



Energy To the future

 **Tüpraş**

 **Koc** | May 2022

Investor Presentation

Disclaimer

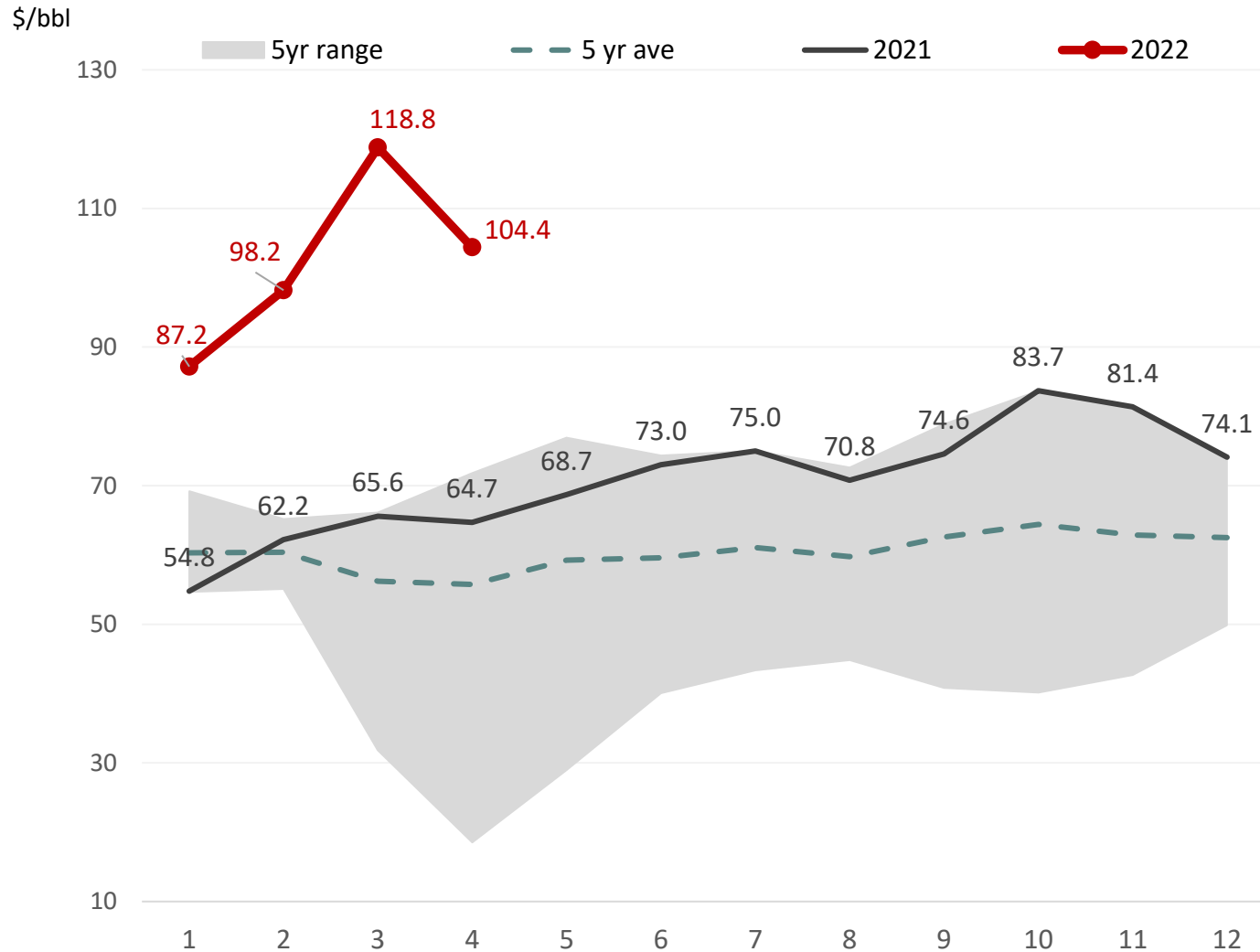
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Refining Market

Brent Crude Prices



- + OPEC ++ production cuts
- + Impact of Iran & Venezuela sanctions
- + Improved mobility following vaccine deployments

- Concerns on global economic development
- Uncertainties on new variants

Year	Average Brent Prices (\$/bbl)
2017	54.3
2018	71.0
2019	64.3
2020	41.7
2021	70.7

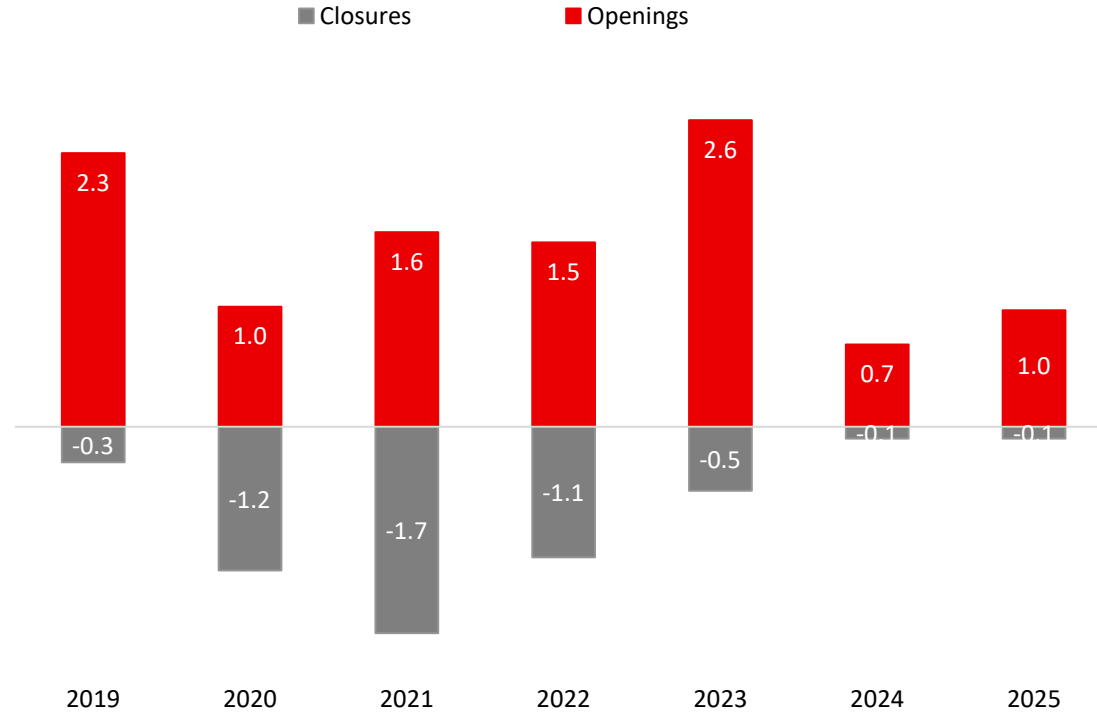
data as of 30 April 2022, 5 year range shows 2017-2021

Global Refinery Capacity Changes

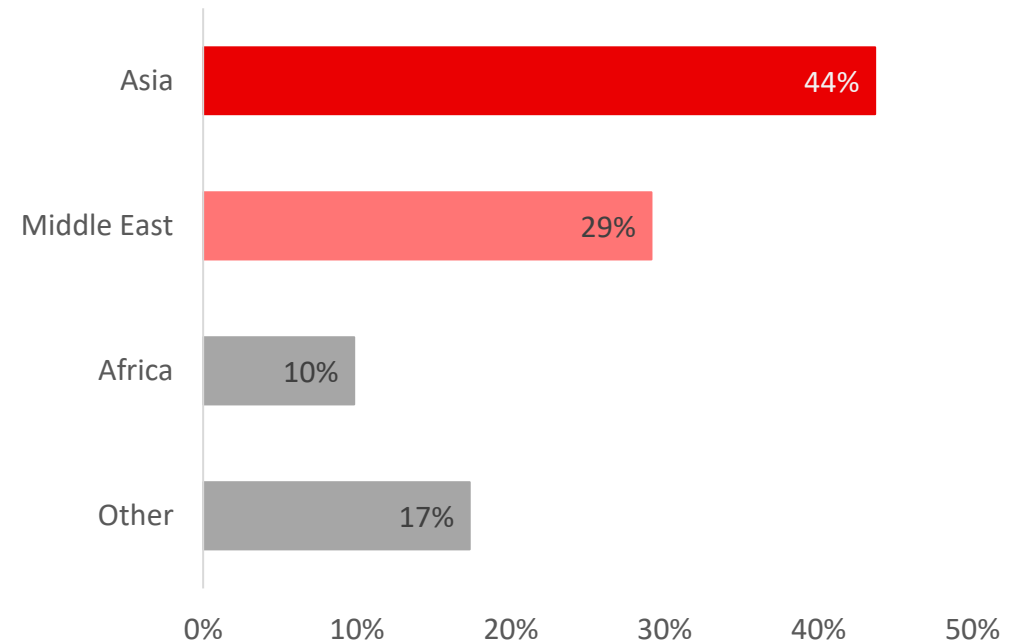
Expectations until 2025:

- 73% of net capacity additions will come from Asia & Middle East
- Net capacity and demand in Europe will remain roughly unchanged

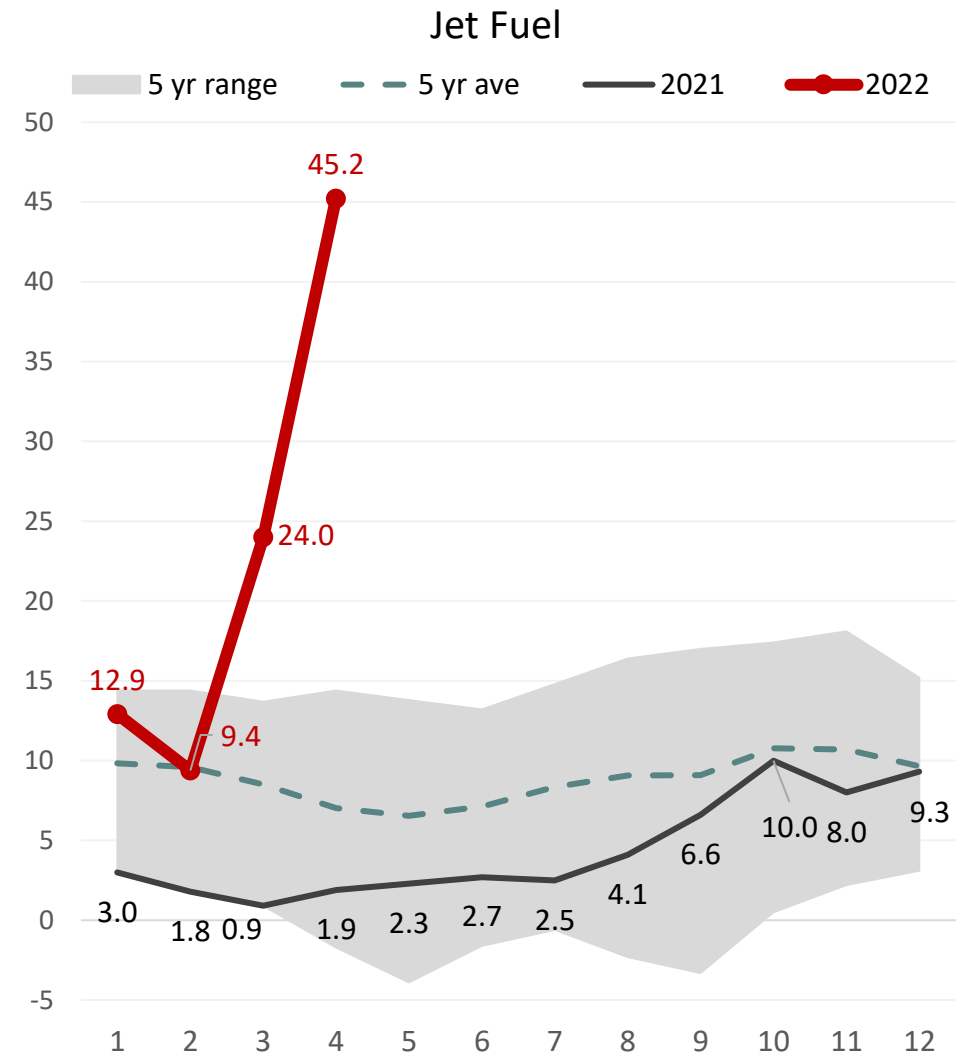
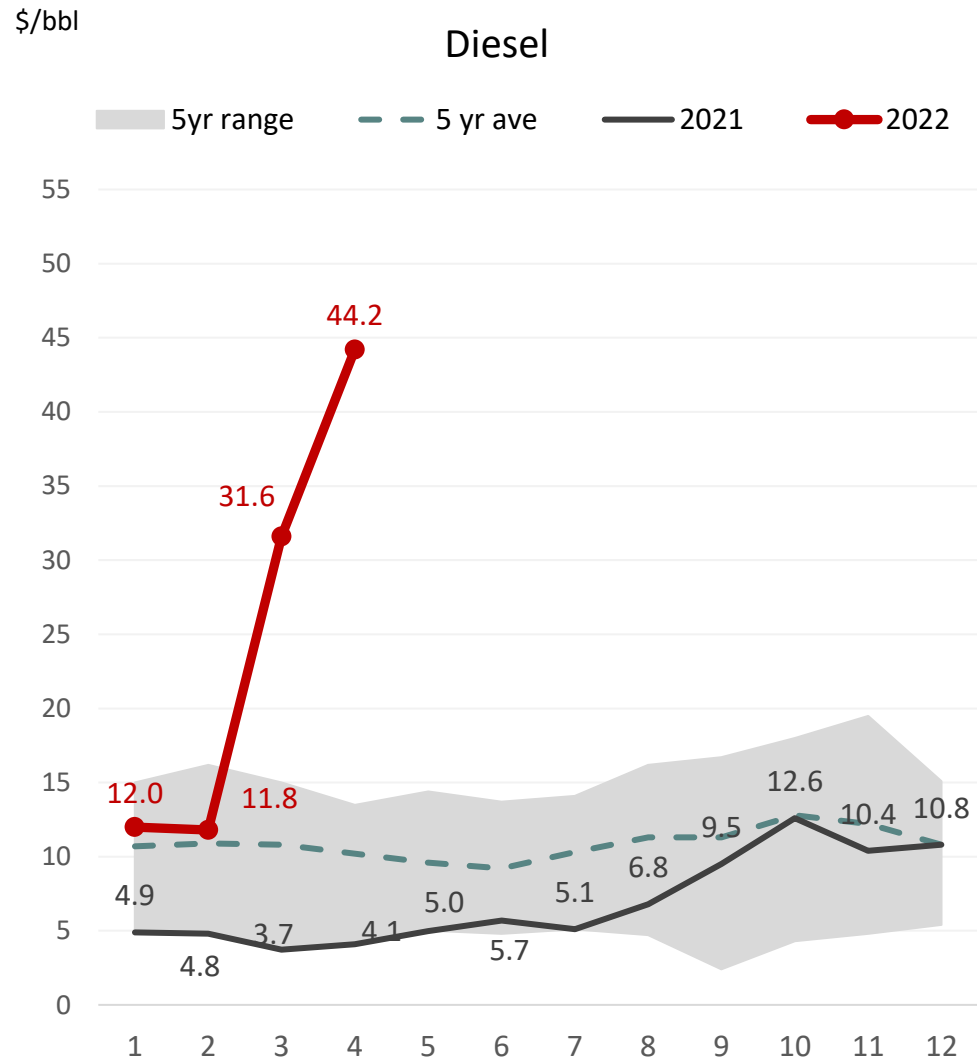
2019-2025 Net Capacity Additions



Capacity Additions by Region

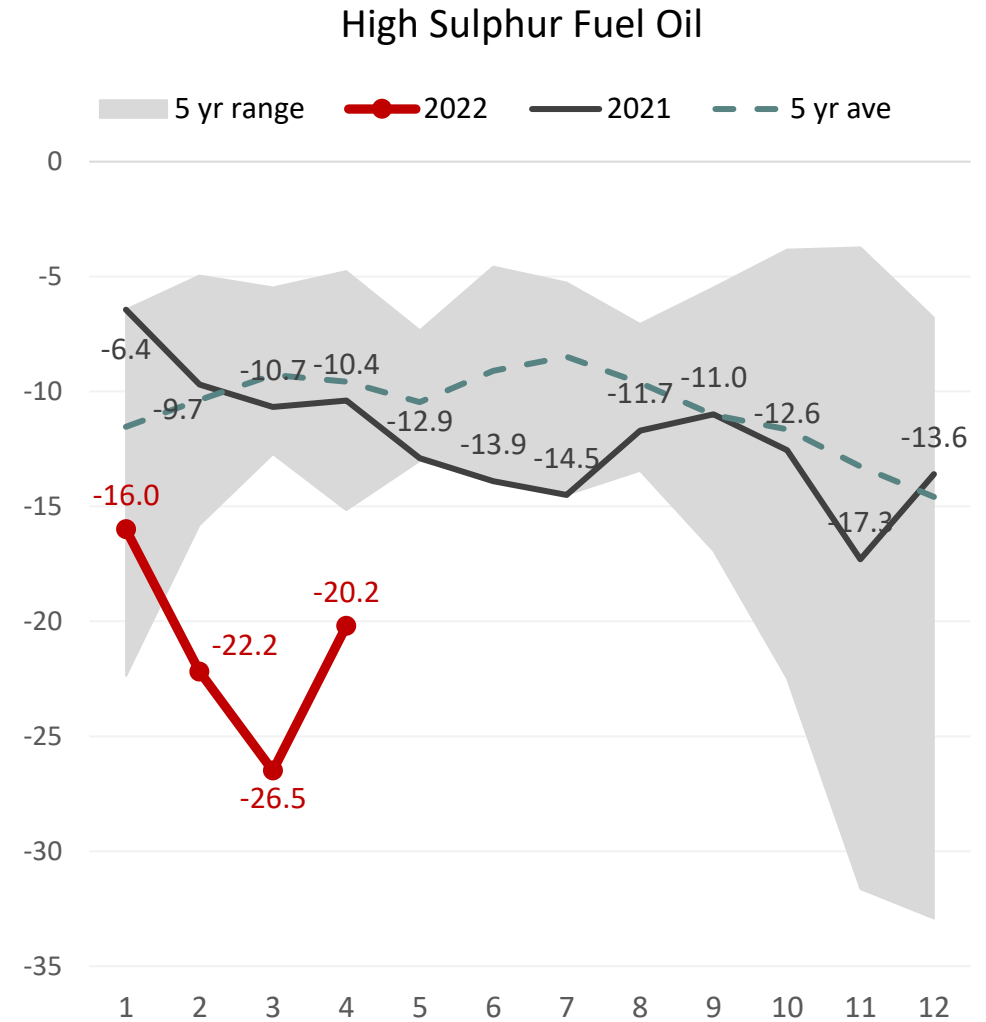
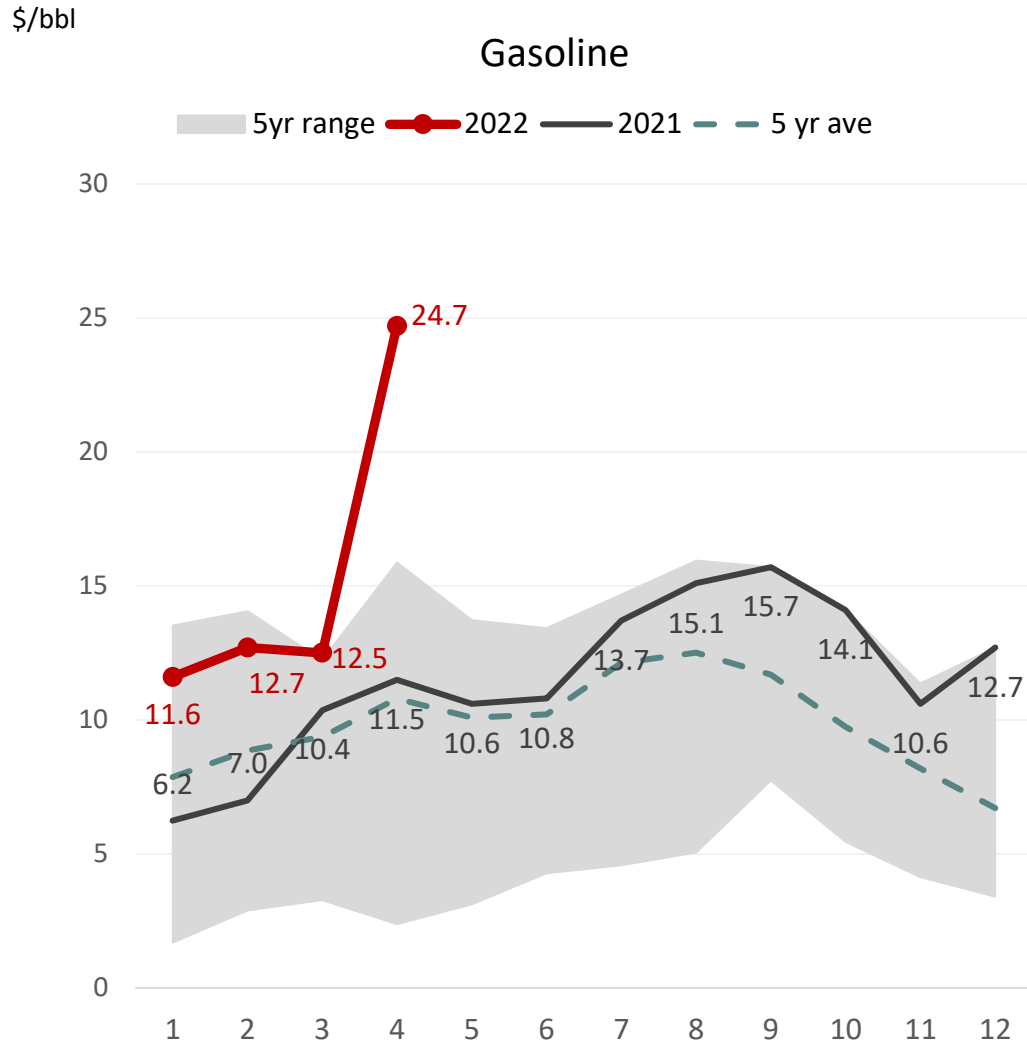


