

Oil & Gas and  
PetrochemicalsBPCL (BUY)  
Target price: Rs412HPCL (ADD)  
Target price: Rs289IOCL (ADD)  
Target price: Rs155

## Research Analysts:

## Vidyadhar Ginde

vidyadhar.ginde@icicisecurities.com  
+91 22 6637 7274

## Mohit Mehra

mohit.mehra@icicisecurities.com  
+91 22 6637 7386

## Refining &amp; marketing

## OMCs: Risk/reward better as earnings outlook improves

Of the two main earnings drivers in oil marketing companies (OMCs), auto fuel net marketing margins have been super-normal in FY19 and FY20-TD. Gross refining margins (GRM) were weak in the last three quarters, but have recovered sharply in Q2FY20-TD. IMO-mandated change in sulphur content in marine fuel is likely to keep GRM strong until CY20. To factor these trends, we have raised OMCs' FY20E-FY21E auto fuel marketing margin and GRM estimates. Risk/reward is better now as OMC share prices are down 19%-24% from levels in early-Jun'19 despite improved earnings outlook. We have upgraded BPCL to BUY and HPCL to ADD from *Hold* earlier. We reiterate ADD on IOC. BPCL, which is the best positioned OMC to gain from IMO-driven GRM strength, is our top pick.

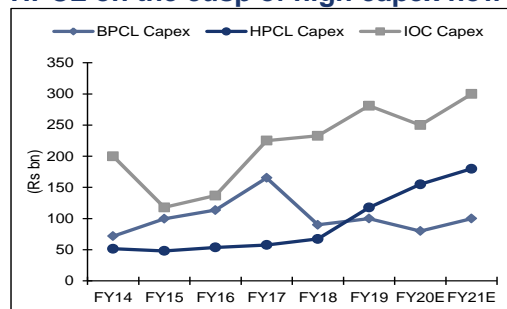
- ▶ **Marketing margins super-normal in FY19-FY20-TD; raise FY20E estimate; further upside not ruled out:** Auto fuel net marketing margin is super-normal at Rs1.89/l in FY20-TD and Rs1.83/l in FY19 vs Rs0.97-1.07/l in FY15-FY18. The re-election of a strong government during whose previous tenure margins were strong also augurs well for auto fuel margin outlook. We have raised our net margin estimate for FY20E-FY21E to Rs1.25/l from Rs1/l earlier. Our revised forecast implies net margin of just Rs0.92/l in the rest of FY20. Further upside to our net margin estimate is not ruled out. **HPCL would gain the most from higher margins.**
- ▶ **IMO to keep GRM strong up to CY20:** Reuters' Singapore GRM, which was weak at US\$3.3/bbl in H1CY19, has surged to US\$6.8/bbl in Q2FY20-TD boosted by permanent closure of a US east coast refinery. IMO mandated changes in marine fuel are estimated to boost global diesel demand by 0.2-0.9m b/d but reduce fuel oil demand by 0.3-1.6m b/d in CY19-CY20. We have raised our FY20E-FY21E GRM estimates for OMCs from US\$4.5-6.0/bbl to US\$5.8-6.8/bbl. Weaker than estimated demand growth and large refining capacity addition are risks to our GRM estimates.

## BPCL's product slate best positioned to gain from IMO-driven GRM strength

	Share in product slate:		
	HPCL	BPCL	IOC
Diesel	43%	50%	47%
FO	11%	3%	6%

Source: Company data, I-Sec research

## BPCL's capex high in the past, but HPCL on the cusp of high capex now



Source: Company, I-Sec research

- ▶ **BPCL our top pick:** Among OMCs, BPCL is our top pick as: 1) it stands to gain the most from IMO-boosted GRM as it has the most diesel and least fuel oil in its product slate; 2) its GRM would also benefit from projects that boost petrol and propylene yields and reduce naphtha yield in its product slate; 3) it would be the least impacted by Euro VI related refinery shutdowns in FY20; and 4) its large capex phase is already done. **Capex as proportion of cash profit is estimated at 73%-83% for BPCL, 180%-194% for HPCL and 103%-111% for IOC in FY20E-FY21E.**

