Equity Research

September 7, 2021
BSE Sensex: 58279

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Sector update

Oil & Gas and Petrochemicals

ONGC (BUY)
Target price: Rs214

OIL (BUY)
Target price: Rs232

GAIL (BUY)
Target price: Rs207

BPCL (BUY)
Target price: Rs544

IOCL (HOLD)
Target price: Rs107

HPCL (HOLD)
Target price: Rs271

RIL (HOLD)
Target price: Rs2,017

MGL (HOLD)
Target price: Rs1,107

IGL (REDUCE)
Target price: Rs472

GGL (SELL)
Target price: Rs564

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INDIA

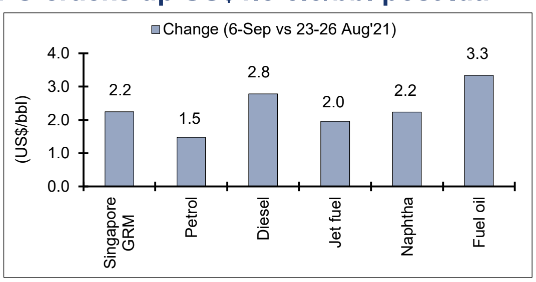
Oil, Gas, Refining & Petrochemicals

Ida: GRM up from lows while Gas and LNG rise further

Hurricane Ida has led to: 1) surge in GRM from lows; 2) surge in US/European gas and LNG prices (other factors at play, too) from already high levels; and 3) modest rise in oil. Reuters' Singapore GRM is up US$2.2/bbl or 83% *vs* average levels on 23-26 Aug as 6% of US refining capacity is still shut. WTI and Brent are up US$3.1-4.3/bbl (5-6%) from pre-hurricane lows as 1.5m b/d (13.3%) of US oil output is still shut. Henry Hub, TTF, UK NBP and JKM spot LNG are up 13-28% from lows (just 2.6% of US gas output shut). PVC, PE and PP margins were down 1-19% WoW as of 27-Aug (5-41% of capacities shut), but are likely to be up in Sep (data awaited). The GRM recovery may not sustain. We remain most positive on strength in gas/LNG prices, which is positive for ONGC, OIL and GAIL, and negative for GGL.

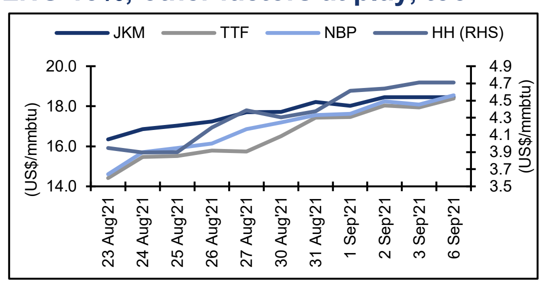
- **2.6% of US gas, 6% of refining, 13.3% of oil and 5-41% of petrochemical capacity still shut:** Hurricane Ida that hit Louisiana on 29-Aug'21 shut Gulf of Mexico (GoM) oil & gas output and refining and petrochemical capacity in the state. As of 6-Sep: 1) 1.53m b/d or 13.3% of US oil (83.9% of GoM) output was still shut *vs* 1.74m b/d or 15.1% of US (95.7% of GoM) output at peak; 2) 1.8bcf/d or 2.6% of US (80.8% of GoM) output is still shut *vs* 2.11bcf/d or ~3% of US (94.5% of GoM) output at peak; 3) 1m b/d or 6% of US refining capacity is still shut *vs* 2.3m b/d or 13% of US refining capacity at peak, and 5) 5.5mmtpa or 14% of ethylene (16% or 6.5mmtpa at peak), 3.3mmtpa or 14% (21% or 5mmtpa) of PE, 41% or 3.4mmtpa of PVC and 0.4mmtpa or 5% (9% or 0.8mmtpa at peak) of PP capacities in US are still shut.