Middle Distillate Cracks



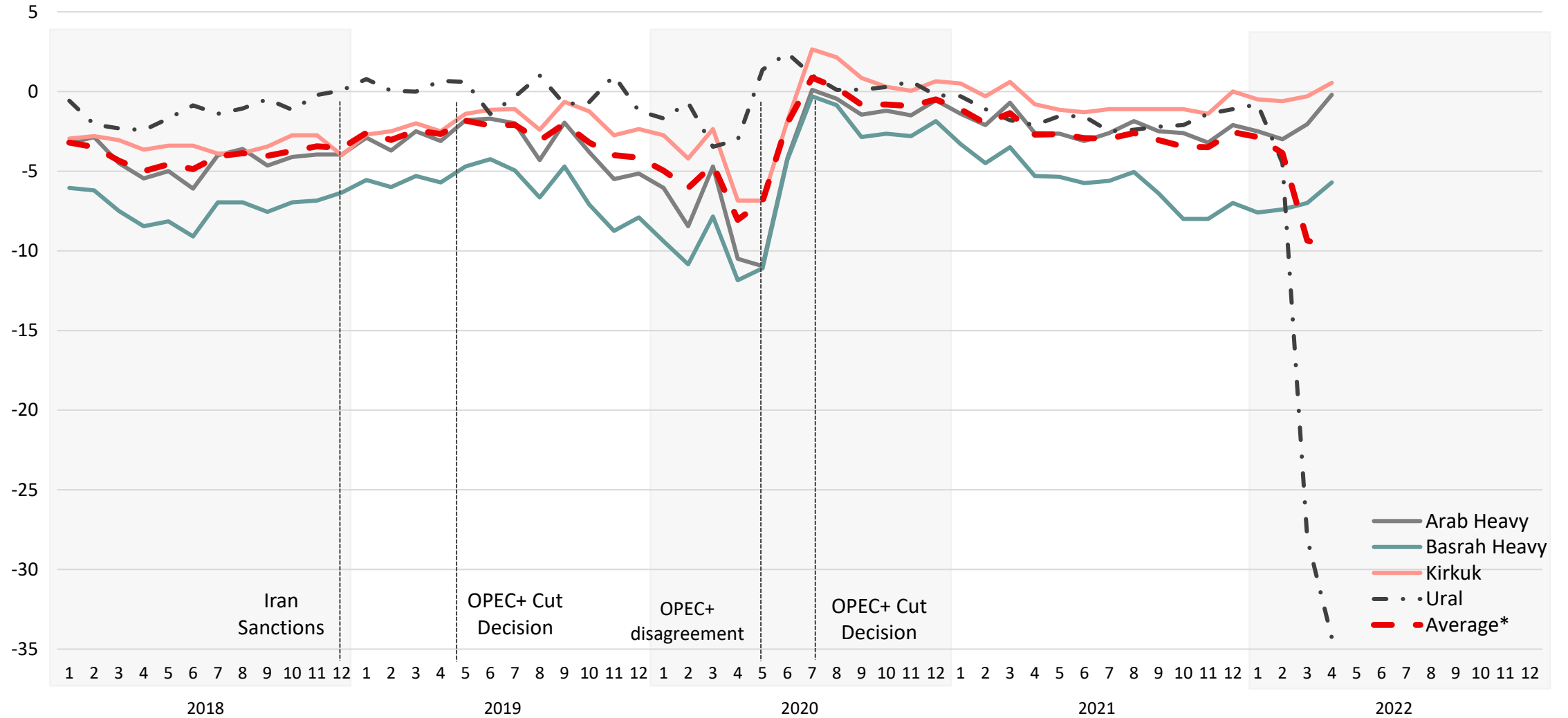
data as of 30 April 2022, 5 year range shows 2017-2021

Gasoline and High Sulphur Fuel Oil Cracks



data as of 30 April 2022, 5 year range shows 2017-2021

Heavy Crude Price Differentials to Brent (\$/bbl)



data as of 30 April 2022

*Simple average of listed differentials



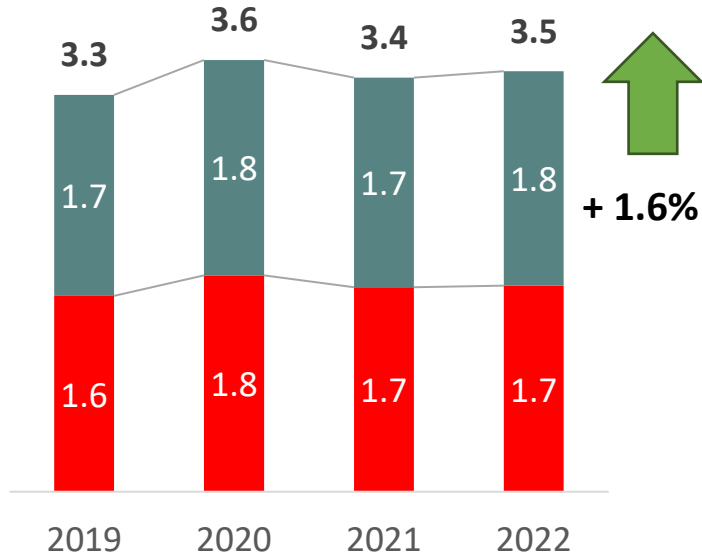
Turkish Market

Turkish Market, 2M 2022

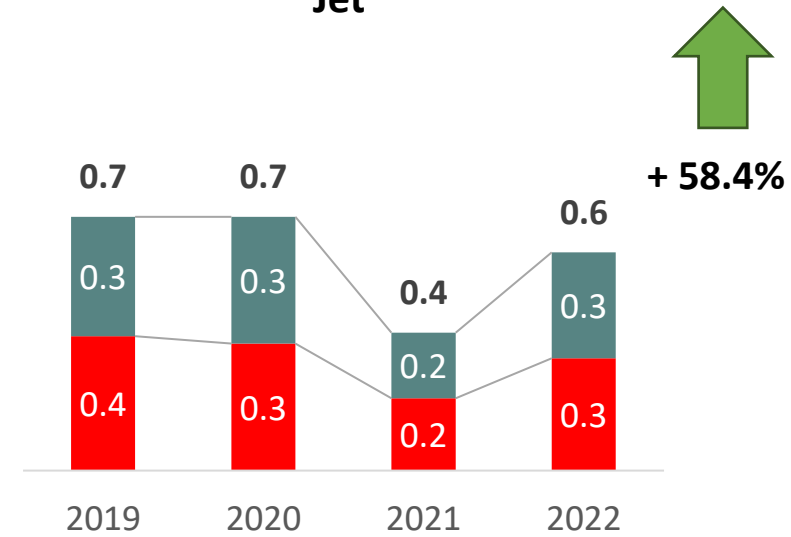
January February

Million Tons

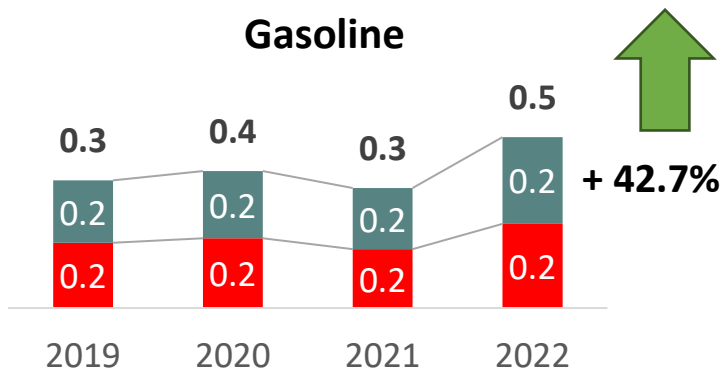
Diesel



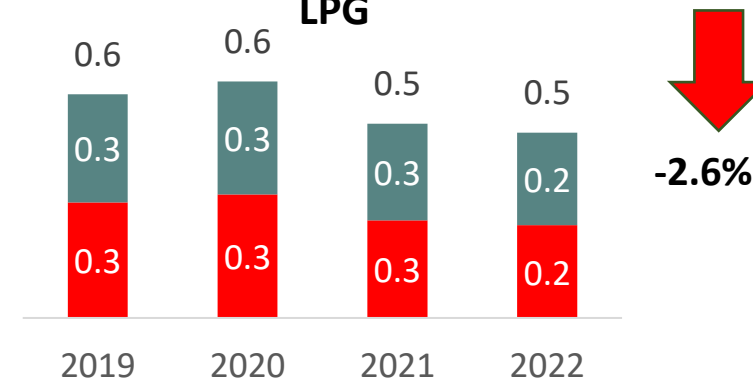
Jet¹



Gasoline



LPG

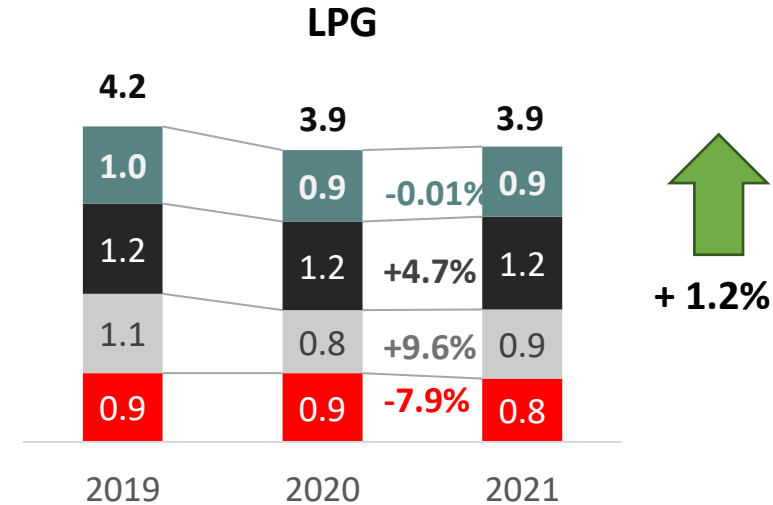
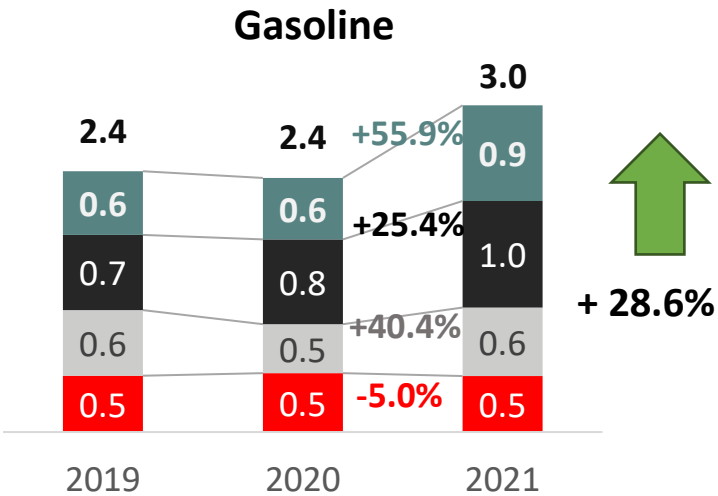
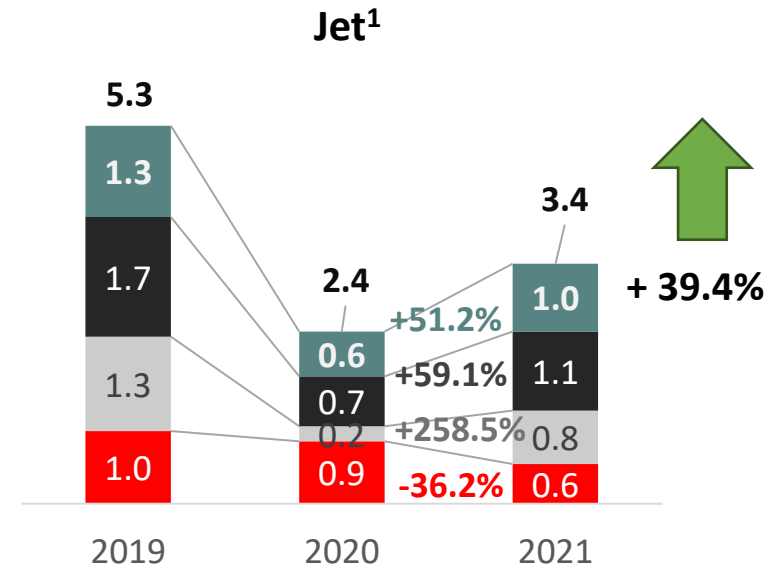
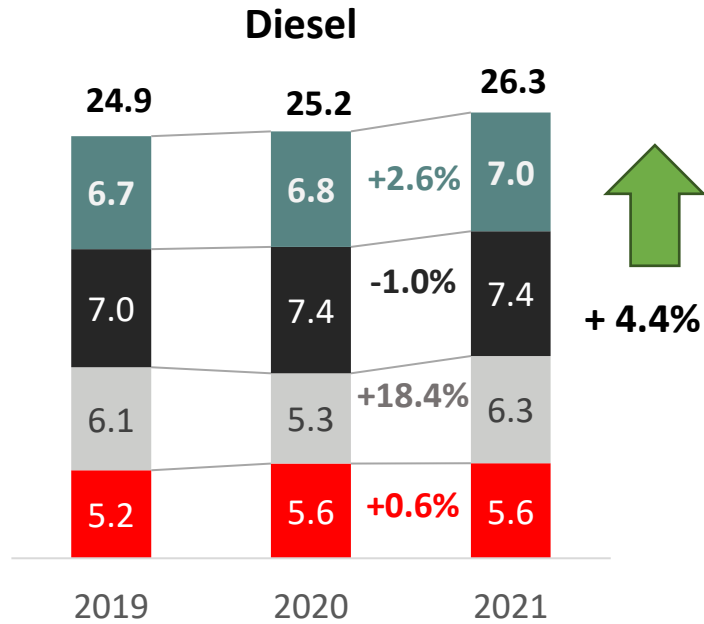


