co-investment with Aramco Ventures in areas such as hydrogen value chain, carbon capture utilization & storage (CCUS)

### R&D Collaboration on Low Carbon Energy Solutions

- Explore opportunities and feasibility of high-efficient hydrogen production with CCUS, carbon neutral e-fuel, and plastic recycling

## Investment for New Business Opportunities

### Hydrogen & Biofuel Investment

	Samsung C&T	Fuel Cell Innovation	Kohygen
Sector	Hydrogen & Biofuel	Fuel Cell / Hydrogen	Mobility/Hydrogen
Business	Hydrogen production & distribution, Bio diesel & jet fuel	Engineering service for fuel cell plant and SOFC <sup>1)</sup> manufacturing	Hydrogen Refueling Station business for commercial vehicles
Amount	Partnership MOU	8.2 bil Won	0.95 bil. Won

### Venture & Other Investment

	LIBEST	IPITECH	OnePredict	Beomjun E&C	Glory & Tech
Sector	Battery & Material	Specialty polymer	Smart Plant, Industrial AI	Specialty Chemical	Carbon Emission
Business	Flexible Lithium-ion polymer battery with high capacity	Polyimide films & varnish materials of various characteristics	Industrial AI-based PHM <sup>2)</sup> solution and Industrial IoT	Sulfur Modifier for concrete & asphalt and construction	CERs <sup>3)</sup> provider via CDM business
Amount	2.5 bil Won	2.0 bil Won	2.0 bil Won	1.0 bil Won	1.0 bil Won

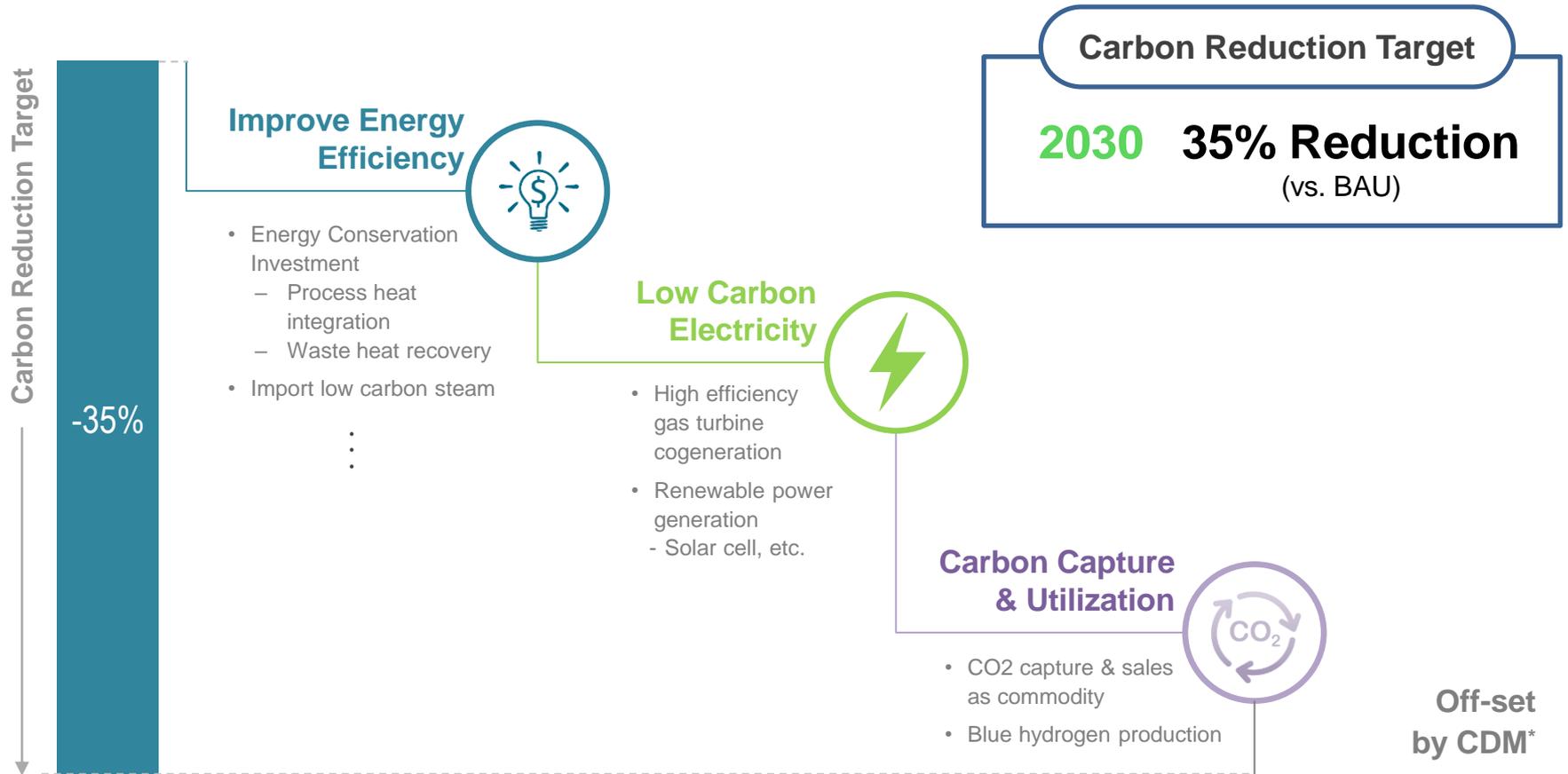
1) Solid Oxide Fuel Cell

2) Prognostics and Health Management

3) Certified Emission Reductions

## Updated Carbon Reduction Target & Roadmap

A new target to reduce carbon emission up to 35% by 2030 has been set up along with a comprehensive roadmap comprising 4 key pathways.