GRM up US$2.2/bbl as petrol, diesel & FO cracks up US$1.5-3.3/bbl post Ida



Source: Reuters, I-Sec research

HH, NBP and TTF up 21-28% & JKM LNG 13%; other factors at play, too



Source: Tellurian, I-Sec research

- **GRM up 83%; may not sustain:** Singapore GRM, which averaged US$2.72/bbl in 23-26 Aug'21, is up 83% (US$2.24/bbl) to US$4.96/bbl on 6-Sep'21. Rise in cracks *vs* average cracks in 23-26 Aug'21 is as follows: 1) fuel oil by US$3.3/bbl; 2) diesel by US$2.8/bbl (at US$6.4/bbl); 3) naphtha by US$2.2/bbl; 4) jet fuel by US$2/bbl; and 5) petrol by US$1.5/bbl. As refineries restart, GRMs are likely correct; soon after the Feb'21 snowstorm all cracks except petrol corrected. Global refined products demand recovery, which would depend on covid cases, is key.
- **Gas & LNG up 13-28%; positive for ONGC, OIL and GAIL and negative for GGL:** HH and JKM spot LNG prices are up 21-13% (US$0.81-2.12/mmbtu) to US$4.7-18.5/mmbtu while UK NBP and Dutch TTF prices are up 27-28% (US$4/mmbtu) to US$18.6-18.4/mmbtu. US/European gas and spot LNG prices were at all-time/multi-year high even before Ida. The recent EU gas rise was also driven by low gas supply / disappointing supply guidance by Russia and rise in EU carbon prices. High gas/LNG prices would boost FY23E deepwater and APM gas price of ONGC and OIL, GAIL's FY22-FY23E gas marketing EBITDA, but hit GGL's FY22E margin.
- **Demand recovery & OPEC+ output hike key to oil**: WTI and Brent are up 5-6% despite 1.5m b/d US capacity still being shut. Pace of global oil demand recovery and whether OPEC+ output hikes continue would determine oil price trend.
- **Petrochemical margins likely to rise:** Indications are capacities may take some time to restart, which may boost margins with gains likely to be most in PVC.

Ida: GRM up from lows while gas & LNG rise further

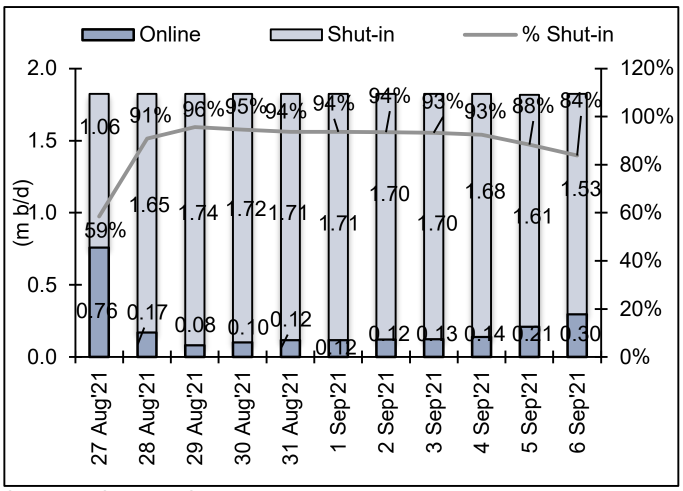
3-13% of US oil & gas, 6% refining & 5-41% of PP/PE/PVC shut

Ida shut 15-3% of US oil & gas output; 13-41% refining & petrochemical

Category-4 hurricane Ida made landfall in Louisiana on 29-Aug'21. At peak, it led to shutdown of:

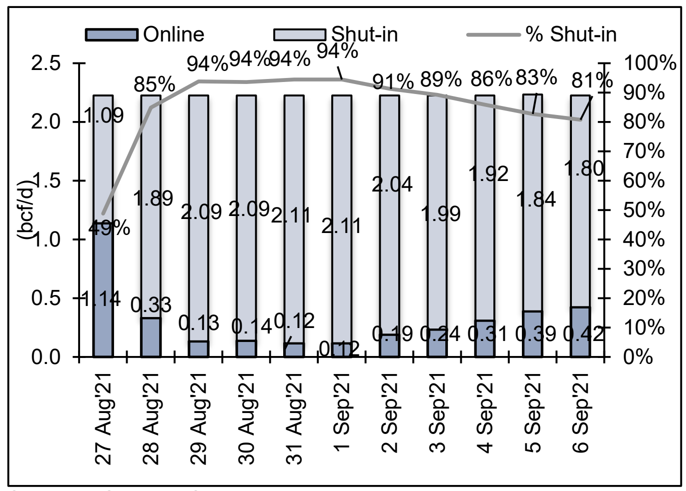
- 1.74m b/d or 15.1% of US and 95.65% of oil output in GoM
- 2.11bcf/d or ~3% of US and 94.47% of gas output in GoM
- 2.3m b/d or 13% of US and 75% of refining capacity in Louisiana
- 6.5mmtpa (16%) of ethylene, 5mmtpa (21%) of PE, 3.4mmtpa (41%) of PVC, and 0.8mmtpa (9%) of US PP capacity.

Chart 1: 1.53m b/d or 84% of GoM and 13.3% of US oil output still shut as of 6-Sep'21



Source: US DoE, I-Sec research

Chart 2: 1.8bcf/d or 80.8% of GoM and 2.6% of US gas output still shut as of 6-Sep'21



Source: US DoE, I-Sec research

13.3% of US oil and 2.6% of US gas output still shut as of 6-Sep'21

Hurricane Ida led to the shutdown of 15.1% of US oil output and ~3% of US gas output at peak. Bureau of Safety and Environmental Enforcement (BSEE) estimates that as of end of 6-Sep'21:

- 1.53m b/d or 13.3% of US and 84% of GoM oil output was still shut.
- 1.8bcf/d or 2.6% of US and 80.8% of GoM gas output was still shut.

6% of US refining capacity still shut as of 6-Sep'21

Hurricane Ida led to shutdown of 2.3m b/d or 13% of US and 75% of refining capacity in Louisiana. 1m b/d or 6% of US refining capacity still remains shut. Four refineries (1.3m b/d) have restarted, but are unlikely to operate at full rates for several days.