¹Transit flight consumption included

Turkish Market, 12M 2021

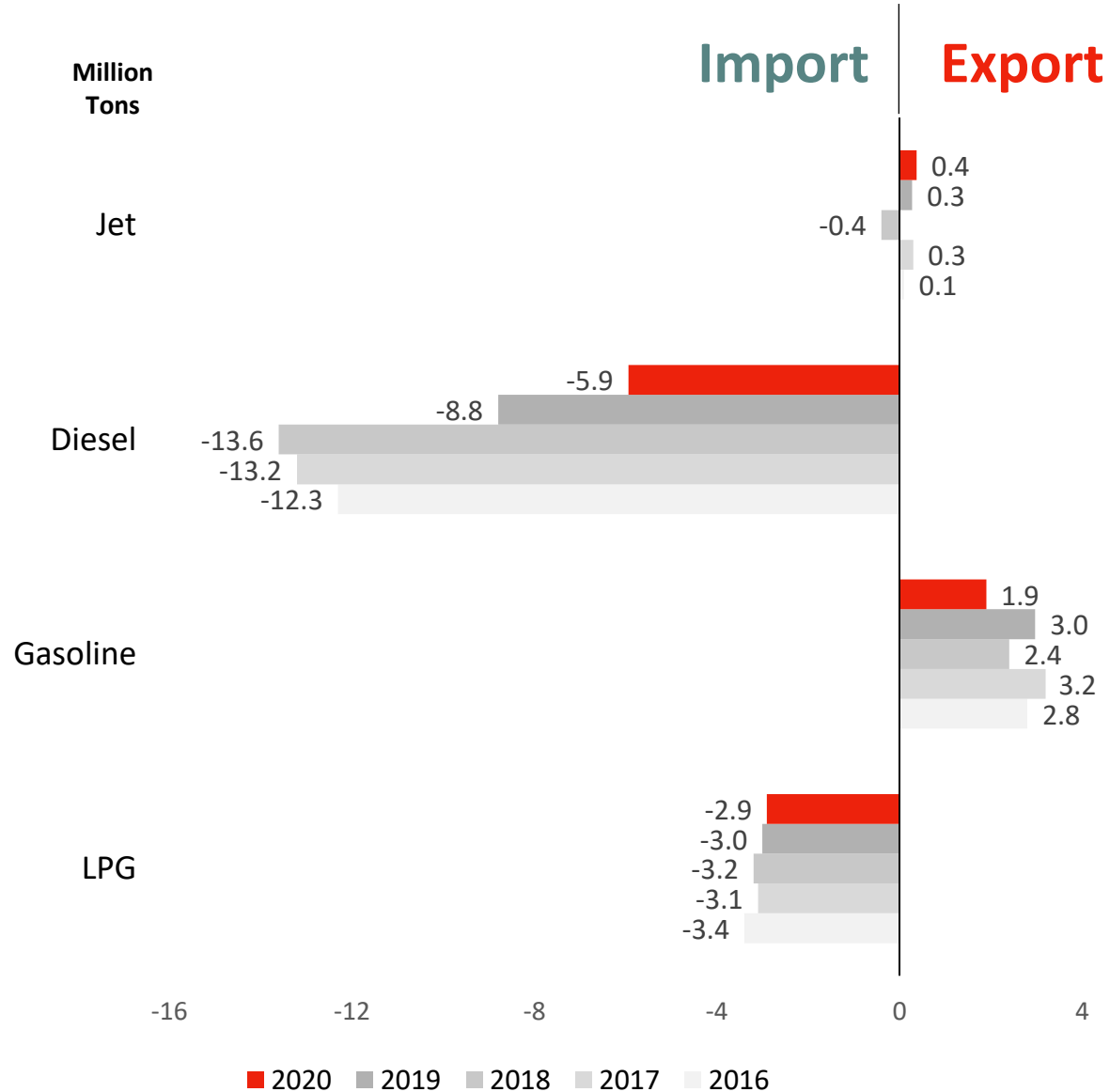
Q4 Q3 Q2 Q1

Million Tons

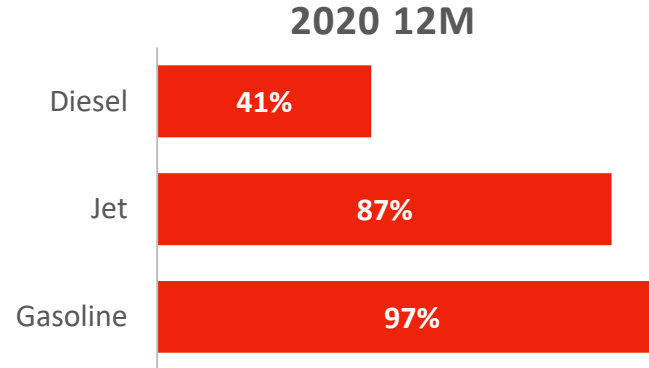


¹Transit flight consumption included

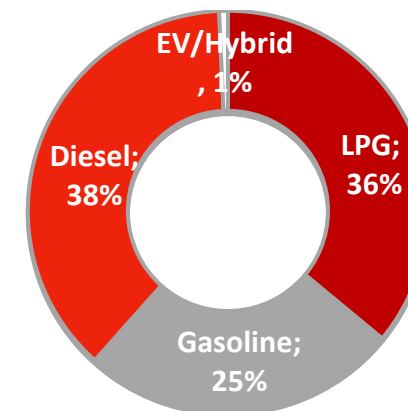
Turkey's Net Import / Export Balance



Tüpraş' Market Share



Fuel Choice of Passenger Cars 2021

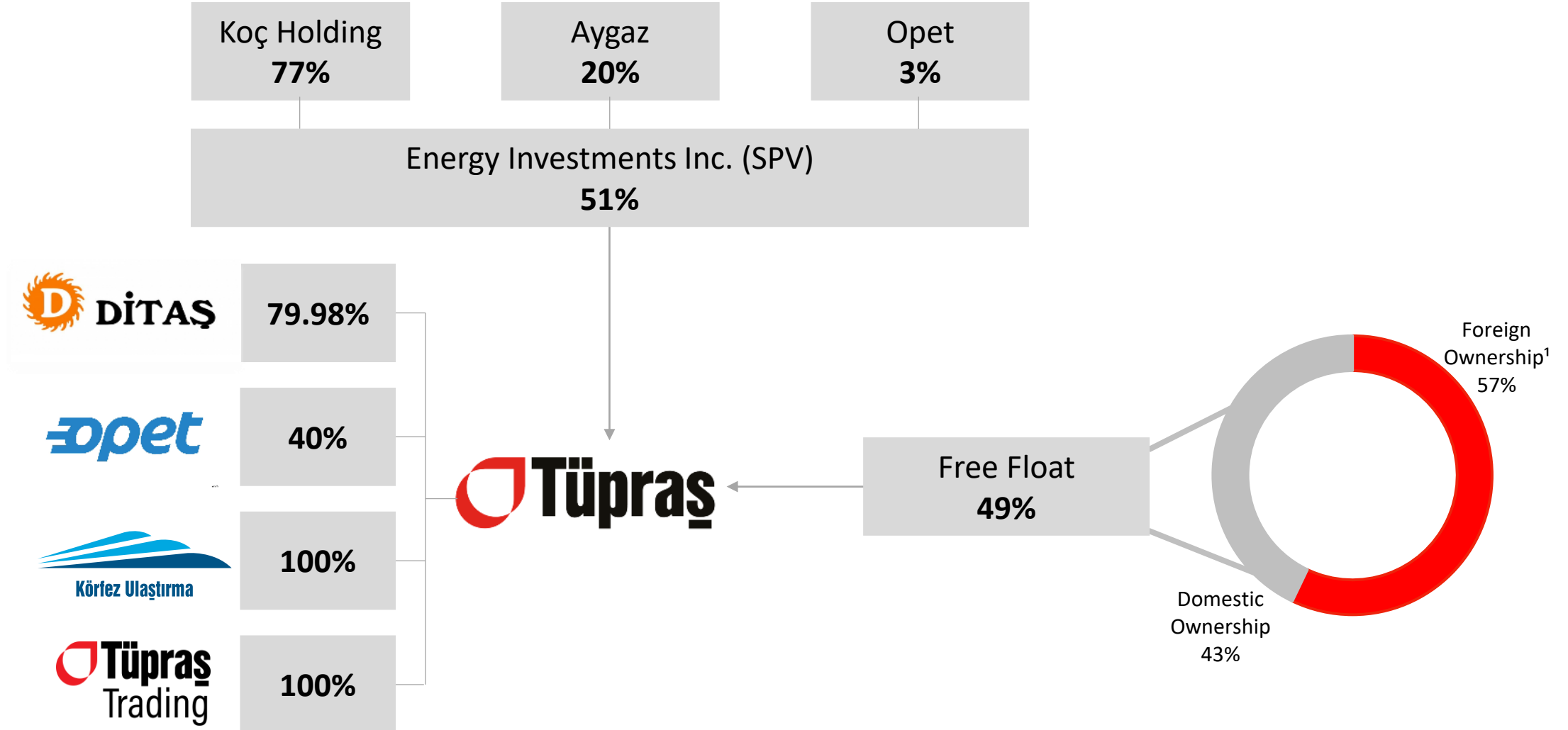




Company Overview

Tüpraş Shareholder Structure

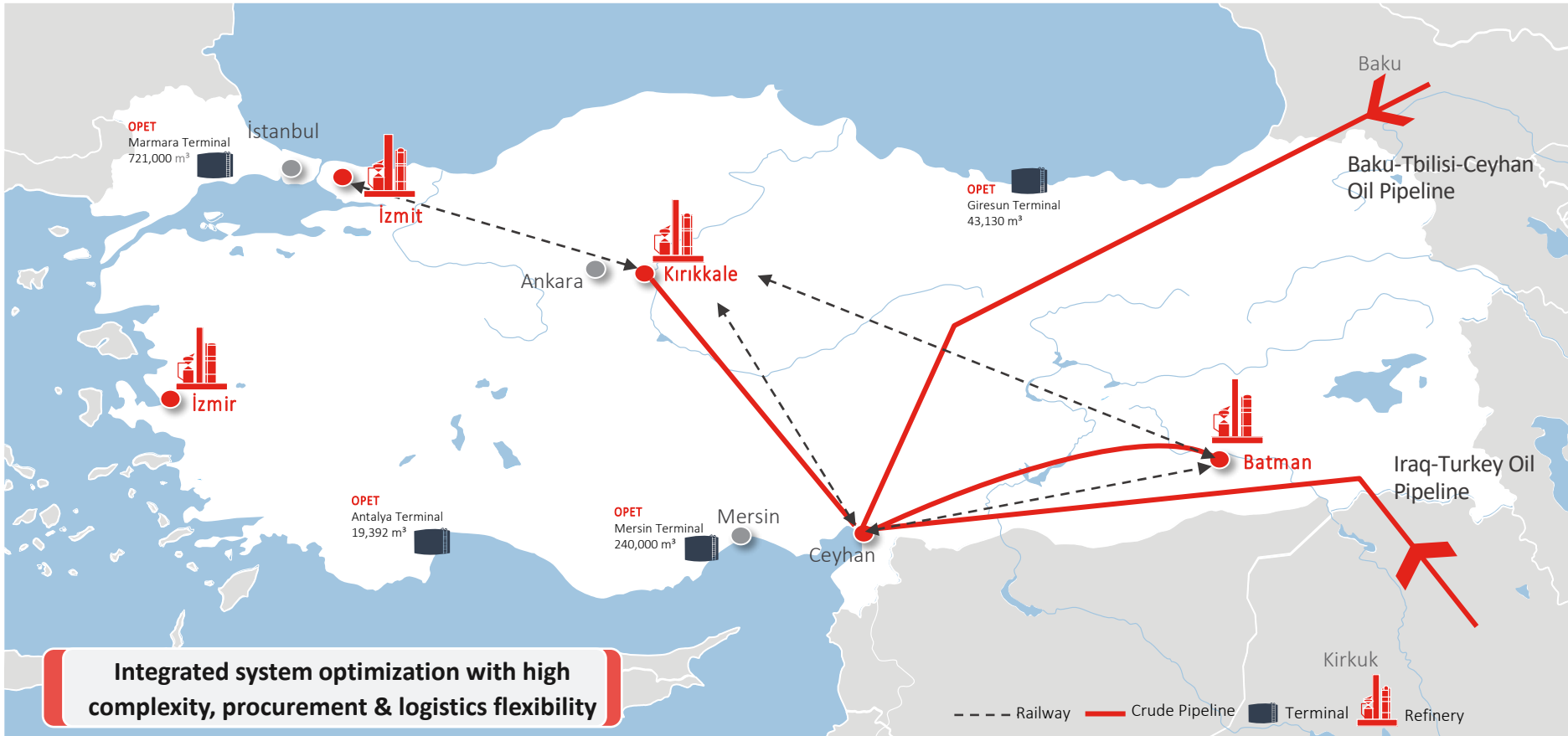
Tüpraş is Turkey's biggest industrial company and leading refiner.



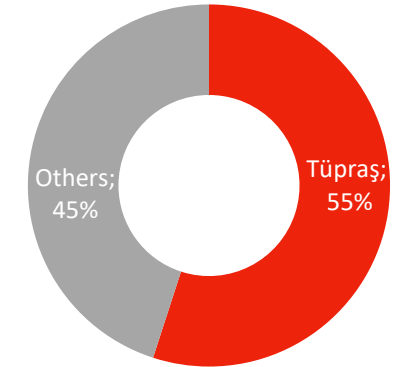
¹As of December 31st, 2021

Tüpraş' Refining Assets & Distribution Network

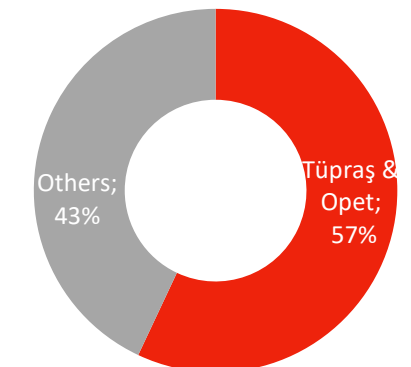
	İzmit	İzmir	Kırıkkale	Batman	Total
Capacity (mn tons)	11.3	11.9	5.4	1.4	30
Nelson Complexity	14.5	7.66	6.32	1.83	9.5
Storage Capacity (mn m ³)	3.0	2.5	1.3	0.3	7.0



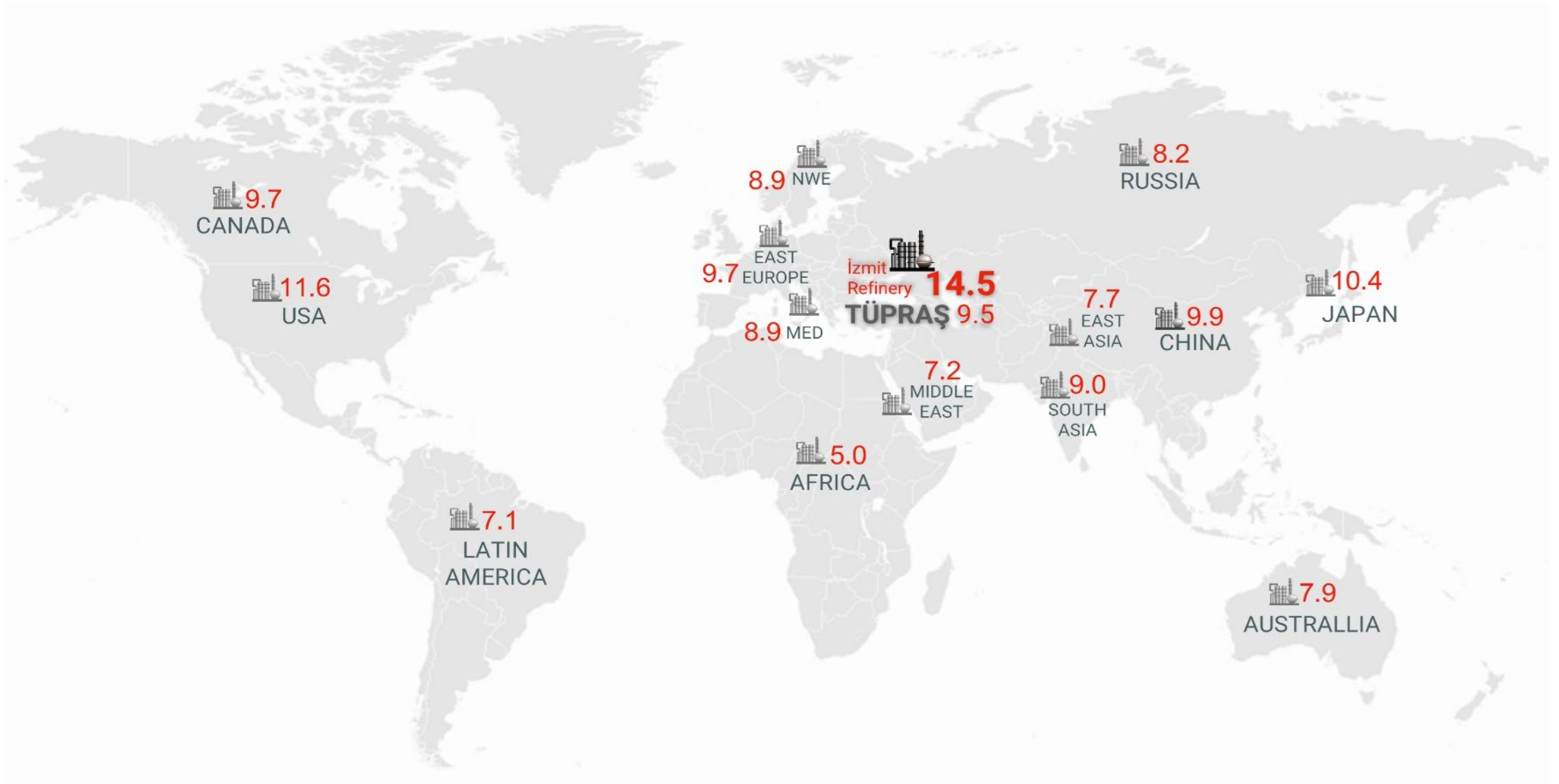
Turkey's petroleum product needs



Turkey's Storage Capacity



Nelson Complexity of Refining Companies



OPET - Distribution



Tüpraş Share: 40%

- 1,802 stations as of 31 December 2021
- As of December 2021 Market share: 17.8% in white products; 22.6% in black products

Tüpraş Trading UK - Trading



Tüpraş Share: 100%

- Over 7 million tons of product trade**
More than 3 million tons of spot crude oil connections
- Trading Office in London is important for wider integration with the global energy landscape by allowing to:
 - Closely monitor international market opportunities
 - Support import and export operations
 - Create additional value from supply chain and sales activities

DİTAŞ - Marine Transport



Tüpraş Share: 79.98%

- 2 Crude Oil Tanker: 314,906 DWT
- 1 Crude Oil - Product Tanker: 49,990 DWT
- 10 Product Tanker: 171,383 DWT

Körfez Ulaştırma - Railway Transport



Tüpraş Share: 100%

- ~7% share in Turkish rail freight market
- ~1.7 mn ton of product and semi-product carried in 2021
- Operates with 12 locomotives (7 of them are hybrid) and 555 cistern wagons

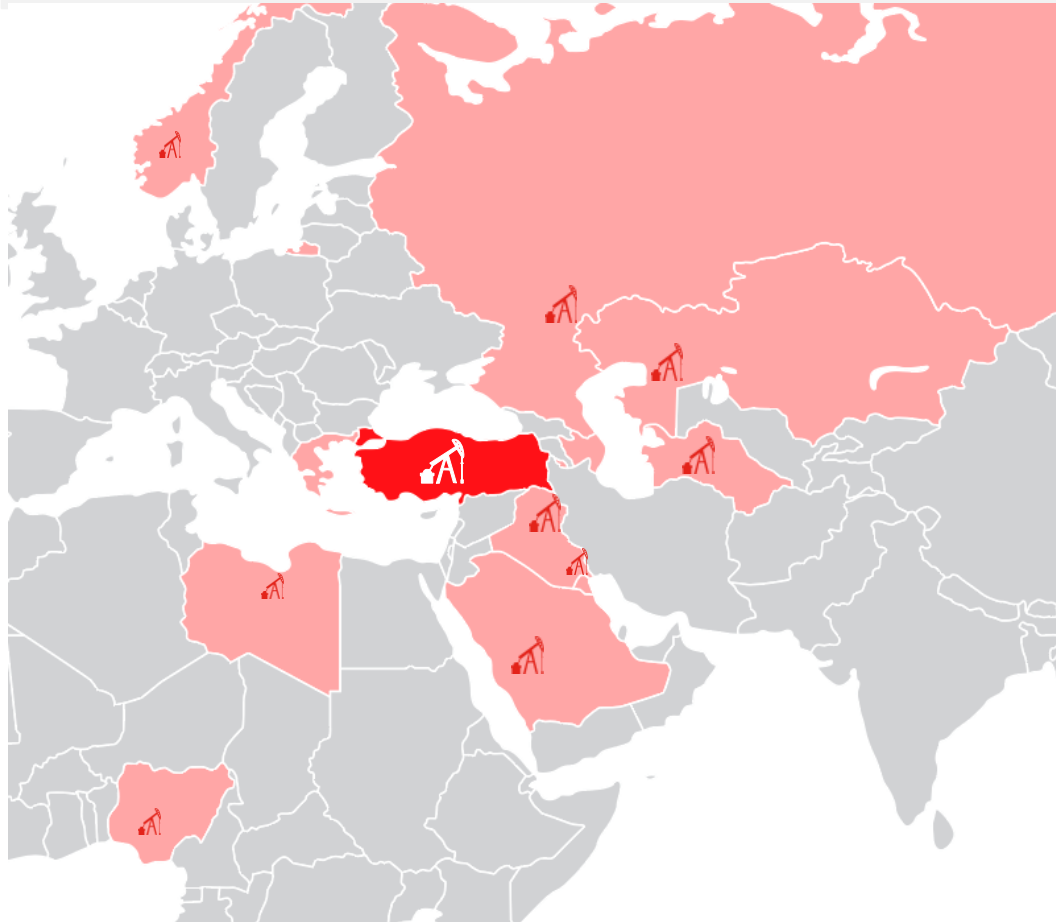


Operations

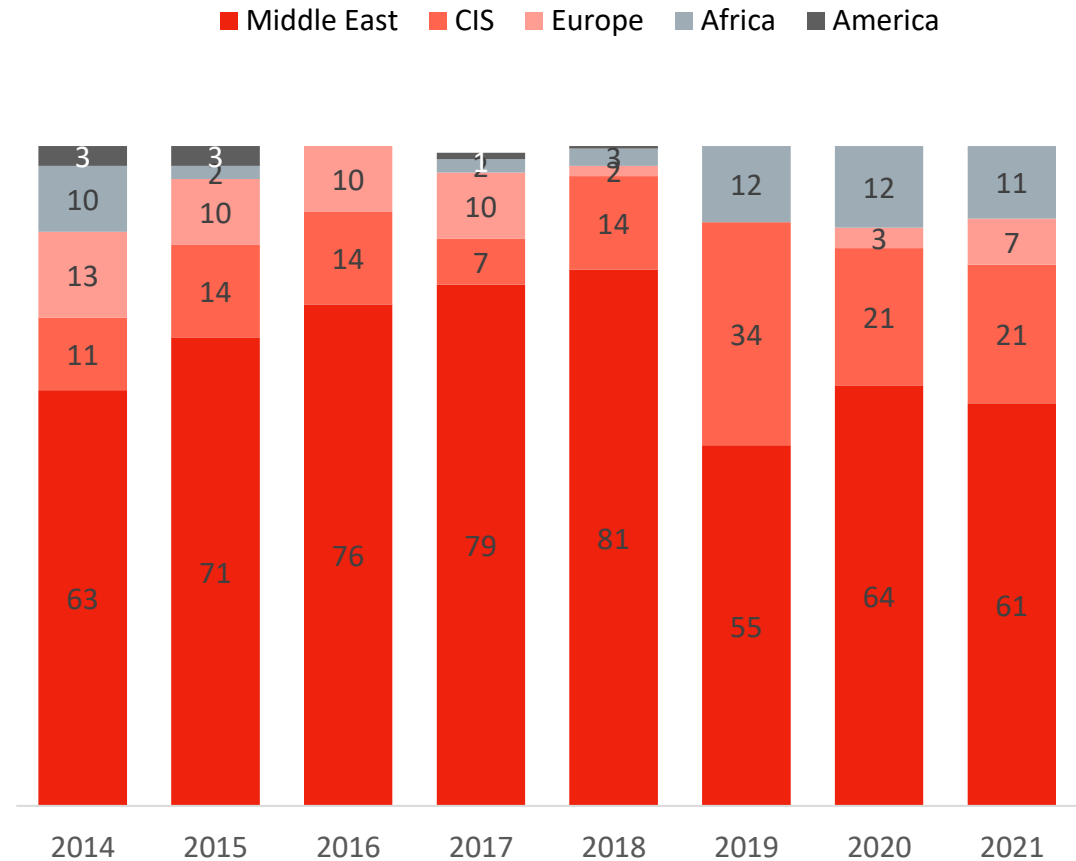
Crude Suppliers of Tüpraş

In 2021, Tüpraş purchased 21 different types of crude from 11 countries with gravities ranging between 20-47 API.