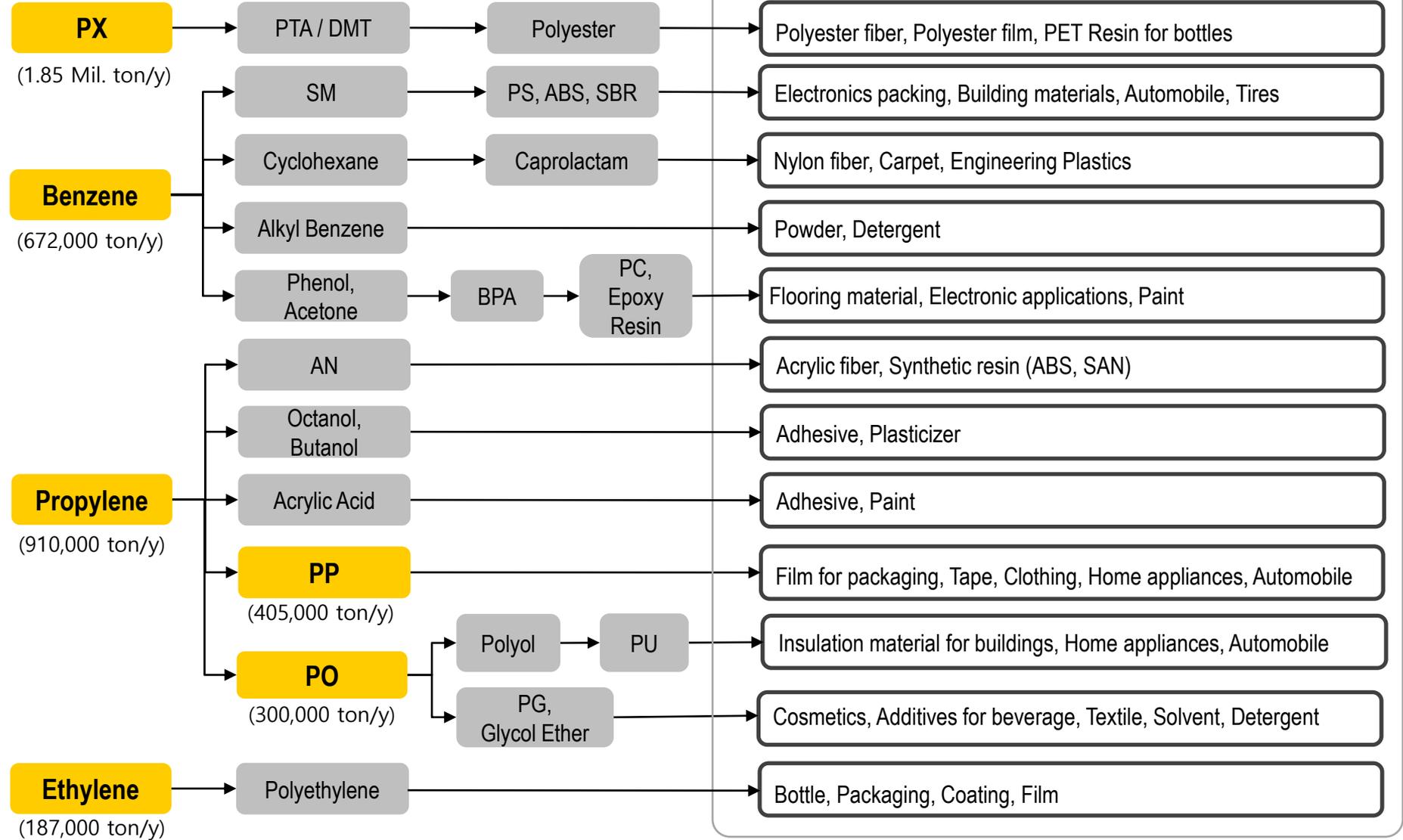
\* CDM : Clean Development Mechanism

## Quarterly Trend of Sales by Region

(Unit: k bpd, %)		4Q '20	1Q '21	2Q '21	3Q '21	4Q '21
<b>Sales Total</b>		723	693	761	729	770
<b>- Domestic</b>		364	350	356	343	369
<b>- Export</b>		359	343	405	385	401
(% in export)						
	China	26.8%	27.3%	26.8%	16.7%	18.9%
	Australia	13.2%	13.8%	15.2%	13.8%	9.4%
	Japan	17.3%	24.3%	15.0%	14.5%	17.4%
	South East Asia	10.9%	6.7%	11.9%	10.2%	19.6%
	USA	11.0%	7.8%	8.1%	9.5%	8.2%
	Singapore	2.6%	3.3%	7.1%	10.0%	4.0%
	India	3.5%	3.9%	2.9%	4.2%	4.0%