Table 1: 2.3m b/d of US refining capacity shut at peak; 1m b/d still shut

Company	Refinery	Capacity (m b/d)	Status
Phillips 66	Belle Chasse	0.3	Shut
PBF Energy	Chalmette	0.2	Shut
Shell	Norco	0.2	Shut
Valero	Meraux	0.1	Shut
Valero	Norco	0.2	Shut
Total shut		**1.0**	
ExxonMobil	Baton Rouge	0.5	Restarting
Marathon	Garyville	0.6	Restarting
Others		0.2	Restarting

Source: S&P Global Platts, I-Sec research

5-41% of US PP, PE and PVC capacities still shut as of 6-Sep'21

Hurricane Ida shut 15.7mmtpa of US petrochemical capacities including 6.5mmtpa (16%) of ethylene, 5mmtpa (21%) of PE, 3.4mmtpa (41%) of PVC and 0.8mmtpa (9%) of US PP capacity. As of 6-Sep'21, 3.1mmtpa of US petrochemical capacities are in the process of restarting while 12.6mmtpa are still shut including:

- 5.5mmtpa (14%) ethylene capacity
- 3.3mmtpa (14%) PE capacity
- 3.4mmtpa (41%) PVC capacity
- 0.4mmtpa (5%) of PP capacity

Table 2: 5.5mmtpa US ethylene, 3.3mmtpa PE, 3.4mmtpa PVC and 0.4mmtpa PP capacities still shut as of 6-Sep'21

	Shut (mmtpa)	Restarting (mmtpa)	Total shut at peak (mmtpa)
Ethylene	5.5	1.0	6.5
PE	3.3	1.7	5.0
PVC	3.4	-	3.4
PP	0.4	0.4	0.8
Total	**12.6**	**3.1**	**15.7**

Source: S&P Global Platts, I-Sec research

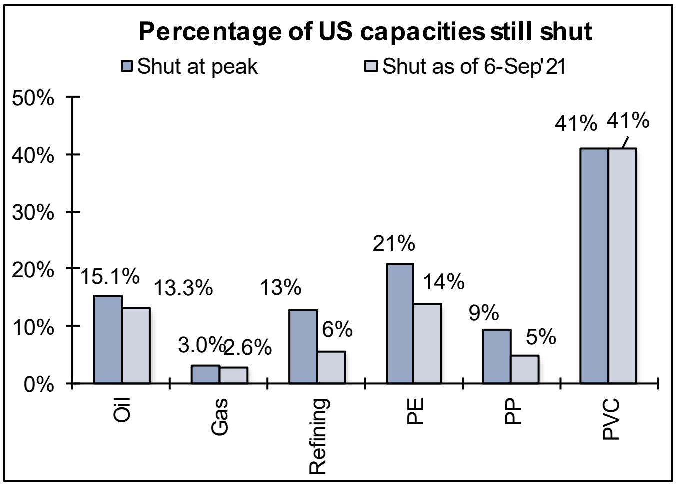
Strong gas/LNG further up; ONGC, OIL & GAIL to gain; GGL hit

13-28% rise in JKM spot LNG, HH, UK NBP and TTF prices

Rise in Henry Hub (HH), JKM spot LNG, Dutch TTF and UK NBP prices from lows of 23-Aug'21 has been steep as follows:

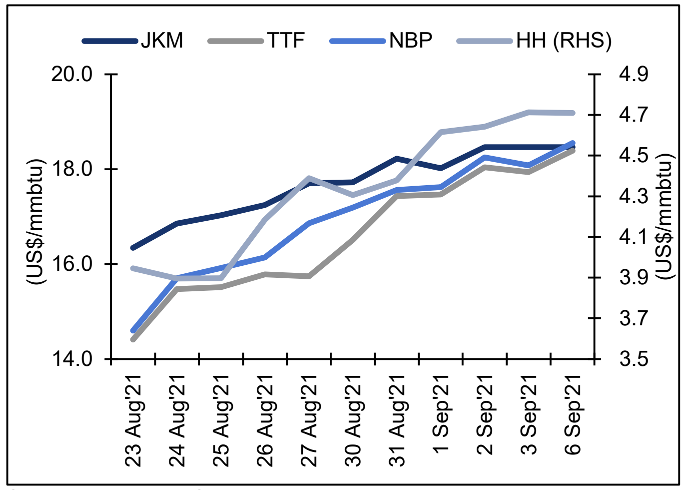
- HH price is up US$0.81/mmbtu (21%) to US$4.71/mmbtu on 6-Sep'21.
- JKM spot LNG price is up US$2.12/mmbtu (13%) to US$18.46/mmbtu on 6-Sep'21.
- Dutch TTF price is up US$3.98/mmbtu (28%) to US$18.39/mmbtu on 6-Sep'21.
- UK NBP price was up US$3.95/mmbtu (27%) to US$18.55/mmbtu on 6-Sep'21.