Main Crude Suppliers in 2021

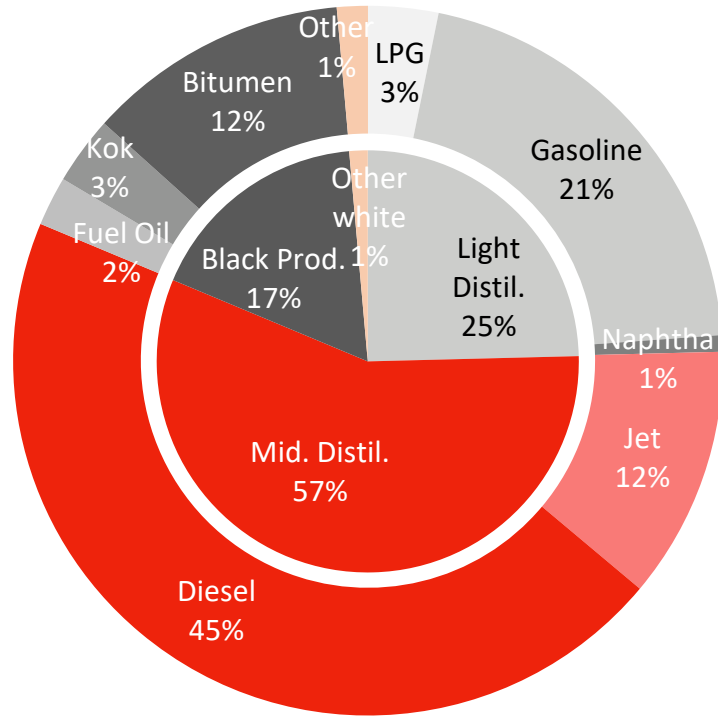


Crude Oil Imports by Region (%)



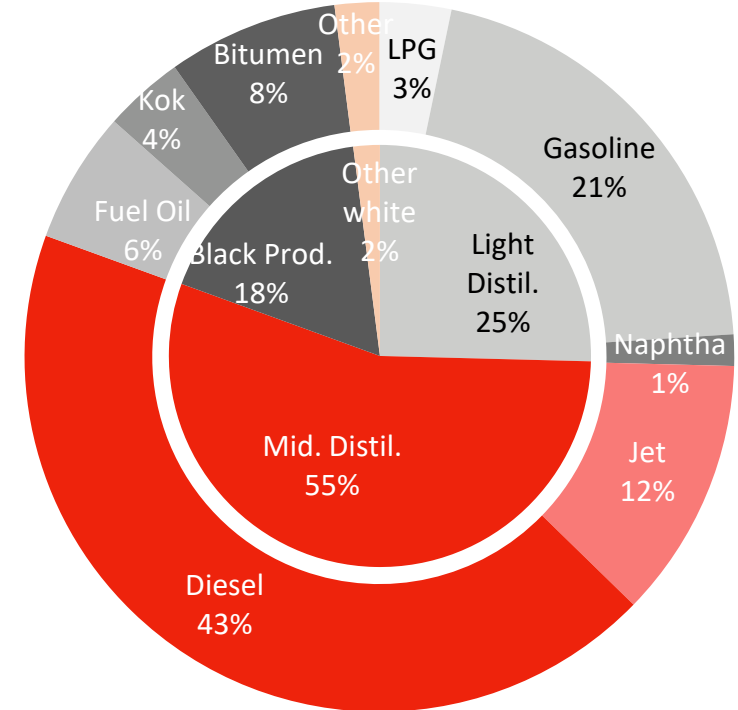
Annual Product Yields

2020



White Product Yield (%)	81.5%
Production	23.4 mn tons
API	31.5

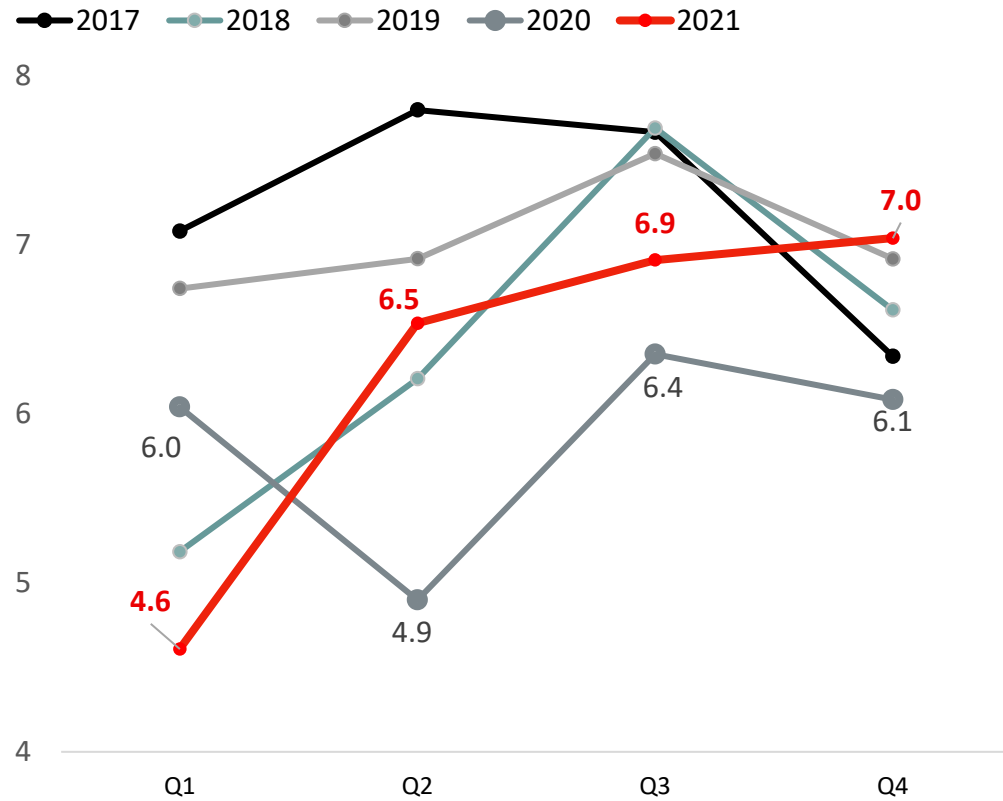
2021



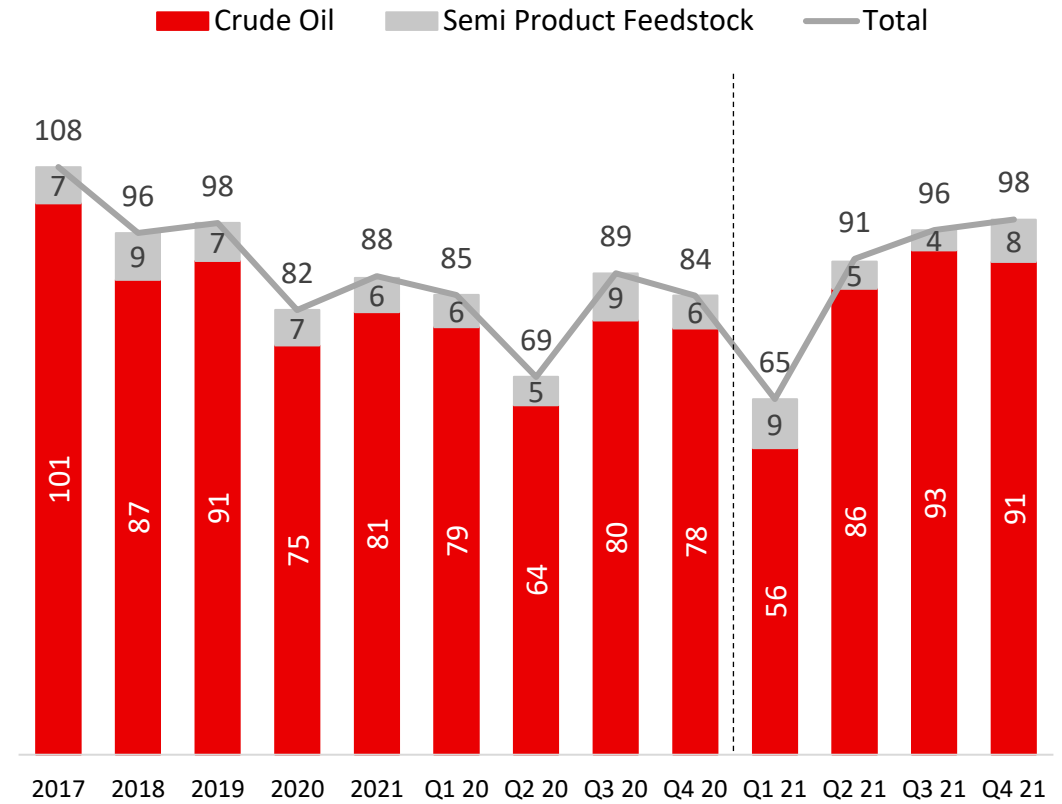
White Product Yield (%)	81.4%
Production	25.1 mn tons
API	31.2

Capacity Utilization and Quarterly Production Volume

Quarterly Production (Million Tons)



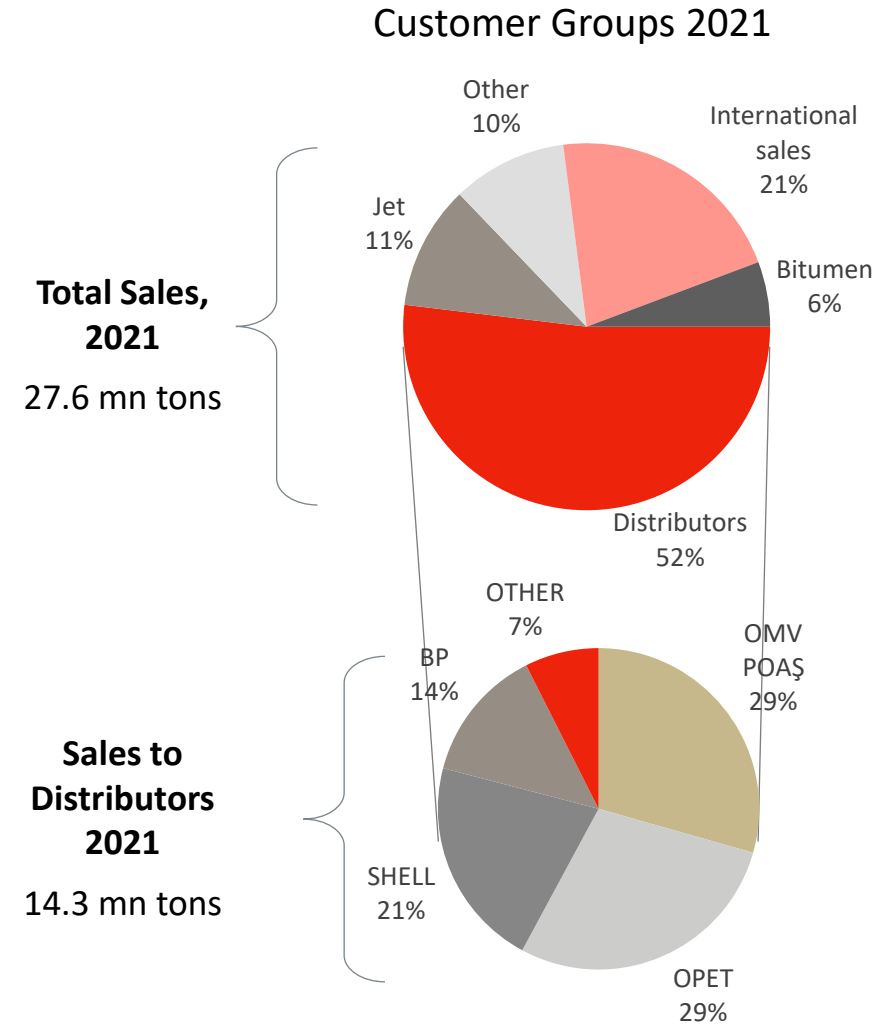
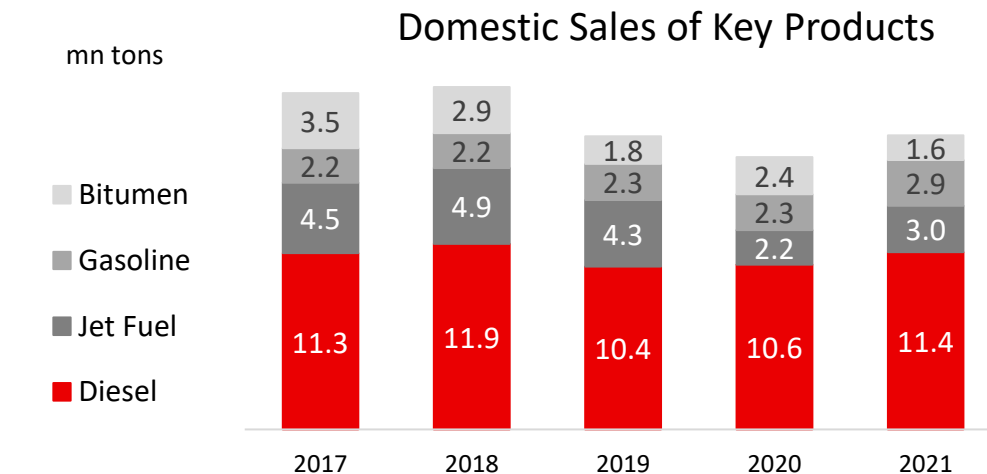
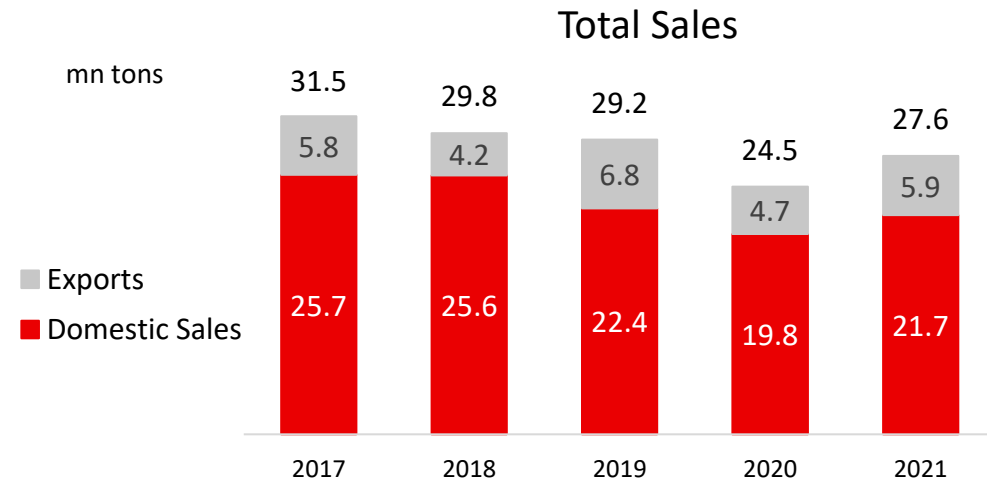
Capacity Utilization (%)



*Capacity utilization calculation is based on 30 mn tons for Q1 2019 and onwards.

Sales

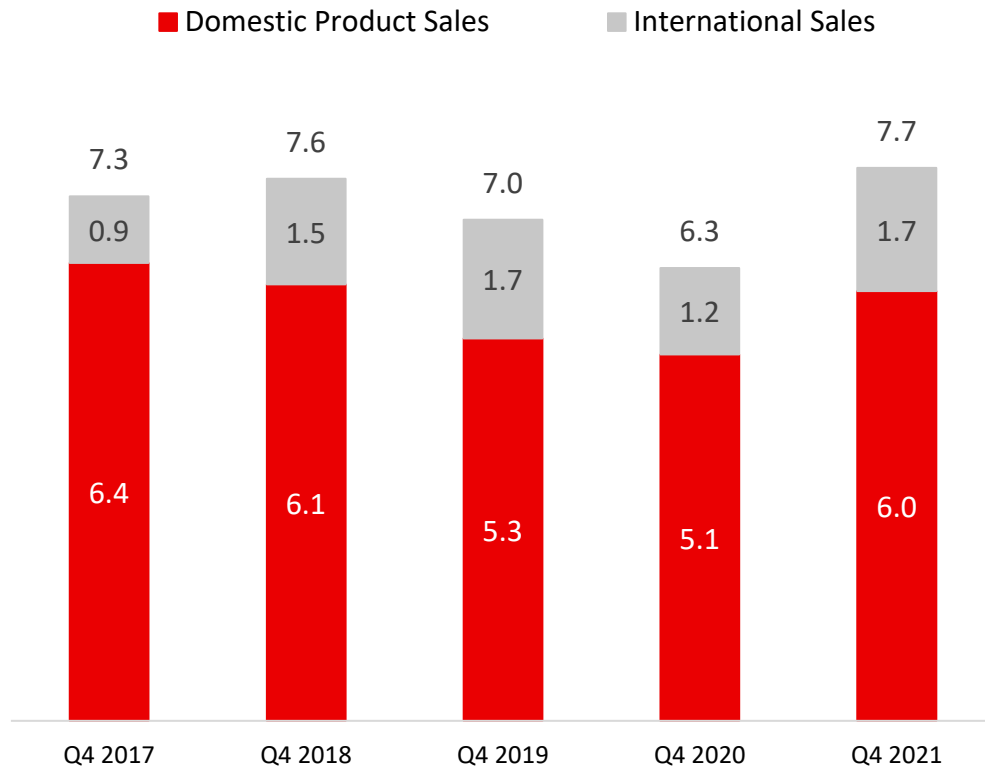
- Tüpraş generated 27.6 million tons of total sales in 2021.



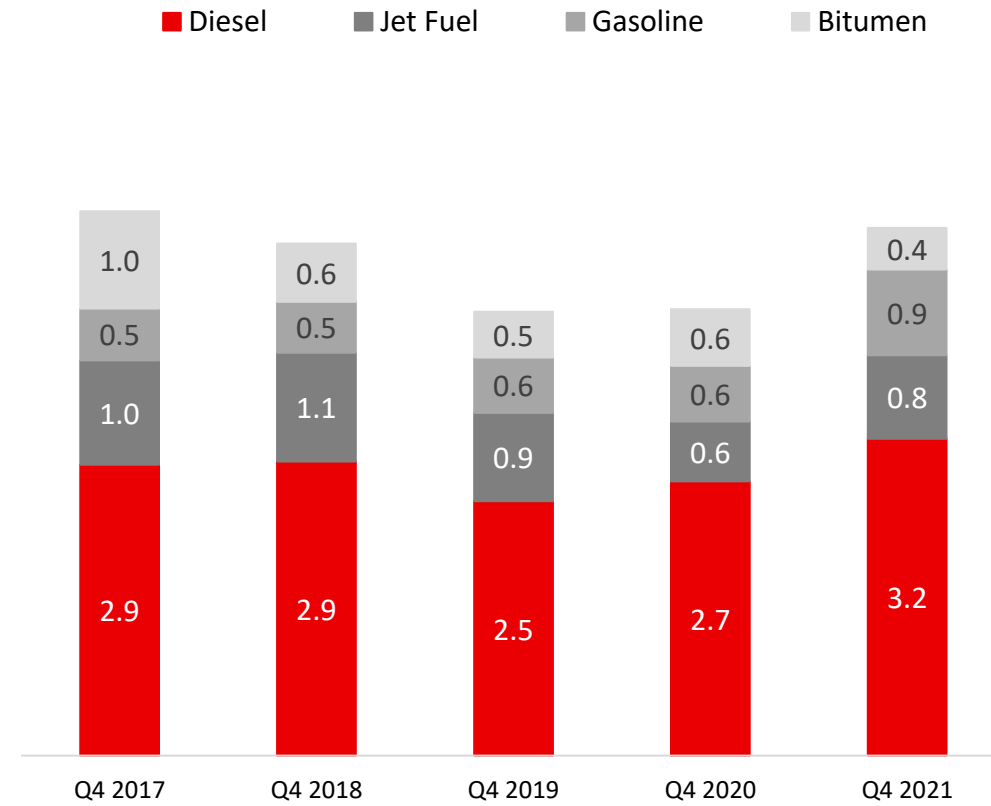
Product Sales in Q4 (Million Tons)

- Tüpraş generated 7.7 million tons of sales in Q4 2021, the highest fourth quarter figure since Q4'2015.
- Gasoline, jet fuel and diesel sales were strong with improved domestic demand.

Total Product Sales



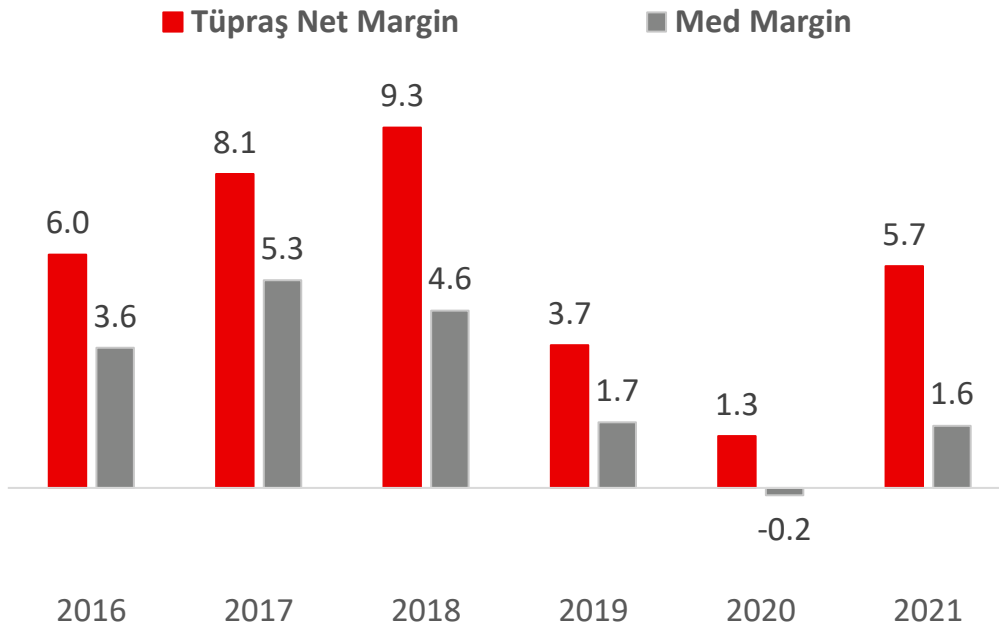
Domestic Sales of Selected Products





Financials

Tüpraş and Med Refining Margins



(\$/bbl)	Gross Margin	Inventory Effect	Clean Gross Margin	Clean NET Margin	Net Margin	Med Margin
Q4 2021	14.0	3.7	10.4	5.5	9.1	3.6
2021	10.5	2.1	8.4	3.6	5.7	1.6
Q4 2020	5.6	0.7	4.8	-0.1	0.7	-0.1
2020	6.4	0.0	6.4	1.2	1.3	-0.2
2022G					4 - 5	2 - 3

Premium to the benchmark Mediterranean peers' refining margin due to:

- Ability to use heavier and sour crudes with higher complexity
- Access to a wide range of cheaper sources of crude oil
- Close proximity to major suppliers reduces transport costs
- Lower cost basis and more efficient energy usage
- Ability to produce a broad range of refined products with higher value added
- Direct pipeline connections with domestic clients

Income Statement (Million TL)