## BPCL is our top pick as it is best placed to gain from the emerging environment

	BPCL	HPCL	IOC
Rating	BUY	ADD	ADD
Target price	412	289	155
Implied upside/downside	20.5%	14.0%	14.6%
FY20 EPS	43.7	43.4	17.7
Change in EPS for Rs0.25/l change in auto fuel net marketing margin	7%	8%	6%
Change in EPS for US\$1/bbl change in GRM	15%	13%	14%
Change in fair value for Rs0.25/l change in auto fuel net marketing margin	7.3%	12.1%	7.1%
Change in fair value for US\$1/bbl change in GRM	14.6%	14.5%	15.5%
FY20 P/E	7.8	5.8	7.6
FY20 EV/EBITDA	5.6	5.5	5.4
GOI stake	53.3%	0.0%	52.2%

Source: I-Sec research

## TABLE OF CONTENTS

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<b>Risk/reward favourable as earnings outlook better .....</b>	<b>3</b>
Marketing margin super-normal; recent GRM recovery to sustain.....	3
Raise OMCs' marketing margin GRM and EPS estimates .....	6
Upgrade BPCL / HPCL to <b>BUY / ADD</b> ; BPCL top pick .....	7
EPS and fair value sensitivity analysis .....	9
<b>GRM rebounds; IMO to keep GRM strong up to CY20 .....</b>	<b>11</b>
Singapore GRM at 9-year low in FY19; at US\$3.3/bbl in H1CY19 .....	11
Singapore GRM recovery to 6-quarter high in Q2FY20-TD .....	12
Singapore GRM recovery in the last few weeks has been mainly driven by: .....	14
Diesel demand boost due to IMO to support GRM up to CY20 .....	14
GRM may remain strong in H2, but supply surge may hit in CY20 .....	16
Light-heavy crude spread may remain low even in CY20.....	17
<b>Auto fuel marketing margin to be strong in FY20.....</b>	<b>20</b>
Auto fuel net marketing margin super-normal in FY19 & FY20-TD .....	20
Q2FY20-TD integrated margin up QoQ & YoY; down in Q1 .....	21
<b>Q1FY20 consumption decline not all negative.....</b>	<b>22</b>
Petrol volume growth strong; diesel growing but growth weak .....	22
Subsidised fuels demand fall in Q1FY20 is good news .....	22

## COMPANIES

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BPCL.....	25
HPCL.....	39
IOCL.....	49

## Risk/reward favourable as earnings outlook better

Marketing margin super-normal; recent GRM recovery to sustain

### Strong marketing margin and GRM key to OMCs' earnings outlook

Our view on OMCs was that their earnings outlook and share performance in FY20 would depend on:

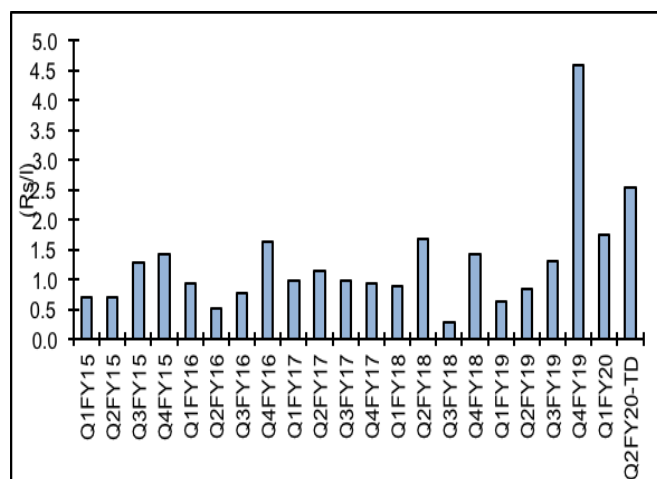
- Whether a strong government would come to power after the May'19 Lok Sabha elections, which would augur well for auto fuel marketing margin outlook.
- Whether IMO would boost diesel demand, diesel cracks and GRM.