Chart 3: 13.3-2.6% of US oil & gas, 6% of refining and 5-41% of petrochemical capacity still shut



Source: S&P Global Platts, I-Sec research

Chart 4: JKM spot LNG & HH up 13-21%, NBP & TTF 27-28% post Ida, but other factors at play, too



Source: Tellurian, I-Sec research

Already strong global gas/spot LNG prices up further in last few days

Even before Ida struck, global gas and LNG prices were already strong and post-Ida have strengthened further as follows:

- US HH gas prices were at 30-month highs and are at 33-month high now.
- European TTF and UK NBP gas were at all-time/multi-year highs and have strengthened further.
- JKM spot LNG prices were at the highest level for this time of the year in at least 11-years (since CY11) and have strengthened further.

European gas price surge also driven by other factors

Rise in European gas prices is also driven by the following factors other than impact of hurricane Ida:

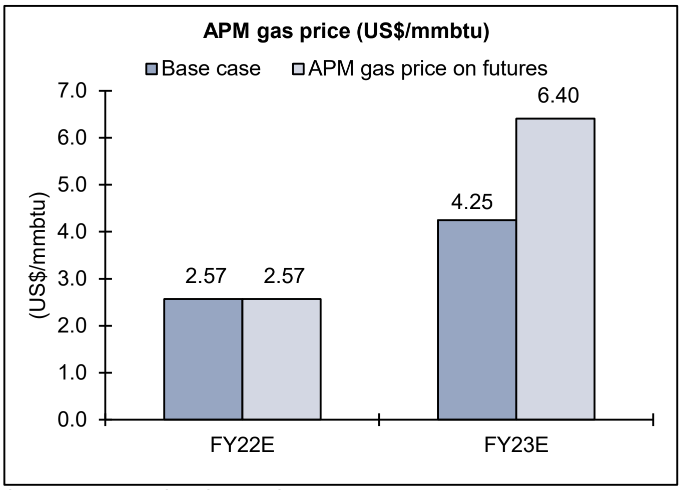
- On 30-Aug'21, Gazprom guided Russian gas supply to Europe in H2CY21E at ~89bcm *vs* over 94bcm in H1; gas supply to Europe in CY21E was guided at 183bcm by Gazprom and, given the over 94bcm supply in H1, it implies supply in H2CY21E of ~89bcm. Implied Russian gas supply to Europe would be down YoY at a time when EU gas storage on 30-Aug'21 was just 67% full *vs* 91.35% full a year earlier on 30-Aug'20.
- Russian gas supply by pipelines has been low in the last few weeks at a time when EU storage is at least at 11-year low.
- Surge in EU carbon price to a new high recently. High EU carbon price makes gas-based power generation more viable *vs* coal-based, thereby boosting demand for gas.

ONGC, OIL & GAIL to gain from gas/LNG price strength

US HH, UK NBP and JKM spot LNG prices being at multi-year seasonal/all-time highs is positive for ONGC, OIL and GAIL as follows:

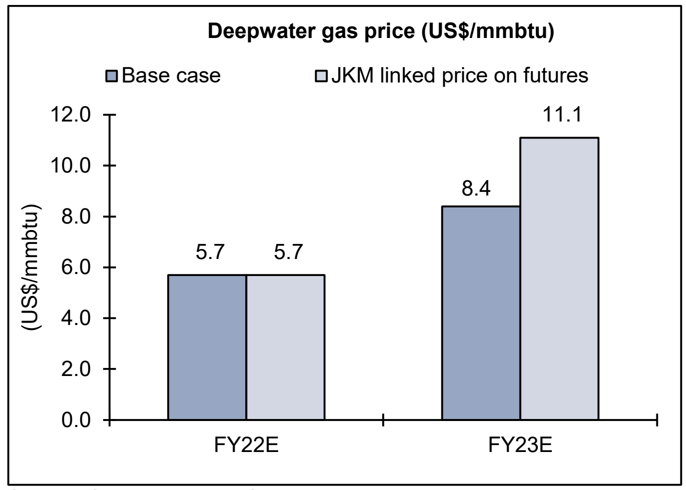
- APM gas price based on prices and futures as of 30-Aug'21 suggest APM gas price may be up 81% HoH at US$5.68/mmbtu in H1FY23E and 25% HoH at US$7.13/mmbtu in H2FY23E; APM price in H1FY23E and H2FY23E would be based on HH, NBP, Russian and Canadian gas price in CY21E and Jul'21-Jun'22 respectively. Thus, FY23E APM gas price may be 51% higher than our FY23E estimate of US$4.25/mmbtu (up 65% YoY). We estimate ONGC and OIL's FY23E EPS to be up 31% YoY and 9% YoY with gas price rise to US$4.25/mmbtu being one of the main drivers. Higher APM gas price than our estimate of US$6.4/mmbtu would mean upside to OIL and ONGC's FY23E EPS of 11-14%.