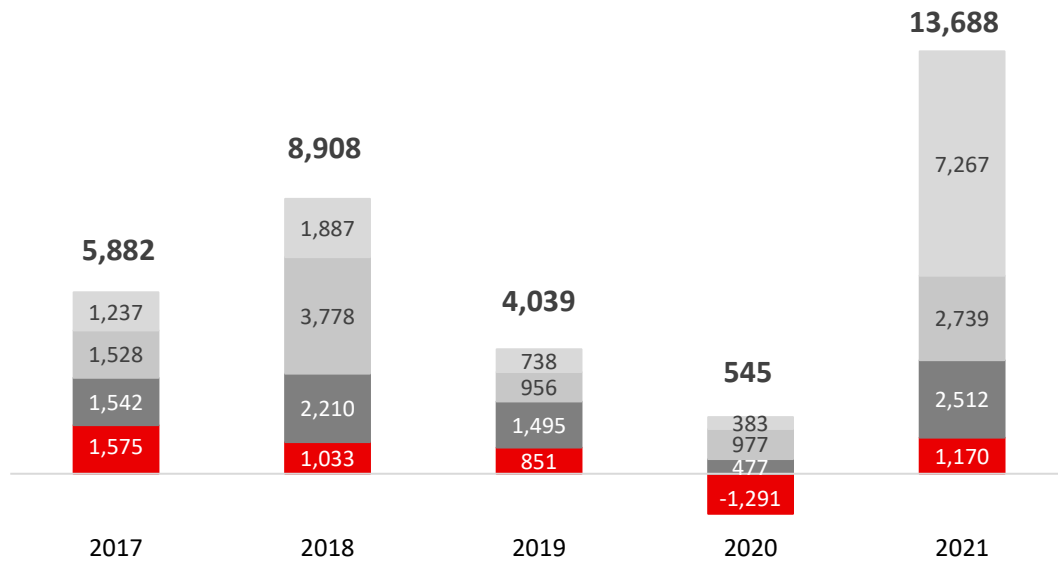
Million TL	Q4 2021	Q4 2020	%	12M 2021	12M 2020	%
Net Sales	56,470	19,990	182%	150,972	63,244	139%
COGS	-48,569	-19,396	-150%	-135,521	-61,480	-120%
Gross Profit	7,902	593	1231%	15,451	1,764	776%
Operating Expenses	-1,212	-535	-126%	-3,242	-2,012	-61%
Income/Loss from other operations	-9,735	562	-	-11,744	-371	-3065%
Operating Profit	-3,045	620	-	465	-619	-
Inc./Loss from Eq. Pick ups & Inv. activities	395	120	230%	701	-28	-
Operating Profit Before Fin. Income/Loss	-2,650	739	-	1,166	-647	-
Financial Income /Expense	3,319	-852	-	996	-3,149	-
Profit Before Tax	669	-113	-	2,161	-3,795	-
Net Profit (excluding minority interest)	1,392	376	270%	3,319	-2,494	-
EBITDA *(mn. TL)	7,267	383	1798%	13,688	545	2410%
Inventory Gain/Loss (mn. TL)	5,223	127	4005%	8,659	-457	-
EBITDA* (mn. TL) CCS	2,044	256	700%	5,029	1,003	402%

Key Highlights of Income Statement

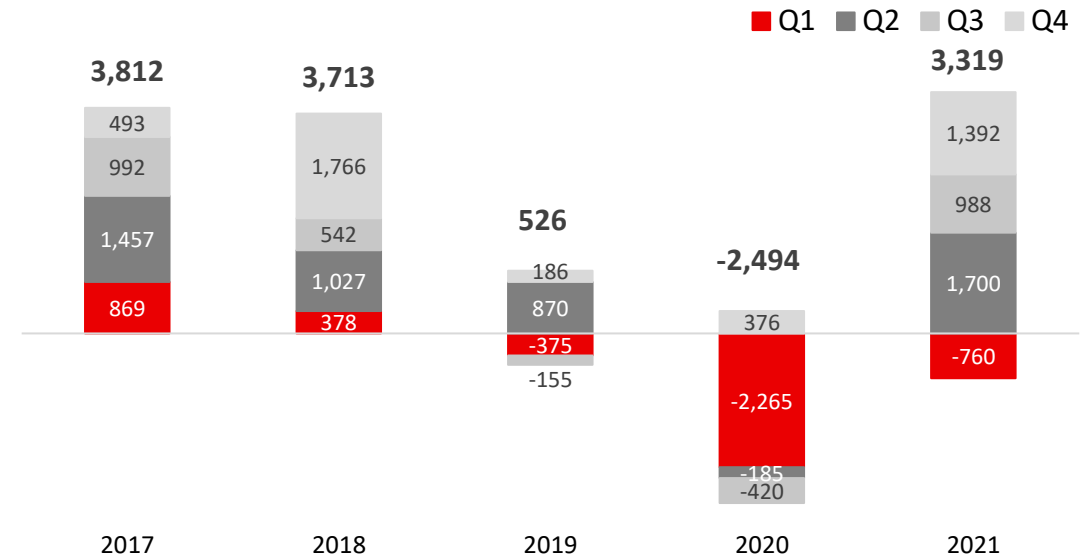
- Y-o-y increase in Opex is mainly driven with higher logistics expenses due to higher production amount in Q4'21, as well as TL depreciation.
- We have recorded 108 MTL income from Ditas' tanker sale in Q4'21.
- Opet's contribution to net income was 287 MTL, recorded under income from equity-pickup.
- Income loss from other operations and Financial Income/Expense should be considered together to calculate the actual FX impact on our P&L.
- Consolidated FX Loss is largely offset by inventory gains in Q4'21.

Financial Highlights

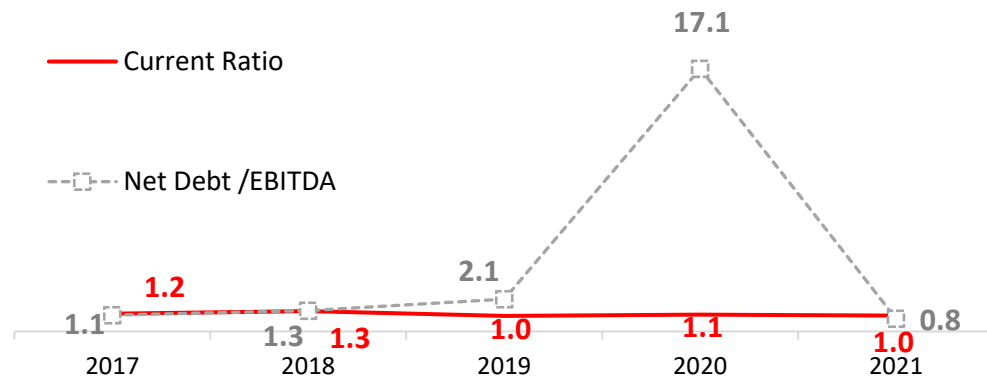
EBITDA (mn TL) ■ Q1 ■ Q2 ■ Q3 ■ Q4



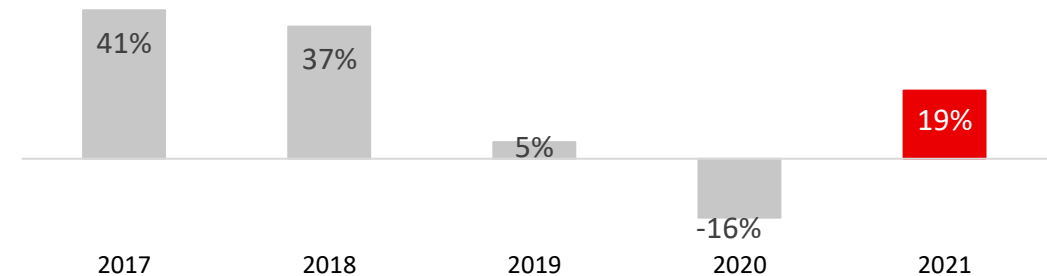
Net Income¹ (mn TL) ■ Q1 ■ Q2 ■ Q3 ■ Q4



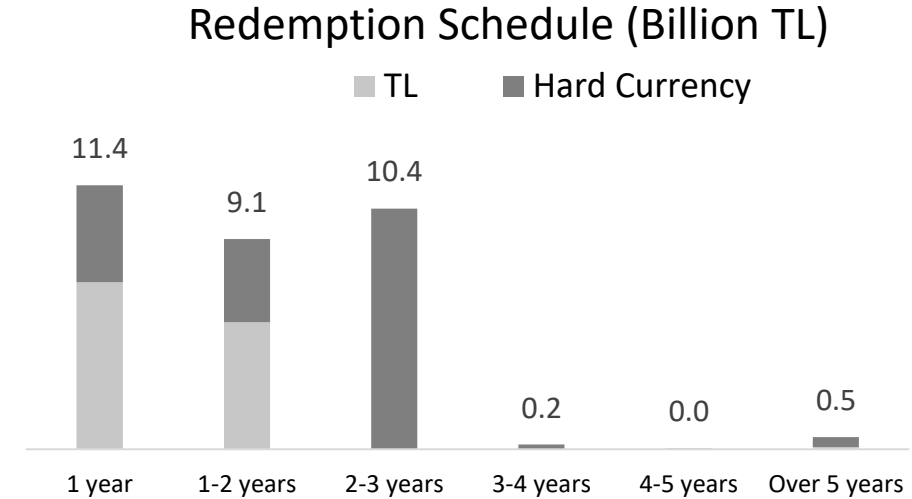
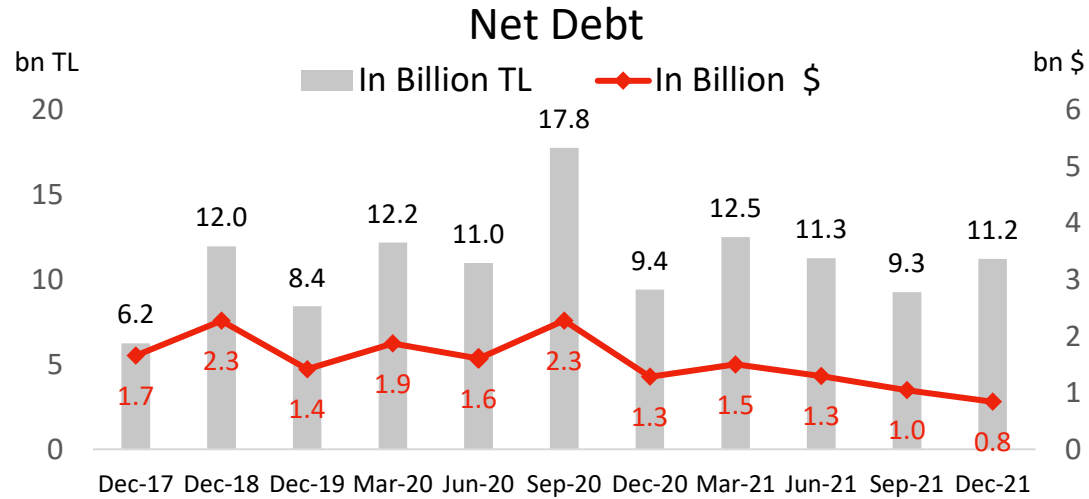
Current Ratio & Net Debt / EBITDA



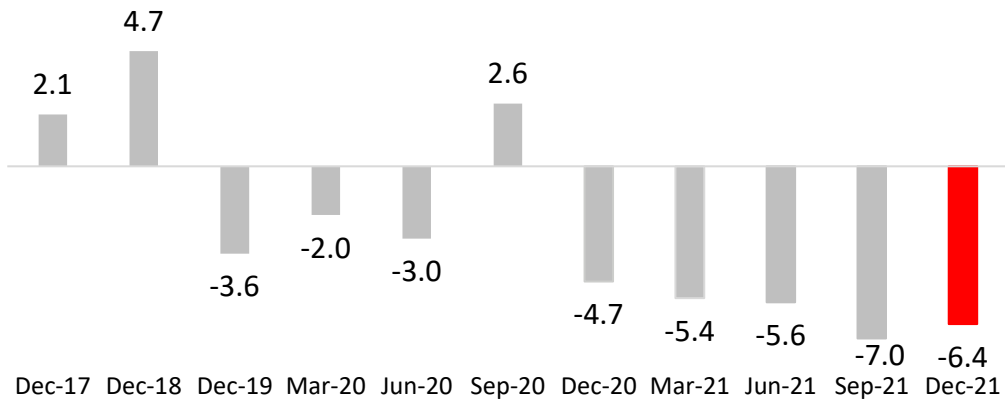
Return on Average Equity (%)



Balance Sheet Analysis



Working Capital Requirement (Billion TL)



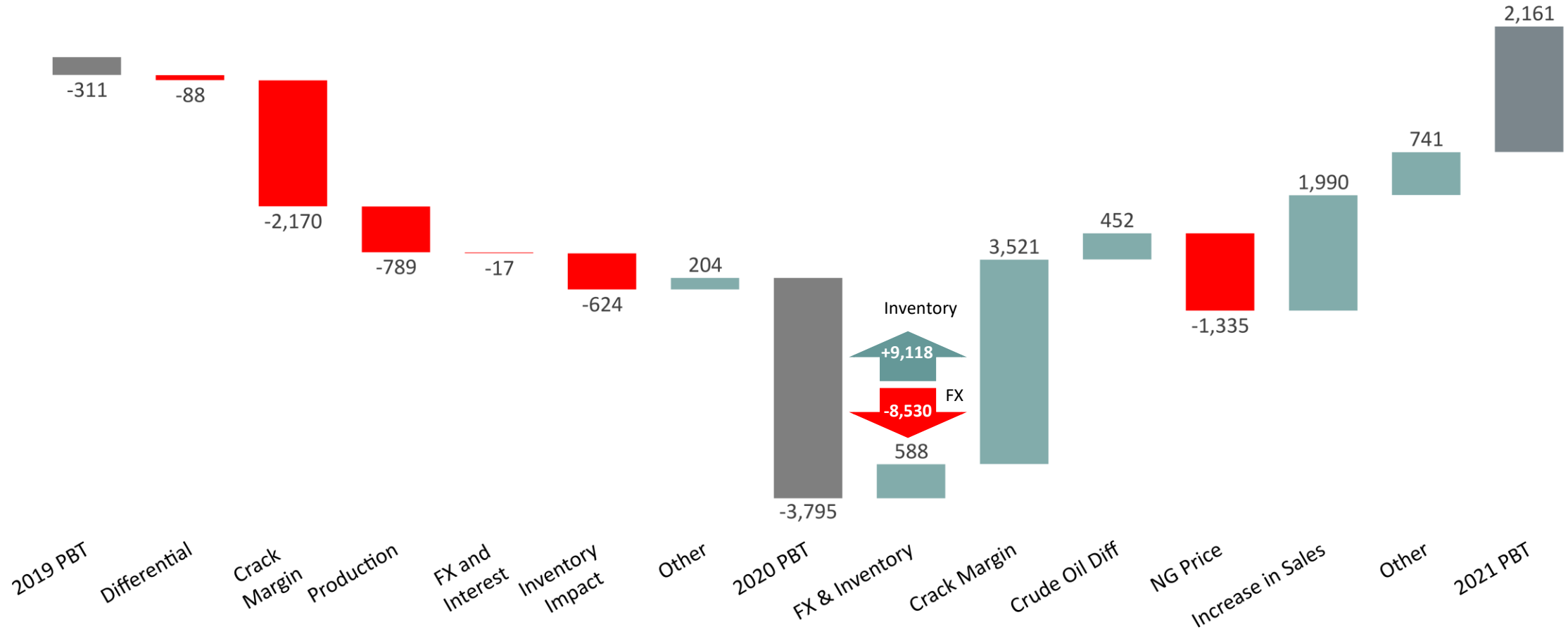
Financial Management

- Ongoing strict working capital management continues to lower funding needs
- Improved operational profit generation further helps deleveraging

Annual Profit Before Tax Bridge (2019-2021)

PBT performance was strong in 2021 with better operational performance and lower interest expenses as net FX impact mostly matched with inventory gains

Million TL



2022 Expectations

Med Complex Refining Margin 2-3 \$/bbl

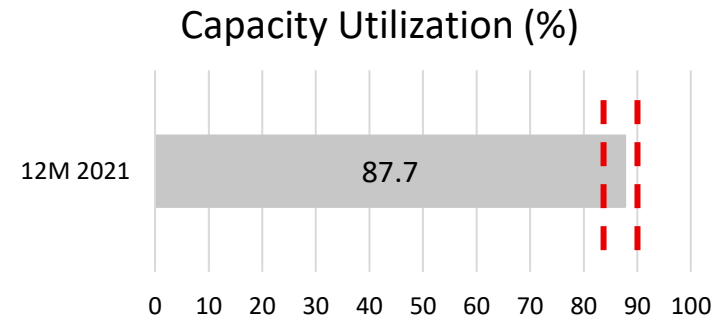
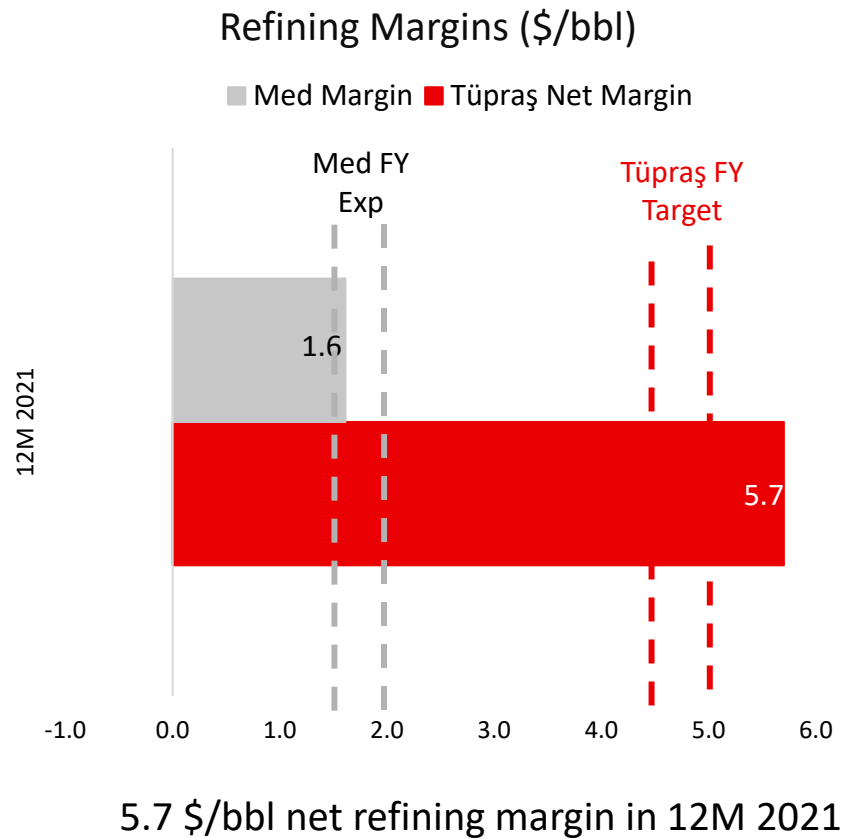
Tüpraş Net Refining Margin 4-5 \$/bbl

- 26-27 mt production, 28-29 mt sales and 90 - 95% capacity utilization

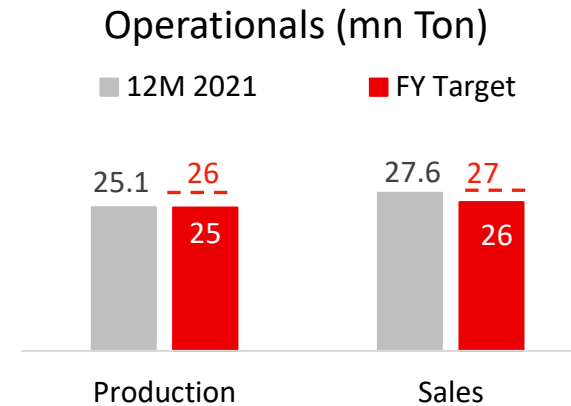
Consolidated Capex ~300 million \$

- ~45% of capex for sustainability focused energy efficiency and environmental projects
- ~80 mn USD of capex is for logistics investments

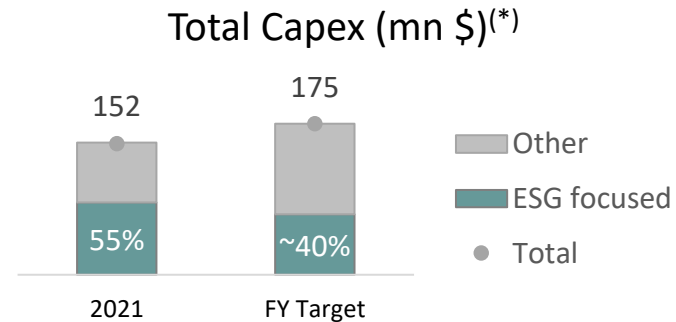
12M 2021 Results



88% total capacity utilization in 12M 2021



27.6 mn tons of sales and 25.1 mn tons of production in 12M 2021



152 mn \$ total CAPEX in 2021, with 55% spent on ESG related investments

Investments (Million \$)