## S-OIL's Petrochemical Product & Value Chain

### The Company's products



## Long-term Margin Trend

### Refining

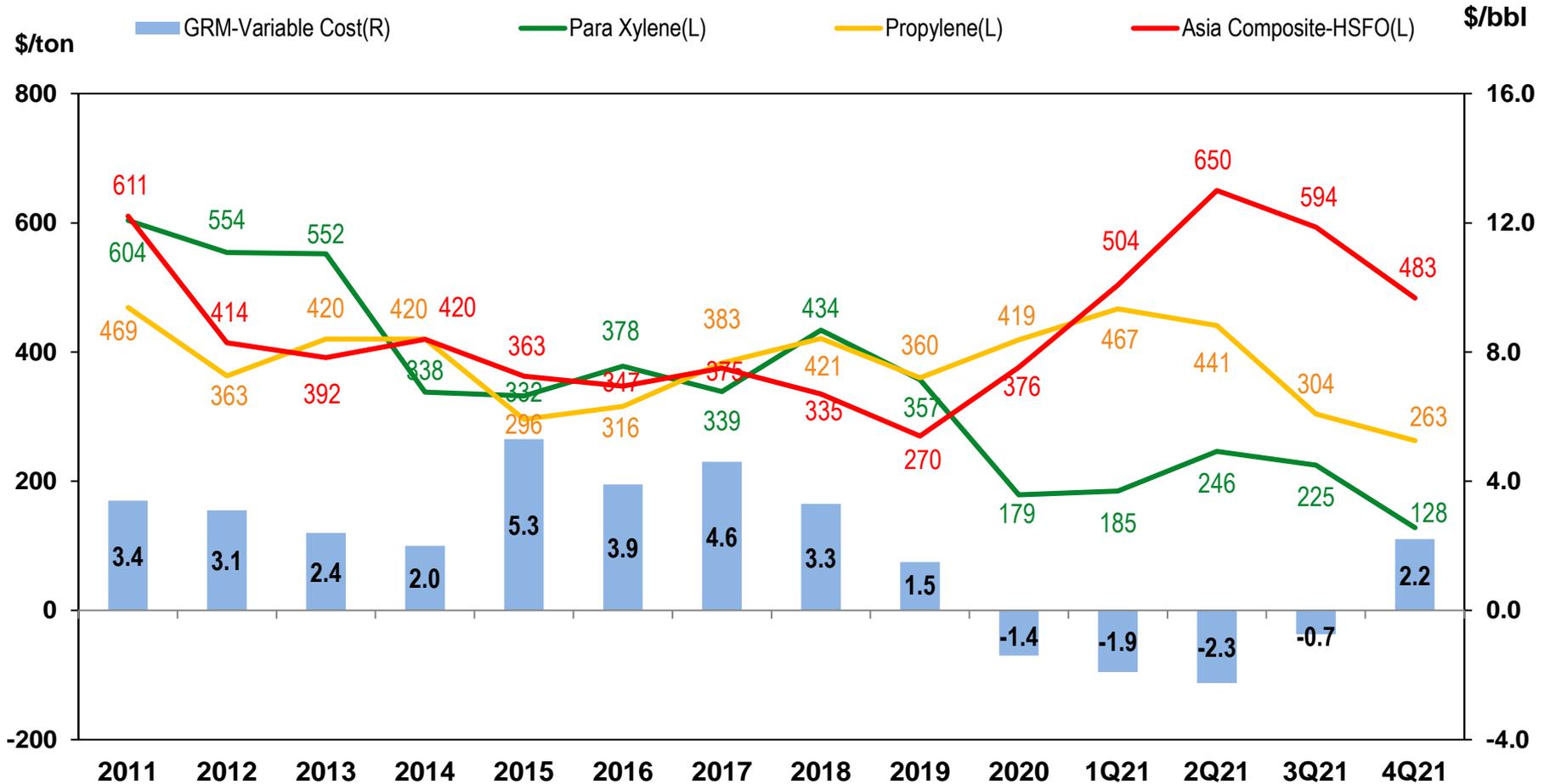
Singapore Complex Margin

### Petrochemical

Product spread (Vs. Naptha)

### Lube base Oil

Product spread



# Thank You

## S-OIL IR Team

Contact : [IRteam@s-oil.com](mailto:IRteam@s-oil.com)

---



**Dow Jones  
Sustainability Indices**

In Collaboration with RobecoSAM 



S-OIL, the only company named to DJSI World for the 12<sup>th</sup> consecutive year among Asia Pacific refiners and won the Best Excellence Company in 2021 ESG awards from KCGS.