Chart 5: APM gas price to be up 65% YoY in FY23E; further upside of 51% likely



Source: EIA, ERCE, CME, I-Sec research

Chart 6: ONGC's deepwater gas price to be up 48% YoY in FY23E; further upside of 32% likely



Source: CME, Reuters, I-Sec research

- Surge in spot LNG prices is likely to boost ONGC's deepwater gas price realisation; in all recent auctions of deepwater gas, price discovered was linked to JKM spot LNG prices. FY23E spot LNG based on futures as of 30-Aug'21 was US$11.2/mmbtu and, on that basis, ONGC's deepwater gas price may be US$11.1/mmbtu. In base case, we are estimating ONGC's deepwater gas price to be up 48% YoY at US$8.4/mmbtu in FY23E; it is one of the main drivers of its 31% YoY EPS rise. Higher deepwater gas price than our estimate at US$11.1/mmbtu would mean 2% upside to ONGC's FY23E EPS.

Table 3: Upside to OIL & ONGC's FY23E EPS of 11-14% at higher APM gas price; upside to ONGC's FY23E EPS of 2% at higher deepwater gas price

Upside to FY23E EPS	ONGC	OIL
APM gas price higher at US$6.4/mmbtu vs US$4.25/mmbtu in base case	11%	14%
Deepwater gas price higher at US$11.1/mmbtu vs US$8.4/mmbtu in base case	2%	-

Source: Company data, I-Sec research

- GAIL's FY22-FY23E gas marketing EBITDA is likely to be boosted by the fact that spot LNG prices are up far more sharply than HH prices and it has indicated on its earnings calls that 20% of its HH-linked US LNG would be sold at spot prices in FY22E-FY23E. At futures as of 30-Aug'21, trading profit on selling HH-linked US LNG at spot prices would be US$7.4/mmbtu in FY22E and US$3.2/mmbtu in FY23E. This would lead to gas marketing EBITDA of Rs47.3bn in FY22E (Rs27.6bn in base case) and Rs46.2bn in FY23E (Rs39.2bn in base case) with contribution from volumes sold at spot prices being Rs31.7bn in FY22E and

Rs15.8bn in FY23E; contribution from US LNG volumes sold at oil-linked prices is estimated at Rs7.2bn-20.4bn in FY22E-FY23E.

Table 4: Upside to GAIL's FY22E gas marketing EBITDA 71%, and to FY23E EBITDA 18%, in most likely scenarios

Rs bn	FY22E		FY23E	
	EBITDA	Upside to base case	EBITDA	Upside to base case
Gas marketing EBITDA				
Base case	27.6	-	39.2	-
Most likely scenario	47.3	71%	46.2	-24%

Source: Company data, I-Sec research

APM gas price surge may mean 45-48% CNG price hike in Oct'21-22

The expected surge in APM gas prices would present a challenge to CGD players as it would mean rise in their gas cost for CNG and residential PNG. APM gas price rise would mean hefty price hikes would have to be made by IGL, MGL and GGL in the next one year as follows:

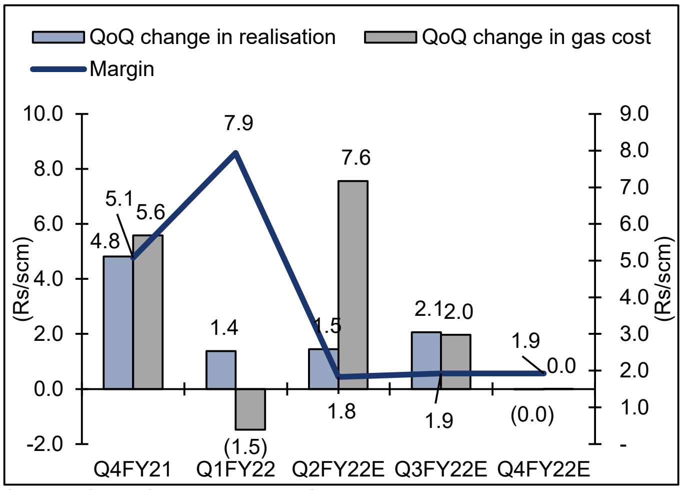
- Rise in APM gas price from US$2/mmbtu in H1FY22 to US$3.15/mmbtu in H2FY22E would mean GGL, MGL and IGL would have to make price hikes of 10-11% in Oct'21.
- Rise in APM gas price from US$3.15/mmbtu in H2FY22E to US$5.68/mmbtu in H1FY23E would mean GGL, MGL and IGL would have to make price hikes of 20-21% in Apr'22.
- Rise in APM gas price from US$5.68/mmbtu in H1FY23E to US$7.13/mmbtu in H2FY23E would mean GGL, MGL and IGL would have to make price hikes of 10% in Oct'22.
- Rise in APM gas price from US$2/mmbtu in H1FY22 to US$7.13/mmbtu in H2FY23E would mean GGL, MGL and IGL would have to make price hikes of 45-48% during Oct'21 to Oct'22.

CGD players may be able to make such hefty prices hikes, but some hit to prevailing hefty margins of MGL and IGL cannot be ruled out.