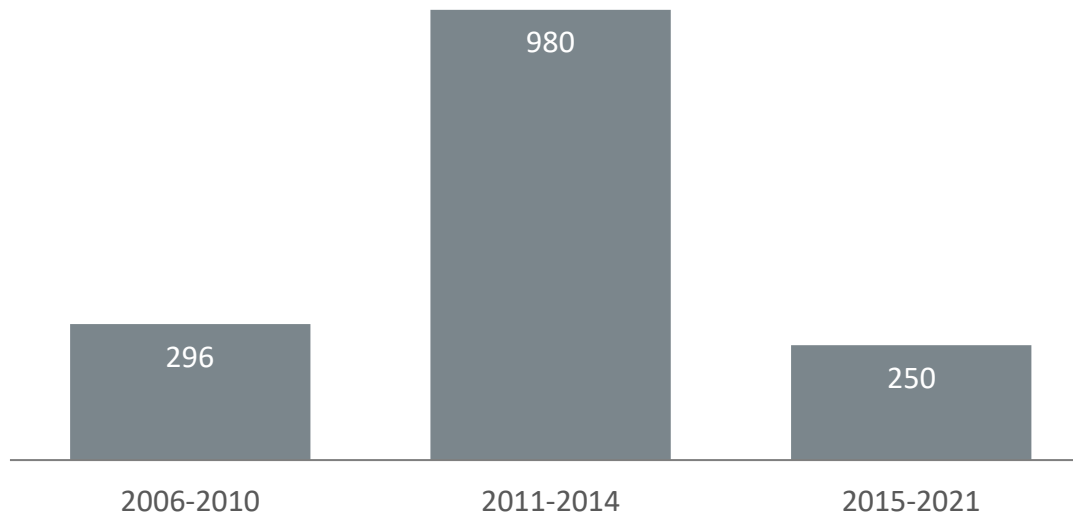
Achievements & Ongoing Projects

- c6.9 bn USD investments since privatization
- Reached 9.5 Nelson Complexity
- Capability to process heavier and more sour crude
- 20 pps improvement in Energy Intensity since 2008
- 25% decrease in water consumption per crude oil processed since 2008
- Revamp of FCC, Periodic Maintenance of Vacuum & Lube Complex in Izmir in 2022

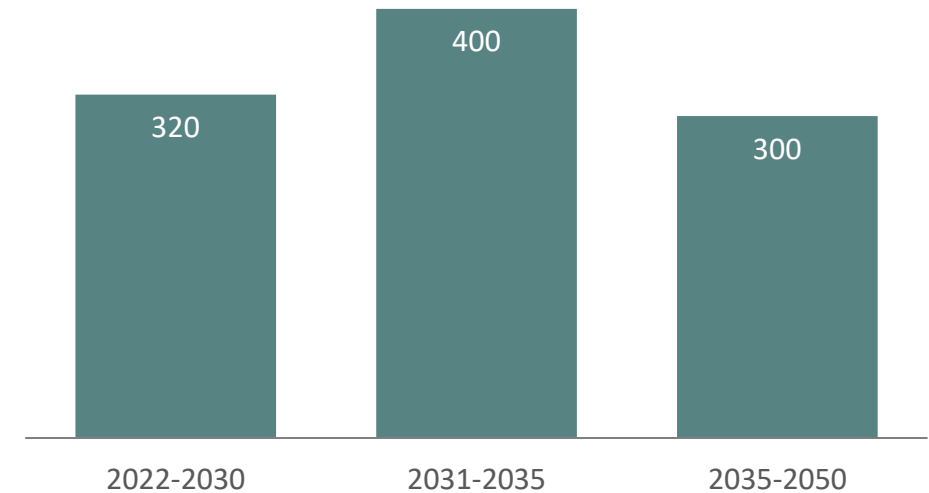
Strategic Transition - Investment Program

- 27% CO₂ emission reduction by 2030 (scope1+2), 100% reduction by 2050
- Investment in **Zero Carbon Electricity** to mainly produce green hydrogen (reaching 2.5GW capacity by 2035)
- Reaching 1GW electrolyzer capacity to **produce green hydrogen** by 2035
- Installing 400 kton/year **biofuel (mainly SAF)** production capacity by 2030 as a best alternative fuel for aviation

Avg. 460 Mn\$



Avg. 350 Mn\$



*Average Investment Amounts – Mn\$

Financial Policy

Financial Discipline: Risk management policies focusing on areas such as leverage, liquidity, counterparty risk, commodity, interest rate and currency exposure.

Leverage & Liquidity

Proactive in liquidity risk management & targets/limits for financial ratios:

- Net financial debt/EBITDA
- Net financial debt/Equity
- Current ratio
- Share of long-term debt

Counterparty Risk Policy

Deposit is kept within bank-based limits:

- Credit rating assessment and strong capital base.
- Cap on the maximum deposit allocated to a single bank.
- Threshold for deposits subject to banks shareholders' equity.

Interest Rate & Fx

- The fixed/floating profile of financial debt.
- Proactive management of FX risk with derivative instruments
- Zero FX exposure target.

Commodity Hedging Policy

Inventory Hedging Policy:

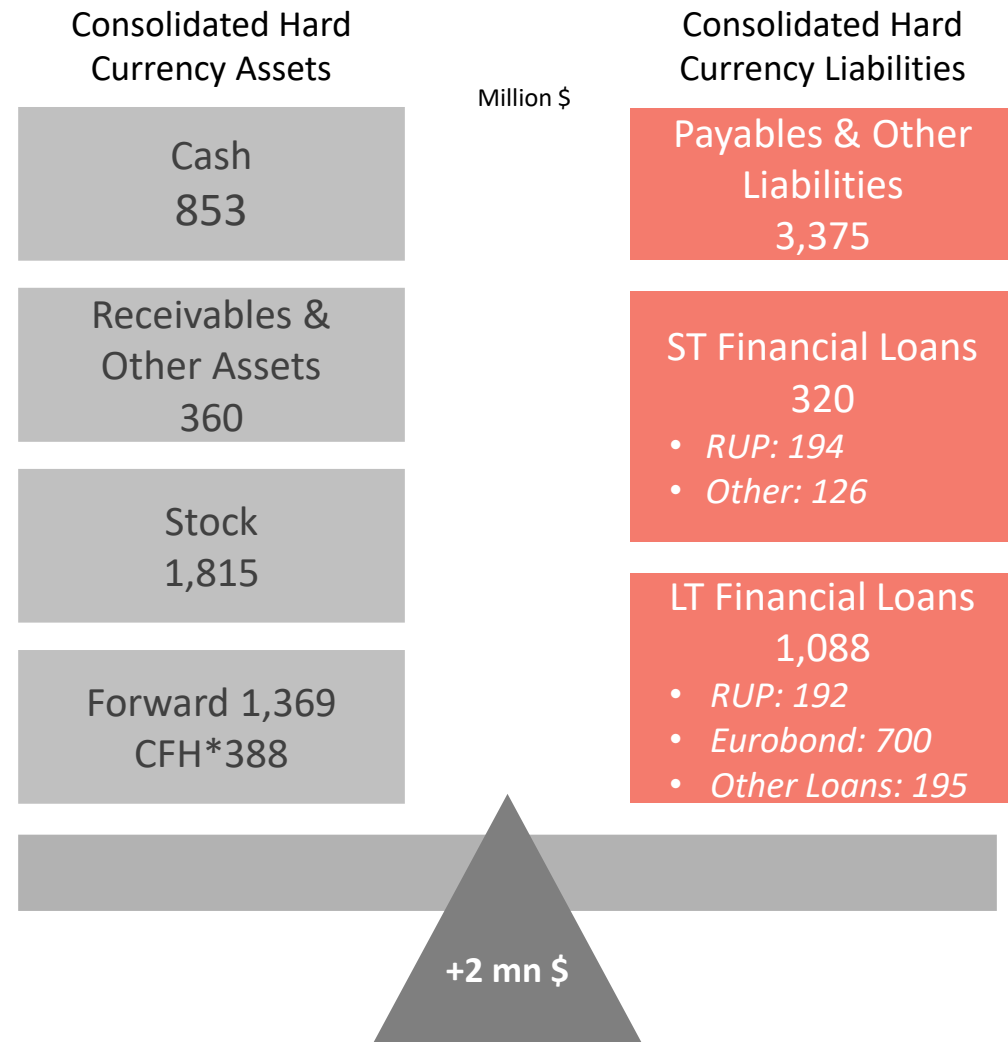
- Operational hedge: Optimum stock policy & forward pricing mechanism.
- Financial hedge: Expected inventory exposure for the year end is hedged by using derivatives.
- Hedging ratio increasing throughout the year.

Crack Margin Hedging Policy:

- Financial hedge: Crack margin (gasoline, diesel, jet fuel, fuel oil) risk mitigation by using derivatives.
- Hedge ratio between %0-%50 with up to 1 year hedge tenor

FX Exposure Management (31 December 2021)

Tüpraş continues to employ strict FX policies to mitigate currency risks stemming from volatility.



*Cash Flow Hedge



Strategy

Strategic Transition Plan – Investment Areas



SUSTAINABLE REFINING

Energy Efficiency and Decarbonization Projects

- Remain as a **Major EBITDA Contributor**
- **Improve energy efficiency** to drive up profitability
- **Diversify product portfolio** through lighter chemicals
- Within **2022-2035**;
 - **~2.3 bn USD capex, ~13 bn USD Cumulative EBITDA**



ZERO CARBON ELECTRICITY

Integrating Zero Carbon Electricity to produce Green H₂

- Ensure affordable **green H₂ production, capturing electrification demand**
- **Primarily supply zero carbon electricity for H₂ production, remaining portion to be sold**
- Within **2022-2035**;
 - **~1.3 bn USD capex , ~400 MUSD Cumulative EBITDA**



BIOFUELS

Becoming the Lead SAF Supplier in Turkey

- Capture changing market for **liquid fuels**, ensure **long term profitability in aviation sector**.
- **Conversion of existing unit** in İzmir to produce **Sustainable Aviation Fuel (SAF)**
- Within **2022-2035**;
 - **~600 MUSD capex, ~1.1 bn USD Cumulative EBITDA**



GREEN HYDROGEN

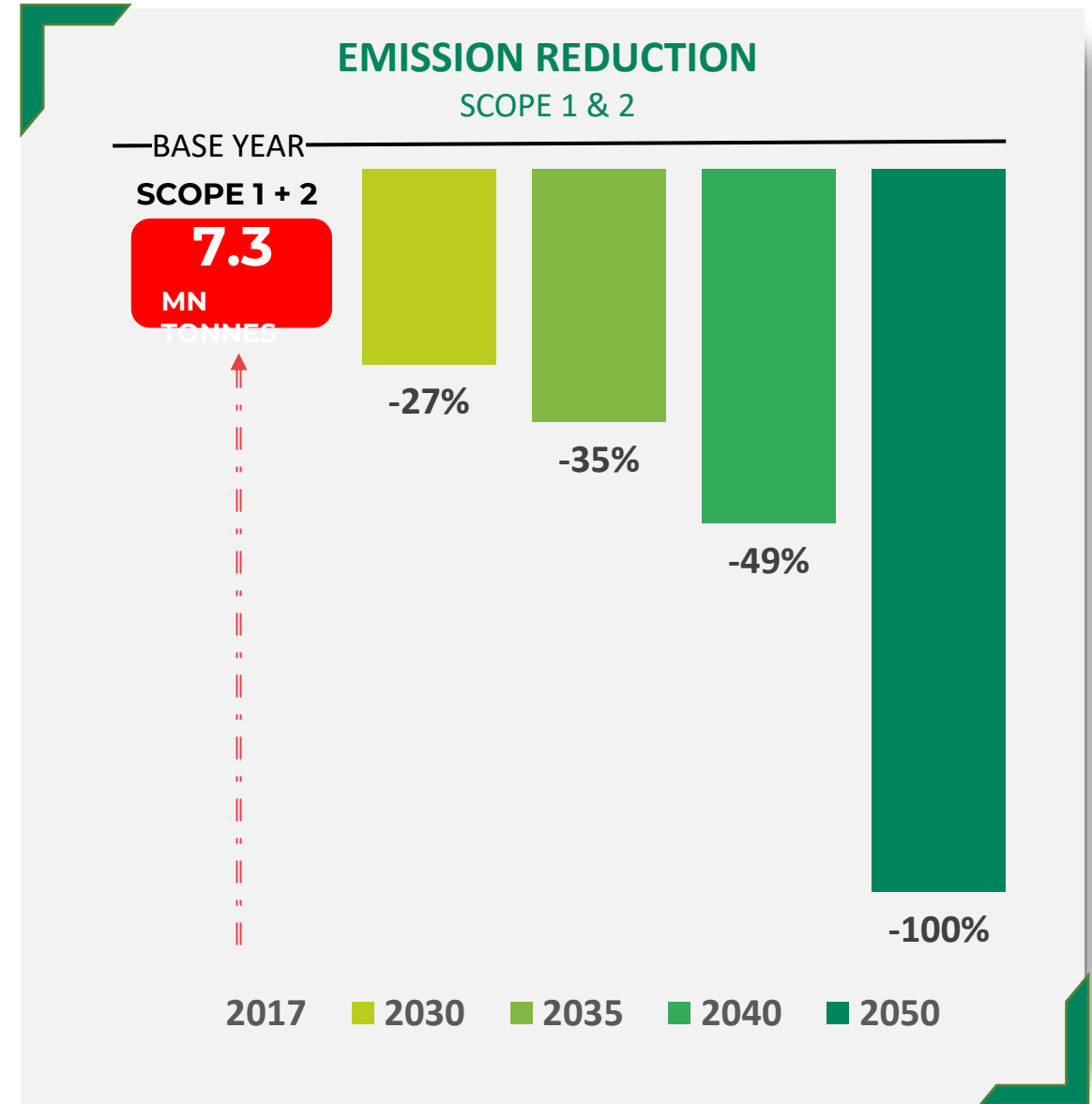
Reducing Refining Emissions

- Capture changing market for **land transportation, reduce refining emissions**.
- **Reduce Scope 1-2 emissions** of refineries. Followed by **H₂ sales**, starting from 2030.
- Within **2022-2035**;
 - **~690 MUSD capex, ~640 MUSD Cumulative EBITDA**

Strategic Transition Plan – Emission Reduction



We will invest in energy efficiency & decarbonization Projects, green hydrogen & zero carbon electricity usage in refining to reduce scope 1 & 2 emissions



Strategic Transition Plan - Financials

We are
sustainable
and
profitable.

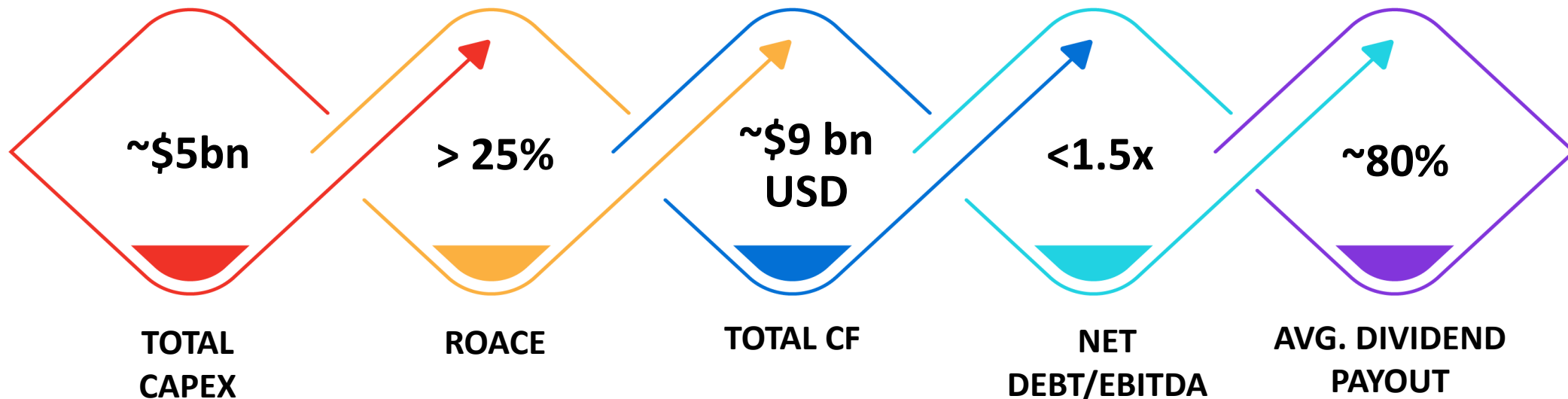
Will **eliminate our scope 1 & 2 emissions by 2050** while executing our plan and achieving these results.

\$350mn average CAPEX until 2035, totaling **\$5 bn.**

ROACE will remain above 25% creating **~ \$9bn total CF** until 2035

With ample CF, **Net Debt / EBITDA** will be below **<2.0x**

Will remain a **high dividend payer**, average **~80% dividend pay-out**



Strategic Transition Plan – Latest Updates

SUSTAINABLE REFINING

Value Added Products

- Signed basic engineering design agreement for alkylation project in Izmir Refinery.
- Finalizing basic engineering design for polymer-grade propylene production in Izmir & Izmit Refinery

Energy Efficiency

- Energy Intensity decreased from 99.1 to 93.5 y-o-y in 2021.



SUSTAINABLE AVIATION FUEL

Feedstock & Basic Engineering

- In talks with feedstock suppliers for potential collaboration.
- Identifying bio-feedstock alternatives.
- Finalizing basic engineering design agreement with selected licensor for 400kton bioprocessing facility.



ZERO CARBON ELECTRICITY



Solar PV & Wind Power

- Applications for license amendment has been made in our Izmir, Kirikkale and Batman refineries.
- Following our PV installation in Batman in 2021, we are planning to initiate installation of Solar PVs in Kirikkale, Izmir and Izmit in 2022

GREEN HYDROGEN

Test site & Equipment

- Test site selection for 20 MW electrolyzer for Green H2 projects.
- In contact with main manufacturers for the configuration and equipment selection.

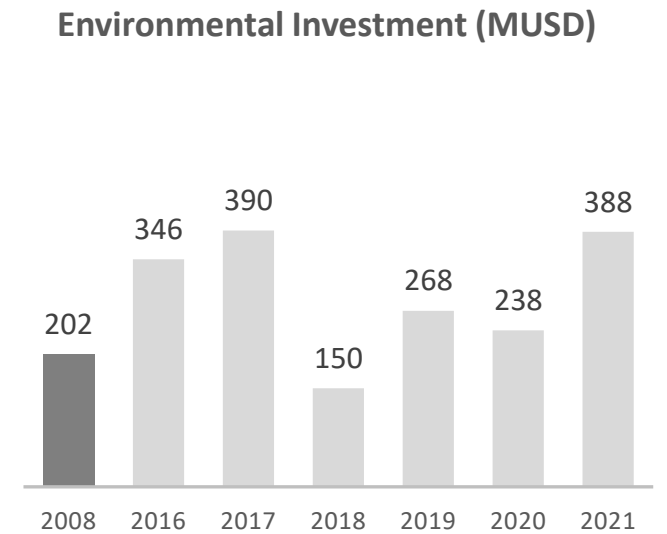
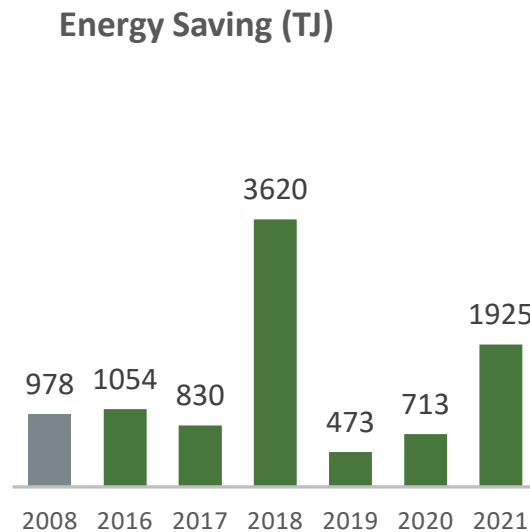
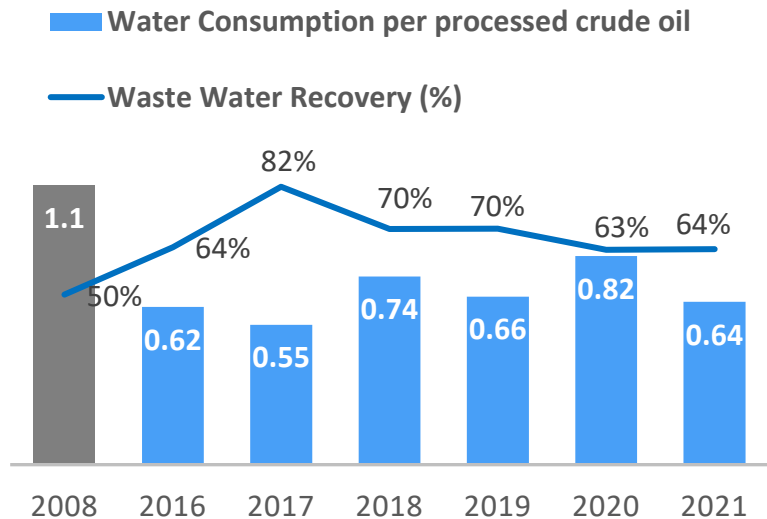
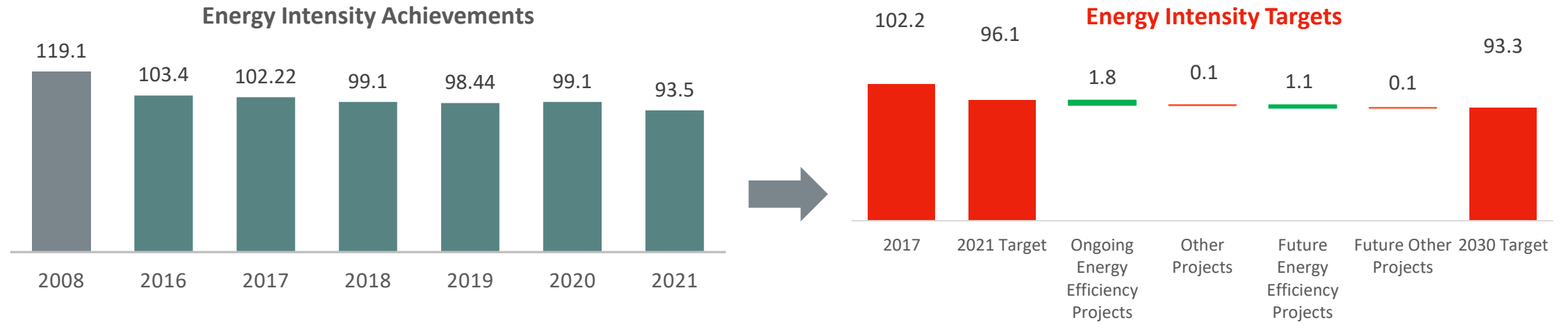