The National Democratic Alliance (NDA) government has been re-elected in CY19 with an even bigger majority than in CY14. During the previous NDA regime, auto fuels remained deregulated and auto fuel marketing margins were healthy/super-normal during FY15-FY19. This augurs well for auto fuel marketing margin outlook not just in FY20 but in rest of the NDA's five-year term.

### Net auto fuel marketing margin super-normal in FY19 and FY20-TD

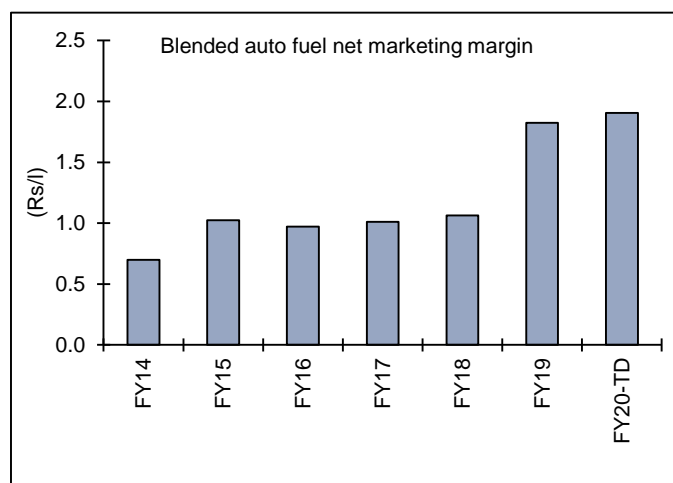
Net auto fuel marketing margin was supernormal in FY19 at Rs1.83/l, which is 72%-88% higher than normal margin of Rs0.97-1.06/l in FY15-FY18. Net margin was weak at Rs0.62-0.83/l in Q1-Q2FY19, but recovered to Rs1.3/l in Q3FY19 and then surged to a super-normal level of Rs4.59/l in Q4FY19 as full benefit of falling prices was not passed on to consumers. Net margin is also super-normal at Rs1.89/l in FY20-TD. Net auto fuel marketing margin was Rs1.75/l in Q1FY20 and is at Rs2.27/l in Q2FY20-TD and at Rs1.5/l on 2-Aug'19.

**Chart 1: Net auto fuel marketing margin, which was weak in H1FY19, super-normal since Q4FY19**



Source: Reuters, I-Sec research

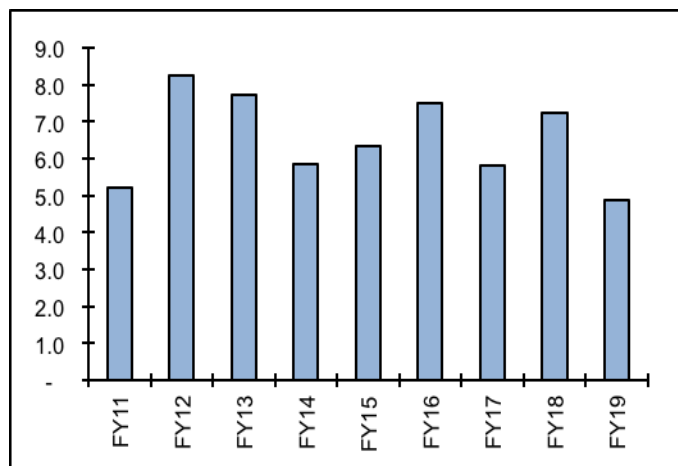
**Chart 2: Net marketing margin at a super-normal Rs1.8-1.89/l in FY19-FY20-TD vs ~Rs1/l in FY15-18**