GGL most vulnerable to be hit by surge in spot LNG prices in FY22E

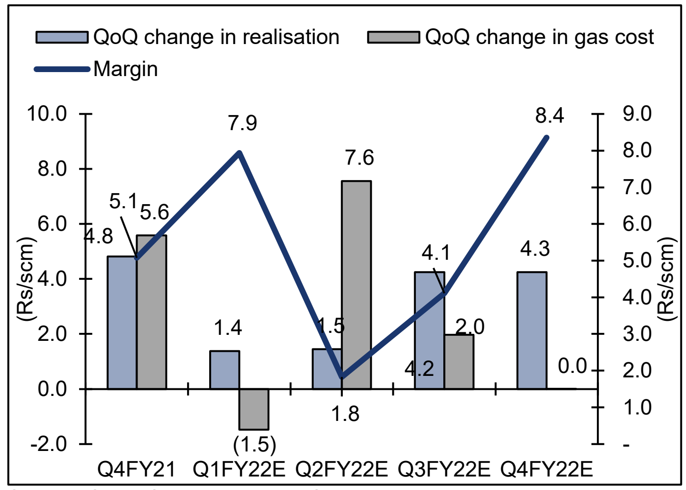
Surge in spot LNG prices factoring futures as of 24-Aug'21 for rest of FY22E would mean GGL's EBITDA margin would decline to Rs3.2/scm (down 48% YoY from Rs6.1/scm in FY21) in FY22E if it doesn't make any price hikes after the 13.4% hike on 24-Aug'21. Further 12.5-22% price hike would be required on 1-Dec'21 for GGL's FY22E EBITDA margin to be Rs4.5-5.5/scm. GGL may not be able to make such hefty price hikes, which may mean sharp YoY decline in FY22E EBITDA margin and earnings. GGL's EBITDA margin is the most vulnerable among CGD players as over 80% of its volumes (14% for MGL and IGL) are sold to industrial and commercial consumers and spot LNG is 43% of its gas mix for such consumers.

Chart 7: GGL's margin to plunge to Rs1.8/scm in Q2FY22E and Rs3.2/scm in FY22E if no price hike



Source: CME, Company data, I-Sec research

Chart 8: 12.5-21.8% price hike needed for margin at Rs4.5-5.5/scm in FY22E



Source: CME, Company data, I-Sec research

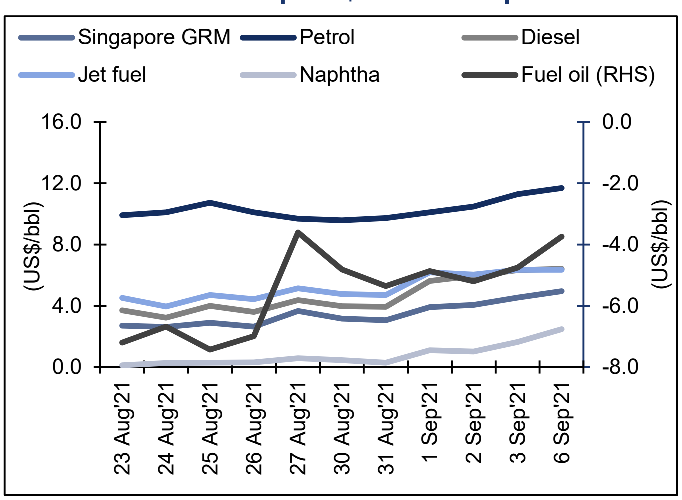
Singapore GRM surge from lows may not sustain; demand key

Singapore GRM up 83% from levels just before Ida struck

Singapore GRM, which averaged US$2.72/bbl in 23-26 Aug'21, is up 83% (US$2.24/bbl) to US$4.96\/bbl on 6-Sep'21. Rise in cracks after Ida struck *vs* average cracks in 23-26 Aug'21 is as follows:

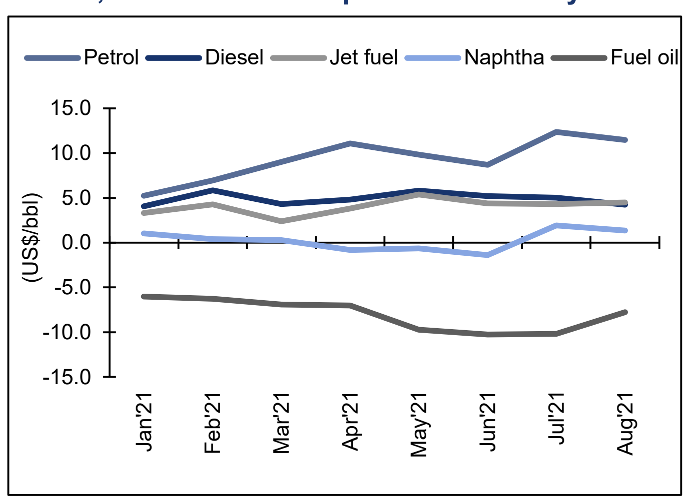
- Fuel oil cracks are up by US$3.3/bbl
- Diesel cracks are up by US$2.8/bbl to US$6.4/bbl
- Naphtha cracks are up by US$2.2/bbl
- Jet fuel cracks are up by US$2/bbl
- Petrol cracks are up by US$1.5/bbl to US$11.7/bbl.