ESG

Tüpraş's Environmental Highlights

Sustainability program was kicked off back in 2008 and achieved many milestones



Tüpraş's Social & Governance Highlights

Strong Policies have been effectively implemented for years



Corporate Governance Rating **9.58**

Board of Directors' Composition

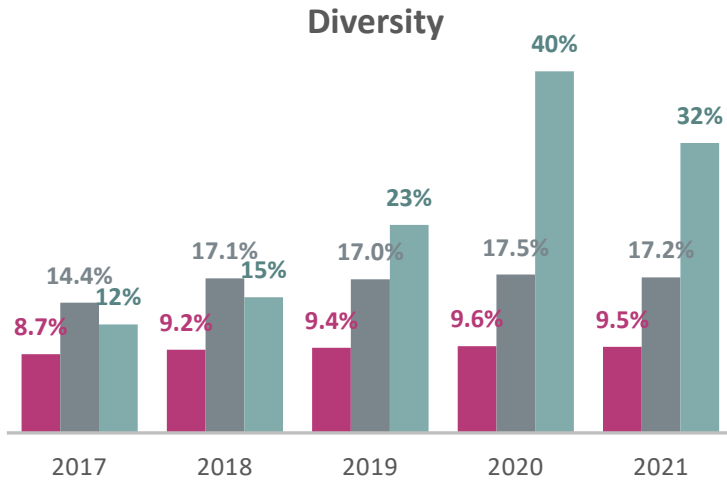
12 members
One-third of the members are **independent**

Committees under BoD

- Corporate Governance
- Risk Management
- Audit
- Executive
- Ethics

Health & Safety and Diversity are the Key Priorities

- Female Share in Total Employees
- Female Representation in Senior and Mid-Level Management
- Female Share in Recruitment



Targets

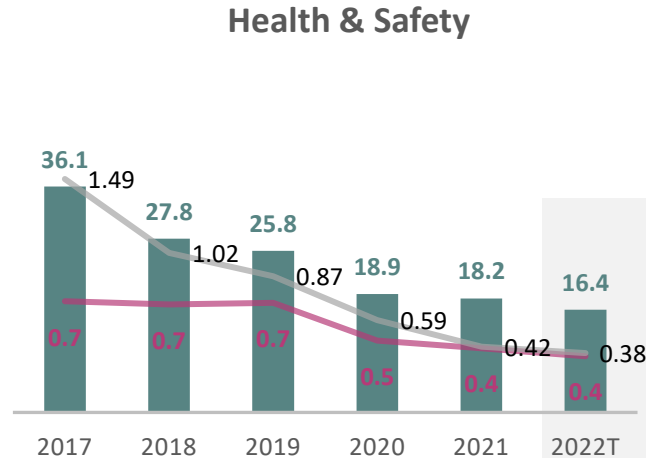
Female Representation in the Board of Directors in the next five years

25%

Targeted Rate of Women in New Recruitments

50%

- LTI Severity
- LTI Frequency
- Process Safety Event Frequencies



Targets	2024-2025	2030
Process Safety Event Freq.	0.30	0.25
LTI Frequency	0.30	0.15
LTI Severity	10.0	5.0

Tüpraş is taking place in these sustainability indices



FTSE4Good



A photograph of an industrial worker in a dark uniform, white hard hat, and green safety glasses. The worker is wearing yellow gloves and is operating a large, circular metal valve. The valve is part of a large industrial machine with a ribbed, cylindrical body. In the background, another worker in a dark uniform with reflective yellow stripes is visible, but they are out of focus. The scene is set in an industrial environment with various pipes and machinery.

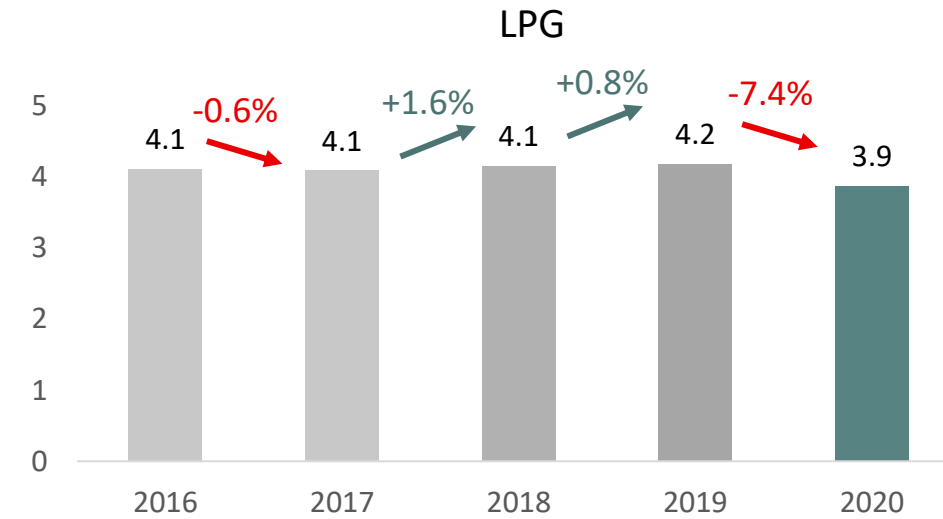
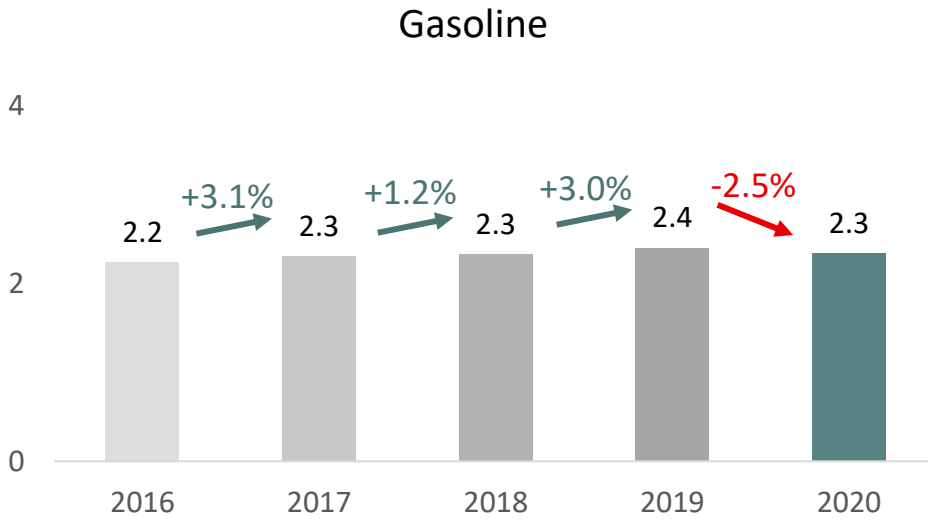
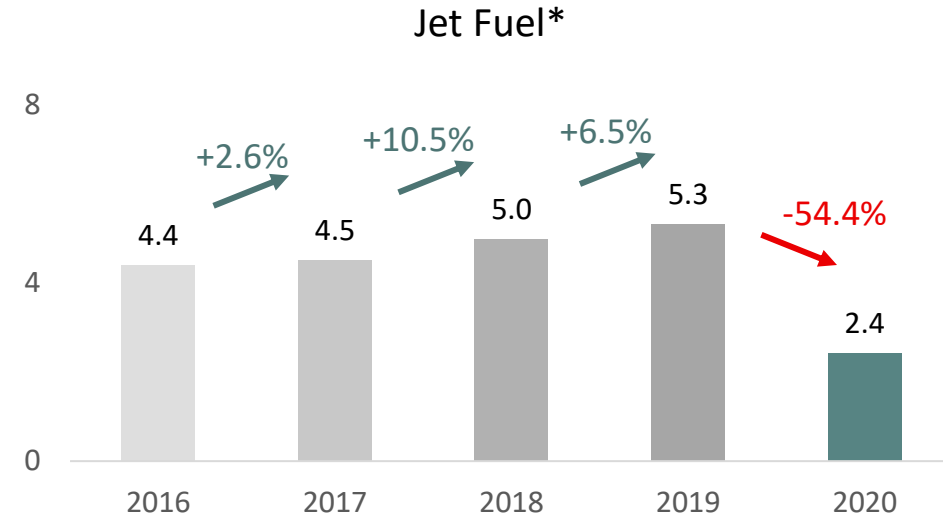
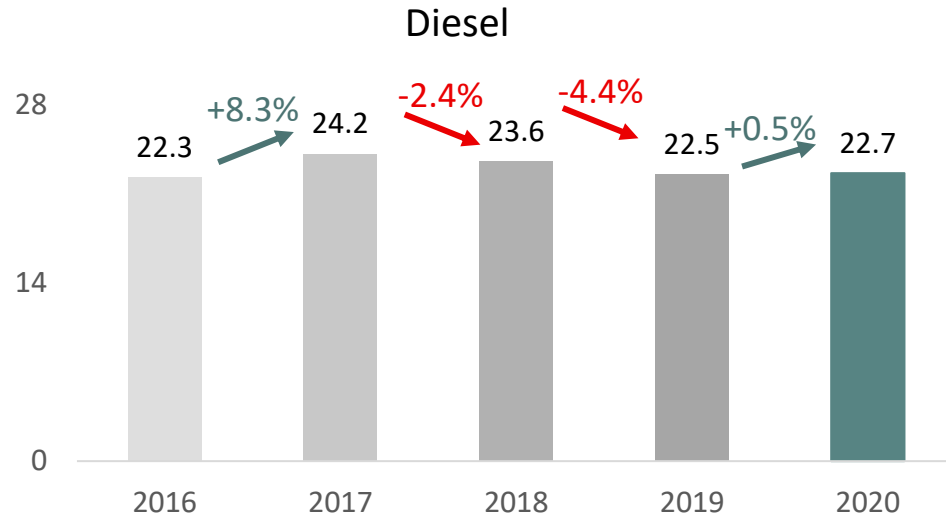
Appendix

2022 Refinery Maintenance Schedule

Refinery	Unit	Starting Quarter	Duration (weeks)	Purpose	Status
Batman	Crude Oil & Vacuum	Q1	13	Seasonal	Ongoing
	Crude Oil & Vacuum	Q4	4		Planned
izmir	Vacuum	Q1	6	Periodic Maintenance	Ongoing
	Lube Complex	Q1	6		Ongoing
	Crude Unit	Q4	9	Revamp	Planned
	CCR & Isomerization	Q4	9		Planned
	Desulphurizer	Q4	9		Planned
	HYC	Q4	4		Planned
izmit	Isomerization	Q1	5	Periodic Maintenance	Ongoing
	Vacuum	Q1	3		Planned
	Desulphurizer	Q1	3		Planned
	Crude Oil & Vacuum	End of Q3	6		Planned
	HYC	End of Q3	6		Planned

Turkish Consumption 2016-2020

Million
Tons



Source: Tüpraş and EMRA
* Transit flight consumption included

Competition - STAR Refinery

Timeline



- Feasibility studies began in 2010 and construction kicked off in 2011
- Goldman Sachs has acquired a 13% stake in SOCAR Turkey for \$1.3 billion.
- Total investment size 6.3 bn USD, with 3.3 bn USD credit agreement.
- Following the completion of construction late 2018, reached full capacity utilization in August 2019

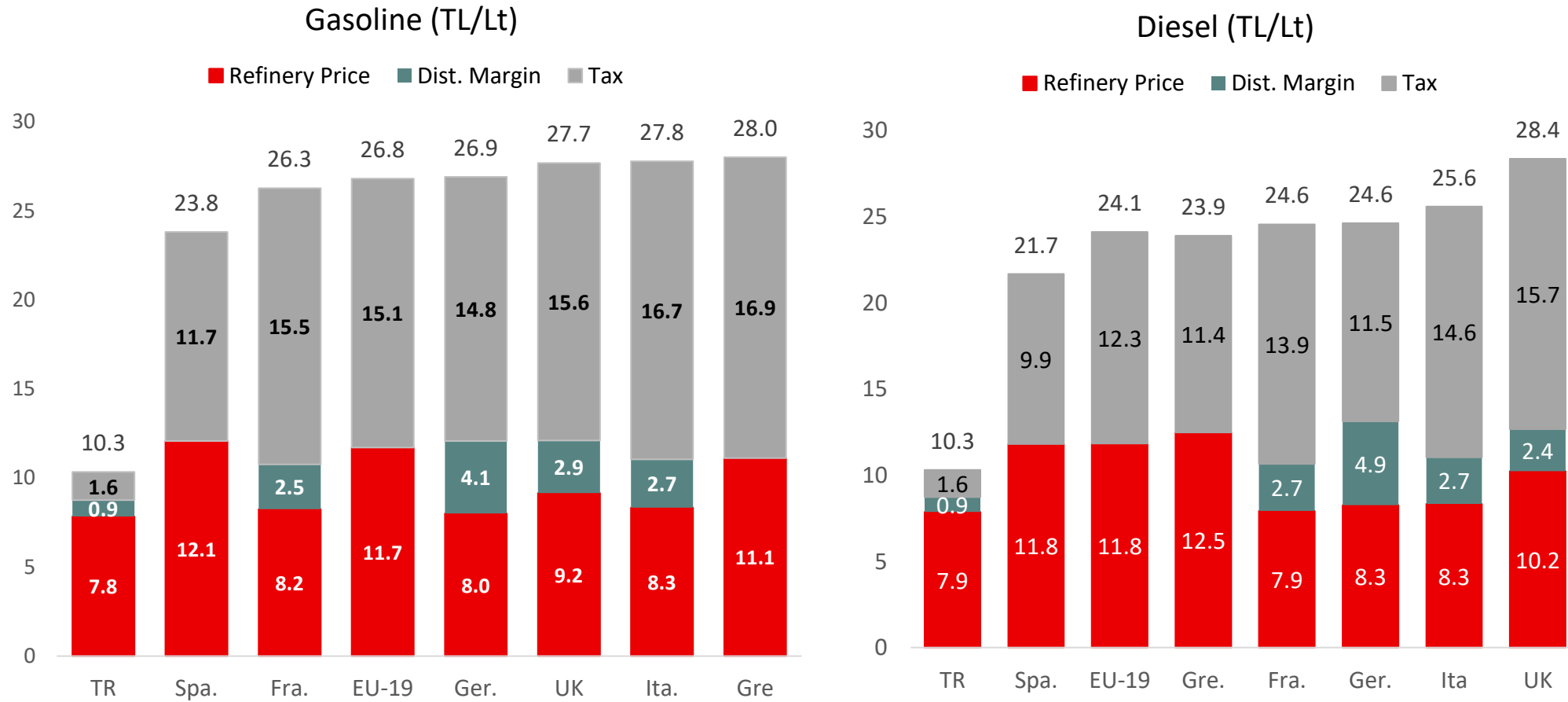
* Source: EMRA

Turkish Market Structure (mn tons)

Turkey Demand	Tüpraş	STAR	Total	Turkish Market Demand*	Balance
LPG	1.1	0.3	1.4	4.2	-2.8
Petchem F.	0.2	2.6	2.8		
Gasoline	6.1		6.1	2.4	3.7
Jet Fuel	5.2	1.6	6.8	5.3	1.5
Diesel	10.7	4.8	15.2	22.5	-7.3
Fuel Oil	1.8		1.8	0.3	1.5
Bitumen	3.1		3.1		
Pet coke	0.8	0.7	1.5		
Total	~30	~10	~40		

European Pump Price Comparison

Turkish fuel prices are highly competitive with other European countries.



Prices of Europe and Turkey, as of December 13th, 2021

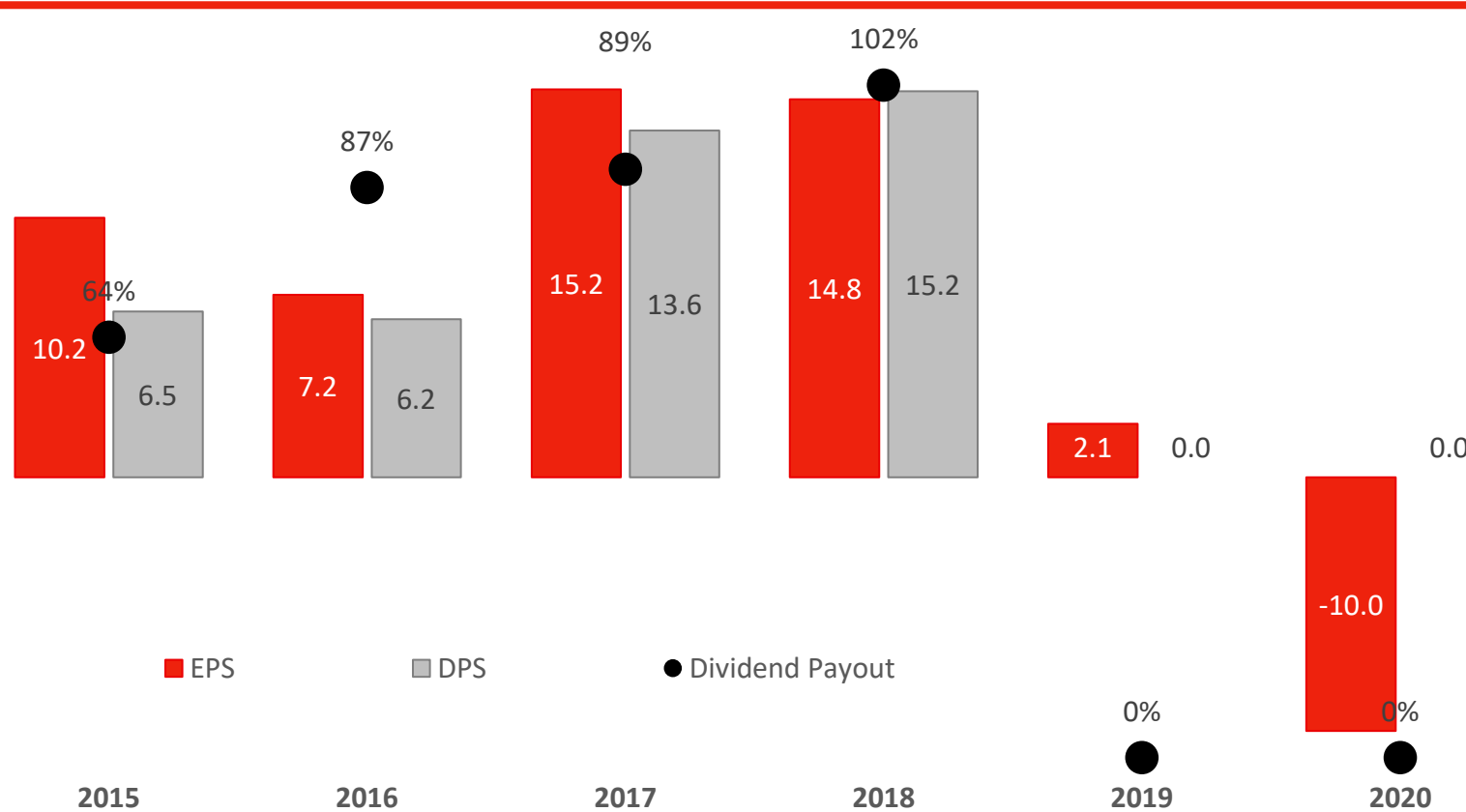
The contribution margin of Germany includes costs for transport, warehousing, legal stockpiling, administration, sales and, since January 2007, costs for organic components and admixtures.