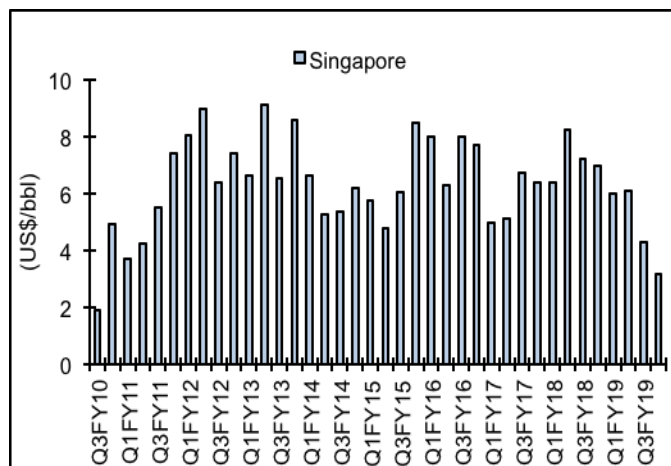
Source: Reuters, I-Sec research

### Singapore GRM at 9-year low in FY19; 33-37 quarter lows in Q3-Q4

Reuters' Singapore GRM was at a 9-year low of US\$4.9/bbl in FY19. While Singapore GRM was strong at US\$6.0-6.1/bbl in Q1-Q2FY19, it declined to 33-37 quarter lows of US\$4.3-3.2/bbl in Q3 and Q4FY19.

**Chart 3: Singapore GRM at 9-year low of US\$4.9/bbl in FY19**

Source: Reuters, I-Sec research

**Chart 4: Singapore GRM at 37-quarter low of US\$3.2/bbl in Q4FY19**

Source: Reuters, I-Sec research

**GRM hit by US & China exports rise, and weak China demand**

US refiners have become very competitive due to US oil price being at discount to Brent and Dubai. US refiners are therefore operating at high rates, exporting products to rest of the world and thereby hitting GRM globally. China's petrol and diesel exports are up YoY for the last six consecutive years, which has also hurt GRM. Singapore GRM weakness in the last few quarters was due to:

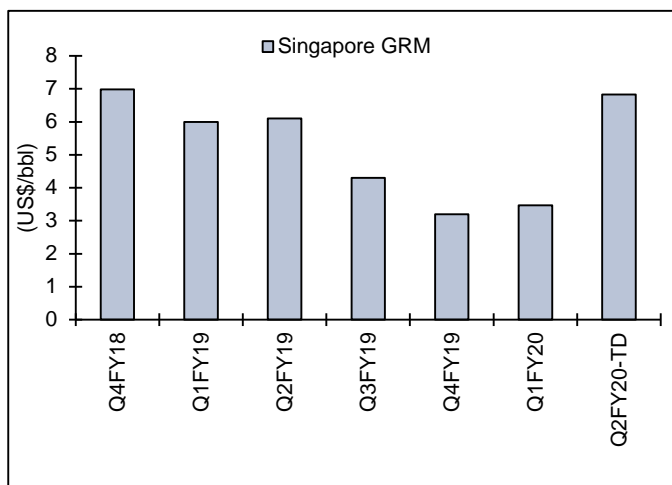
- US refinery utilisation being at 20-year high in CY18
- US turning net exporter of petroleum products in CY11 and surge in its net exports since then.
- US turning net exporter of petrol in CY17 and its net petrol exports being up 18% YoY in CY18.
- Chinese petrol and diesel exports rising YoY for the last six consecutive years up to CY18. Exports have been boosted since CY16 by rise in utilisation at its teapot refineries after they were allowed to import crude directly from mid-CY15.
- Chinese diesel demand declining by 4.6%-6.8% YoY in CY18 and by 11.5% YoY in CY19-TD.