Chart 9: Singapore GRM up US$2.2/bbl as petrol, diesel & FO cracks up US$1.5-3.3/bbl post Ida



Source: Reuters, I-Sec research

Chart 10: Cracks surged post snowstorms in Feb'21; rise sustained in petrol cracks only



Source: Reuters, I-Sec research

GRM rise may not sustain; all but petrol cracks down post snowstorms

As refineries restart, GRMs are likely to correct. Already 1.3m b/d capacity refineries out of the 2.3m b/d shut by Ida have restarted though these refineries may take some time to fully ramp up to pre-Ida levels. Soon after the Feb'21 snowstorm, all cracks except petrol corrected. The strength in petrol cracks was also due to the 26.6m bbls US inventory decline during the 5-6 weeks 5.9m b/d (32% of US) of refineries shut/impacted by the snowstorm took to restart.

Pace of global demand recovery & covid trend key to GRM outlook

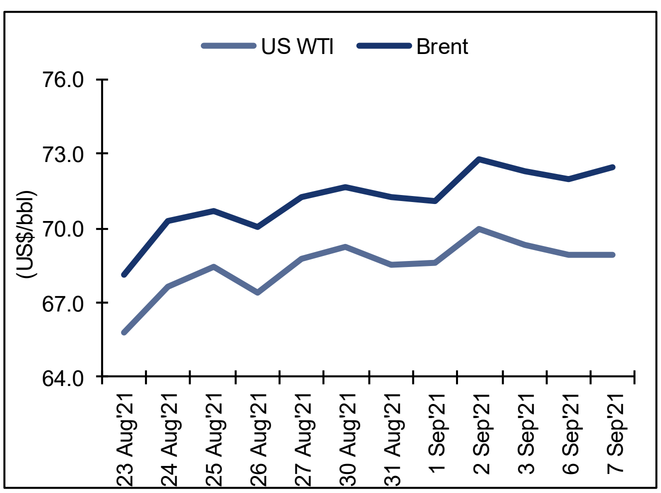
Pace of global refined products demand recovery is key to GRM outlook. Demand recovery would depend on covid cases trend globally in general and large oil consuming markets in particular. The surge in cases in recent months in US meant many employers in US that were hoping to get staff back to office after Labour Day (6-Sep'21) have delayed those plans at least until Oct'21 and in some cases even until Jan'22. China with its zero tolerance covid policy imposed new mobility curbs, which led to drop in fuel demand during 20-Jul'21 to 6-Aug'21 *vs* levels in early-Jul'21. Flight departures at China's 20 biggest airports fell to 40% of 2019 levels in 1-10 Aug'21 while road congestion in China was 83% of pre-covid level in early-Aug'21 as per Bloomberg NEF. This led to Chinese refiners cutting refinery throughputs by 5-10% MoM in Aug'21.

Pace of demand recovery & OPEC+ output hike key to oil outlook

Brent and WTI up 6-7% at peak; down 1-2% from peak

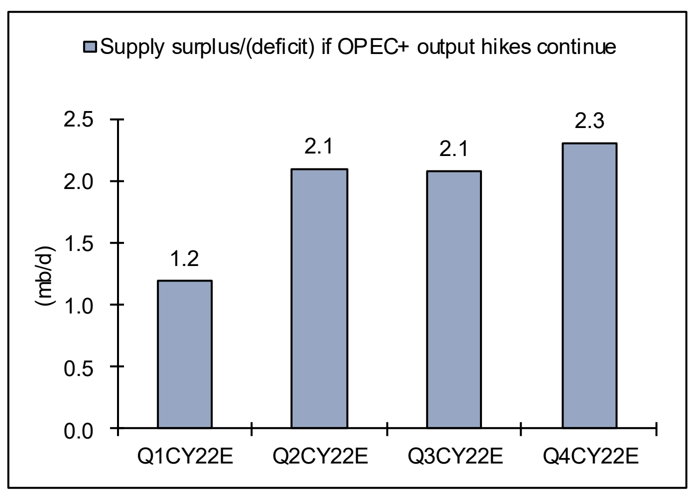
Brent and WTI prices surged initially as over 15% of US oil output was shut due to hurricane Ida. At peak, WTI and Brent were up US$4.2-4.6/bbl (6-7%) *vs* levels on 23-Aug'21. However, Brent and WTI have corrected US$0.3-1.1/bbl (1-2%) from peak as US oil output is gradually recovering and 1m b/d capacity refineries remain shut, which would hit demand for crude.