Tüpraş Balance Sheet (Million TL)

	31.12.2021	31.12.2020	Diff.	Diff. (%)
Current Assets	65,429	30,663	34,766	113
Cash & C. Equivalents	20,400	19,825	575	3
Trade Receivables	13,517	1,736	11,781	679
Derivatives	3,818	380	3,438	904
Inventories	23,756	7,701	16,055	208
Pre-paid expenses	186	234	-47	-20
Other Current Assets	3,751	788	2,964	376
Long Term Assets	37,106	30,505	6,601	22
Financial Assets & Subsidiaries	2,156	1,330	825	62
Tangible & Intangible Fixed Assets	26,537	22,137	4,400	20
Derivatives	44	88	-44	-50
Pre-paid expenses	95	135	-40	-30
Deferred Tax	6,378	5,002	1,375	27
Other Longterm Assets	1,897	1,813	84	5
Total Assets	102,535	61,169	41,366	68
Short Term Liabilities	64,002	28,341	35,661	126
Financial Loans	11,399	8,502	2,897	34
Trade Payables	43,704	14,137	29,567	209
Derivatives	3,302	763	2,539	333
Provisions	200	142	58	41
Other ST Liabilities	5,396	4,796	600	13
Long Term Liabilities	20,706	21,155	-450	-2
Financial Loans	20,219	20,743	-525	-3
Payables & Provisions	448	356	91	26
Derivatives	29	45	-16	-36
Other LT Liabilities	11	10	0	4
Total equity attributable to equity holders of the parent	17,557	11,446	6,111	53
Minority Interests	270	226	44	20
Total Liabilities & Equity	102,535	61,169	41,366	68

Dividend (TL)

Avg. Payout Ratio: 90%*



Strategic Transition Dividend Plan

80%

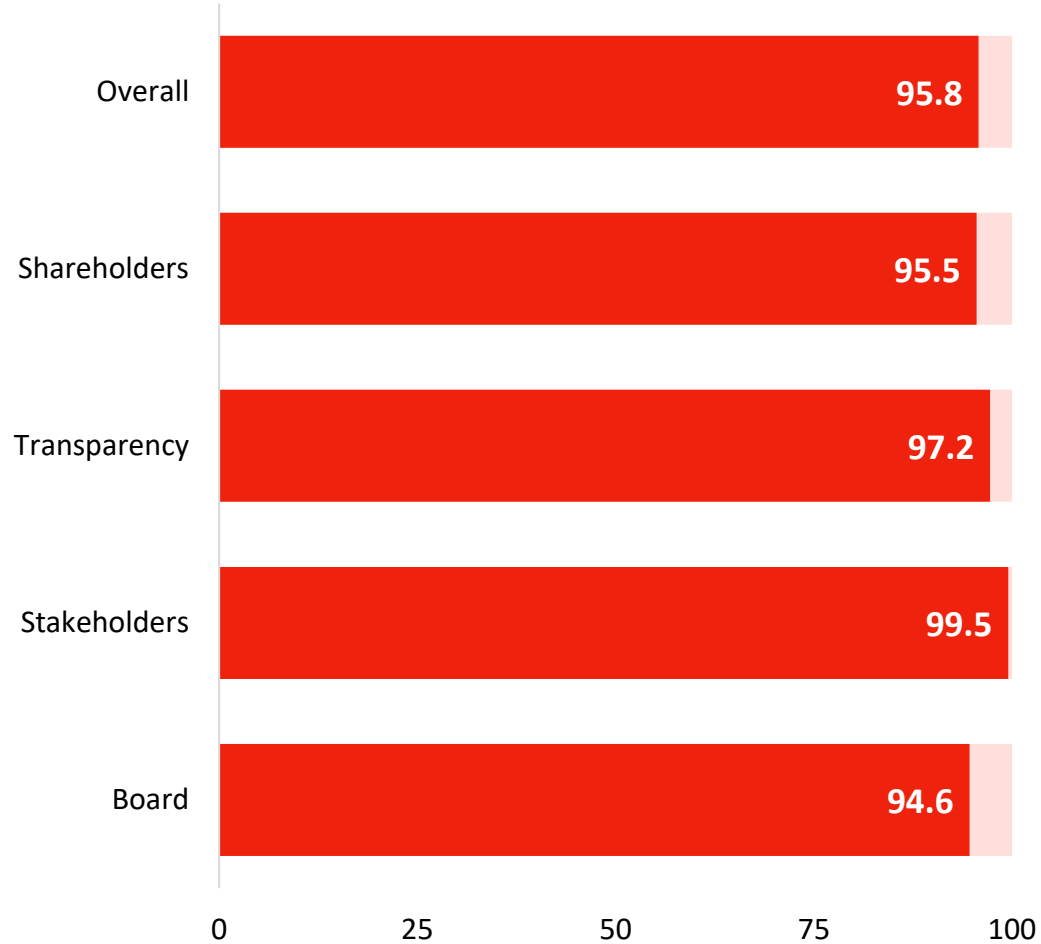
Our new business model enables us to pay ~80% average dividends and we will remain as a high dividend payer

2025-2035

*Years without dividend payments are not taken into account. Dividend payout ratio is calculated according to distributable net income based on statutory accounts

Tüpraş - Ratings

Tüpraş BIST Corporate Governance Rating Score



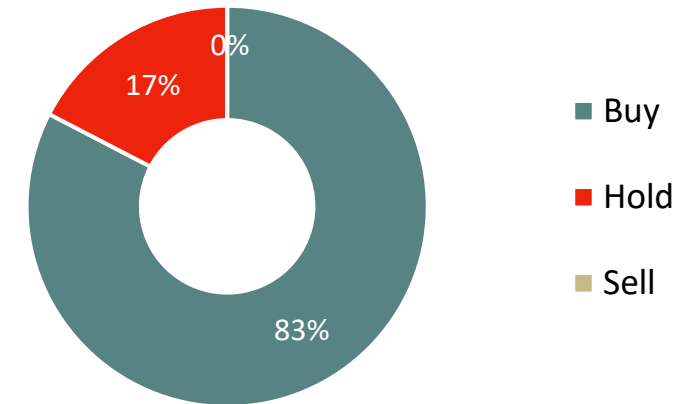
*data as of 28 February 2022

Source: SAHA Corporate Governance and Rating Services Inc. (October 2021)

Credit Rating Scores

Foreign Currency Long Term	FitchRatings	MOODY'S	S&P Global Ratings
Tüpraş	B+ (Negative)	B2 (Negative)	
Turkey	B+ (Negative)	B2 (Negative)	B+ (Negative)
Koç Holding		B2 (Negative)	BB- (Negative)

Analyst Recommendations



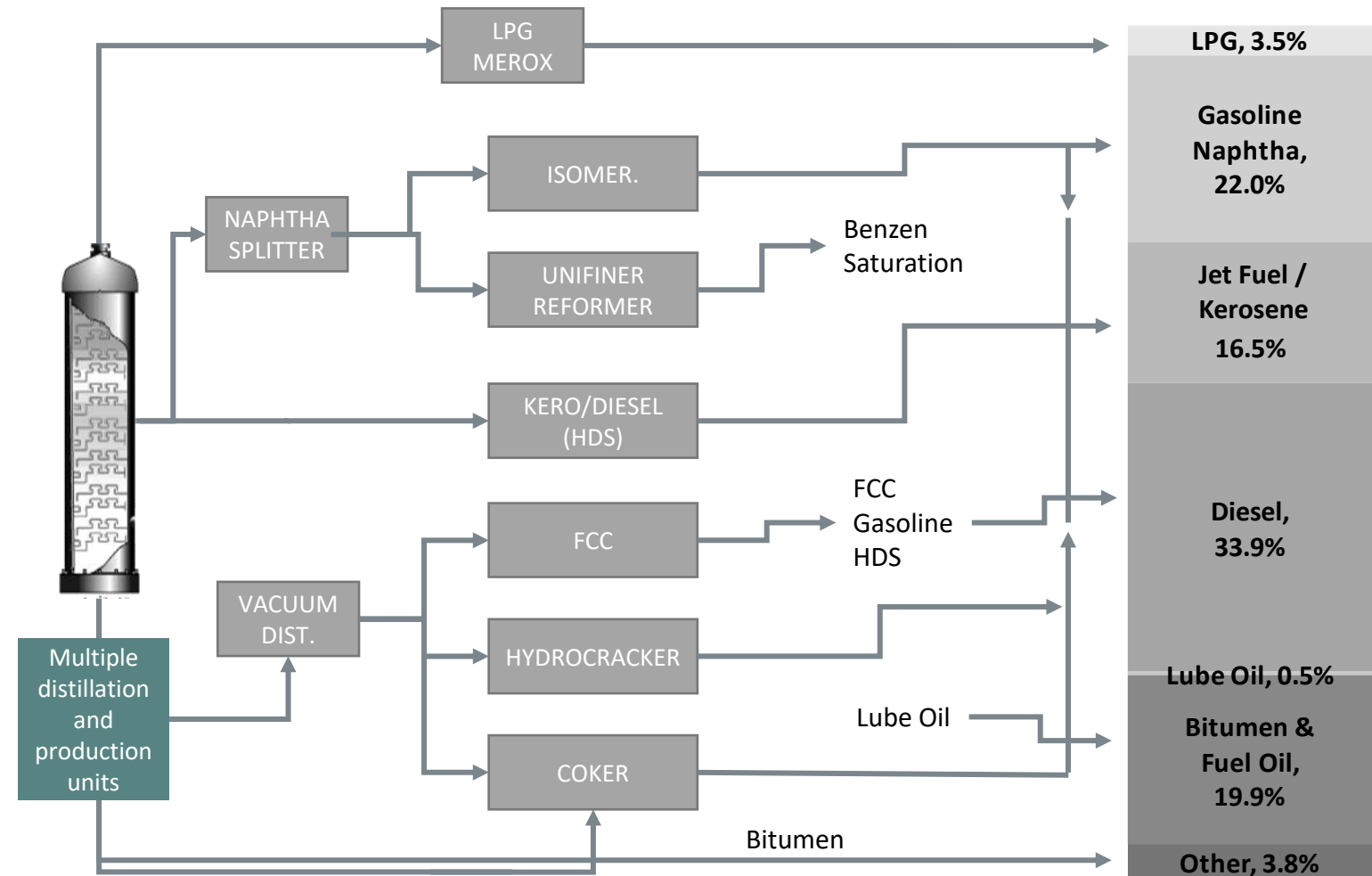
Source: Bloomberg*

Tüpraş Production Flow and Yield Breakdown

- Tüpraş has 30 million tons of production capacity
- Tüpraş operates 4 refineries with an integrated system optimization program

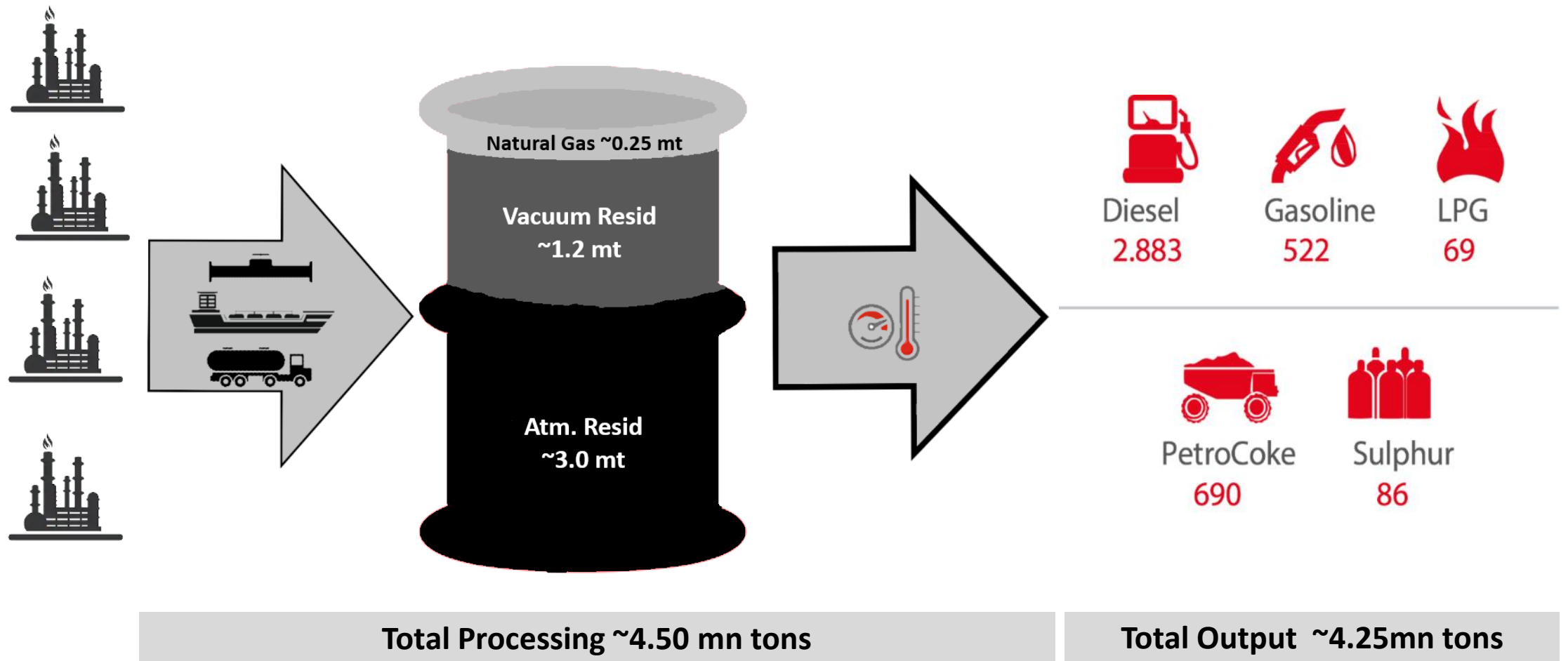
Key Units	# of Units	Capacity (m ³ /d)
CRUDE OIL	8	99,420
VACUUM DIST.	8	42,752
HYDROCRACKER	4	18,032
ISOMERATION	3	7,804
UNIFINER REFORMER	5	16,225
KERO/DIESEL (HDS)	9	37,265
FCC	2	4,650
COKER	1	9000
NAPHTA SPLITTER	8	
LPG MEROX	6	

Flow Diagram



RUP Feedstock and Production

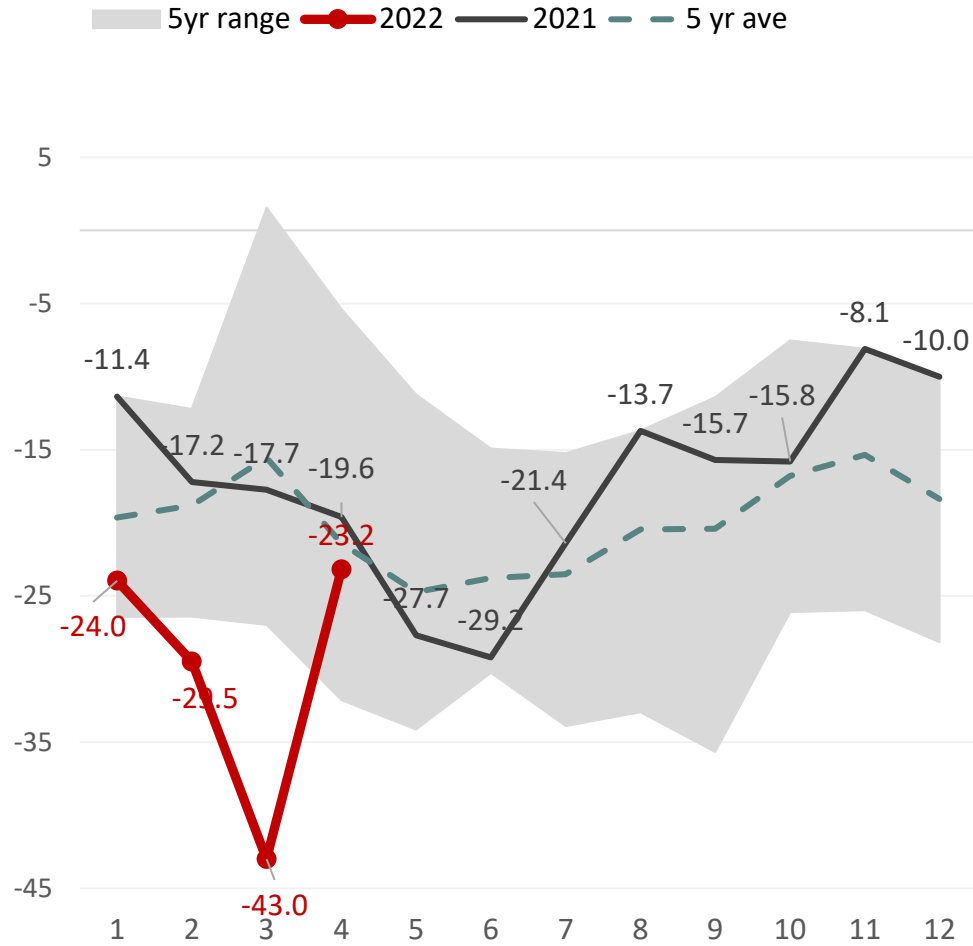
- Residuum Upgrade Plant (RUP) was completed in 2015 and it is the main conversion unit of Tüpraş.
- First periodic maintenance was completed in Q2 2019.



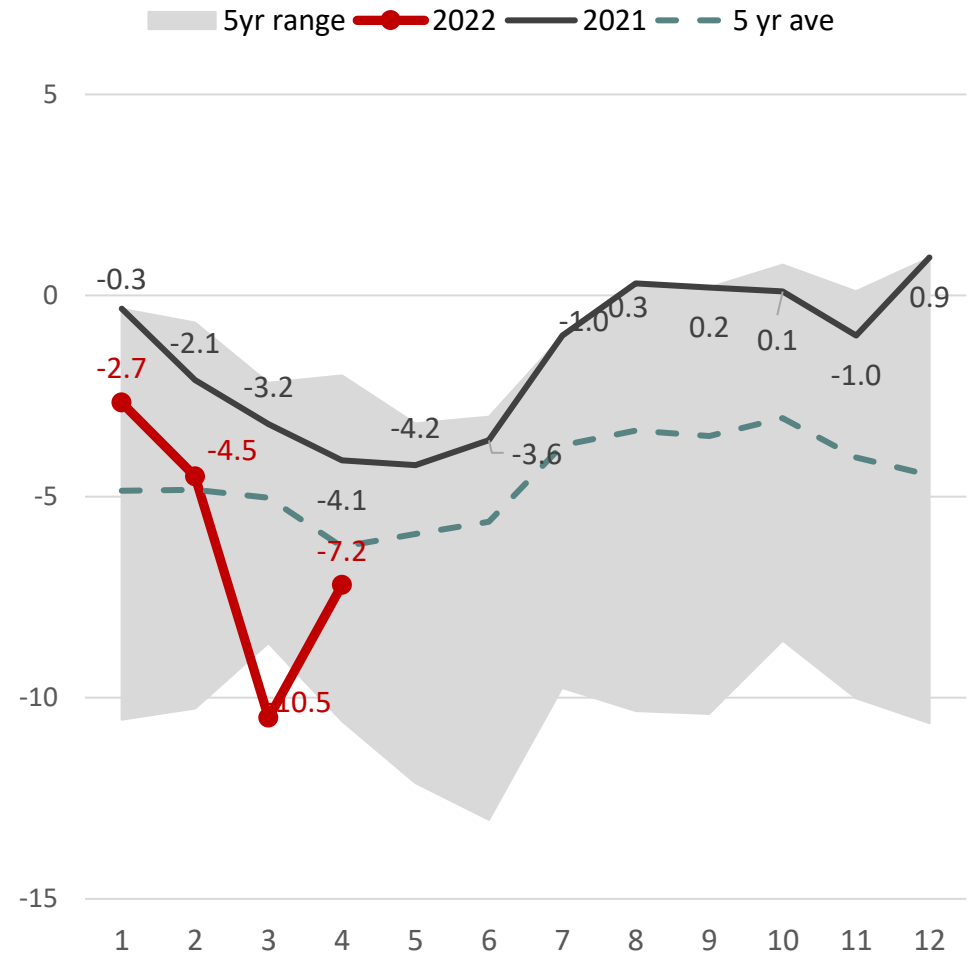
LPG and Naphtha Cracks

\$/bbl

LPG



Naphtha



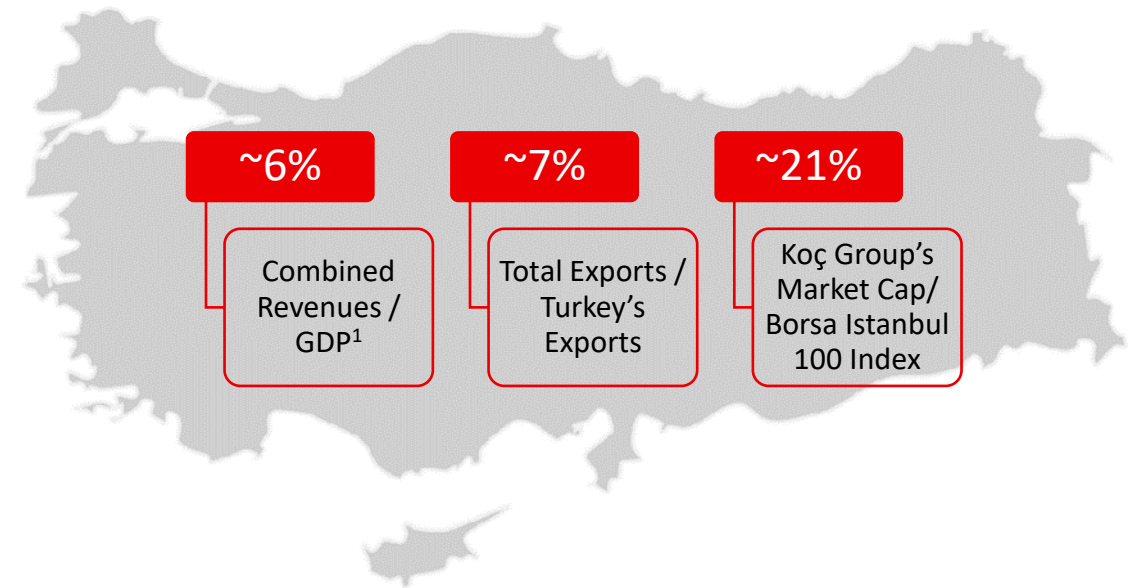
data as of 30 April 2022 and 5 year range refers to :2017-2021

Turkey's Leading Investment Holding Company

- Koç Holding is Turkey's largest industrial and services group
- The only Turkish company in Fortune Global 500².

Pioneer in its Sectors

- Leading positions with clear competitive advantages in sectors with long-term growth potential such as energy, automotive, consumer durables and finance.



Notes : Data as of YE20

(1) 2020 Report (based on consolidated revenues)

(2) 2021 report (based on consolidated revenues)

 **Tüpraş**

 **Koç**



Investor
Presentation

Latest
Webcast



Sustainability
Report



Strategic
Transition Plan



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