Chart 11: Brent and WTI up 6-7% to US$73-70/bbl at peak; down 1-2% from peak



Source: Bloomberg, I-Sec research

Chart 12: Supply surplus of 1.9m b/d estimated in CY22E if OPEC+ output hikes continue



Source: IEA, I-Sec research

Demand recovery & OPEC+ output hike to determine oil price trend

We believe oil price trend would be determined by:

- Pace of global oil demand recovery, which will depend on covid cases trend globally in general and large oil consuming markets in particular.
- Whether OPEC+ output hikes continue after Dec'21. If it continues, we estimate supply surplus of 1.2m-2.3m b/d in Q1-Q4CY22E and surplus of 1.9m b/d in CY22E. **OPEC+ appears to be aware of the likely surplus if output hikes continue beyond Dec'21. Saudi Energy minister has indicated that OPEC+ would decide in their monthly review meeting to pause or even reverse monthly output hikes, if needed, to ensure there is no supply surplus.**

Petrochemical, especially PVC, margins likely to rise

Petrochemical margins down WoW as of 27-Aug; likely to rise in Sep

PVC, PE and PP margins were down 1-19% WoW as of 27-Aug'21 (9-41% of capacities shut). However, we believe margins are likely to be up in early-Sep'21 (data awaited) if capacities take time to restart.

Petrochemical, especially PVC, margins to rise if long delay in restarts

There are indications that capacities may take some time to restart, which may boost margins. PVC margins are likely to gain the most given capacities along the chain from chlorine to EDC to VCM to PVC that have been shutdown due to Ida; **several PVC producers have announced *force majeure*.**

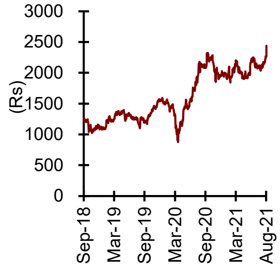
Risks to recommendation

Upside/Downside risks to our recommendation are:

- **RIL:** 1) GRM being lower than assumed; 2) higher/lower ARPU than estimated; 3) petrochemical EBITDA higher/lower than estimated; 4) net debt significantly higher/lower than our estimate.
- **GAIL:** 1) Gas marketing EBITDA is lower than estimated; 2) lower than estimated gas transmission volumes & EBITDA.
- **IOC:** Higher/Lower than estimated auto fuel marketing margin and GRM.
- **BPCL:** 1) Privatisation doesn't go through, or bid price is sharply lower than estimated; 2) lower than estimated auto fuel marketing margin and GRM.
- **HPCL:** Higher/Lower than estimated auto fuel marketing margin and GRM.
- **OIL:** 1) NRL stops getting excise benefit leading to plunge in GRM; and 2) lower than estimated oil and gas prices.
- **ONGC:** Long-term oil and gas prices significantly lower than our estimate.
- **GGL:** EBITDA margin or volumes are higher or lower than our estimate.
- **IGL:** EBITDA margin or volumes are higher or lower than our estimate.
- **MGL:** EBITDA margin or volumes are higher or lower than our estimate.

Price charts

RIL



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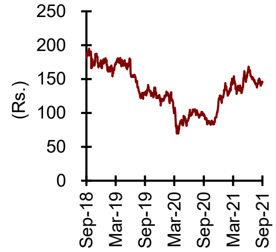

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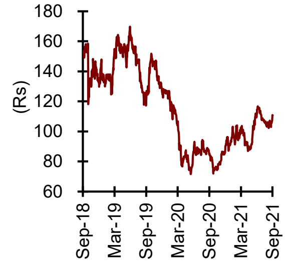

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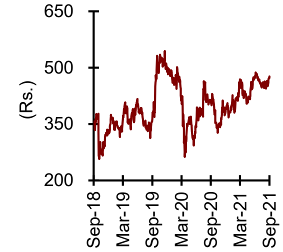

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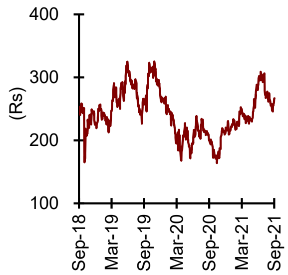
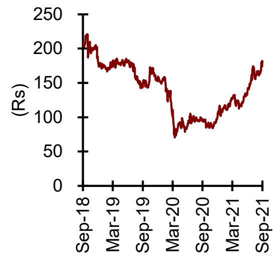
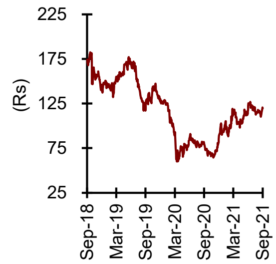


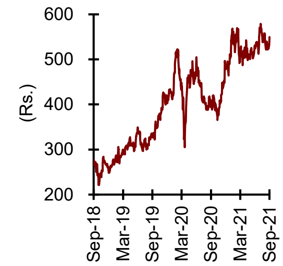
OIL India



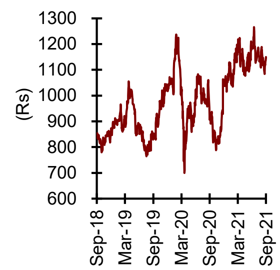
ONGC



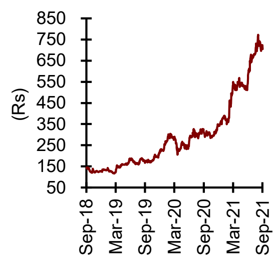
Indraprastha Gas



Mahanagar Gas



Gujarat Gas



Source: Bloomberg

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