**Singapore GRM at 6-quarter high in Q2FY20-TD after 3 weak quarters**

Reuters' Singapore GRM was at a 9-year low of US\$4.9/bbl in FY19 and at 33-37 quarter lows of US\$4.3-3.2/bbl in Q3FY19 and Q4FY19. Singapore GRM rebounded modestly to US\$3.5/bbl in Q1FY20 and has surged to a 6-quarter high of US\$6.8/bbl in Q2FY20-TD. Singapore GRM has been mainly boosted by:

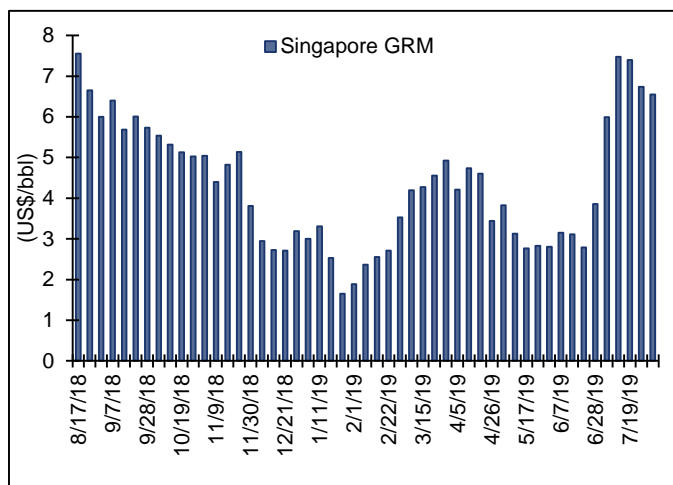
- Accident on 21-Jun'19 followed by announcement of permanent closure of 335k b/d Philadelphia refinery during US driving season (when petrol demand is at its peak), which boosted petrol cracks
- Rise in fuel oil cracks due to 29% fall in Singapore (world's biggest bunker port) inventories over the last five weeks due to clearance by suppliers ahead of the IMO-mandated cut in sulphur content from Jan'20. Surge in demand from Middle East power plants to meet rising cooling demand also boosted fuel oil cracks.

**Chart 5: Singapore GRM at 6-quarter high of US\$6.83/bbl in Q2FY20-TD**



Source: Reuters, I-Sec research

**Chart 6: Singapore GRM up sharply in Jul'19; at 47-week high in W.E. 12-Jul'19**



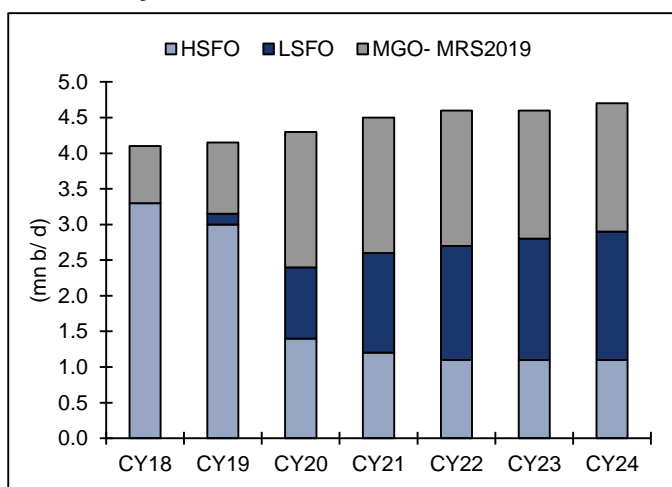
Source: Reuters, I-Sec research

**Boost to diesel demand from IMO likely to sustain GRM strength**

The GRM gains from permanent shutdown of Philadelphia refinery may wane off by early-Sep'19 when US summer driving season ends. However, the IMO-mandated change in sulphur content in marine fuel from Jan'20 is expected to boost diesel demand, cracks and GRM from H2CY19 in general and Q4CY19 in particular. IEA estimates that IMO would boost global diesel demand by:

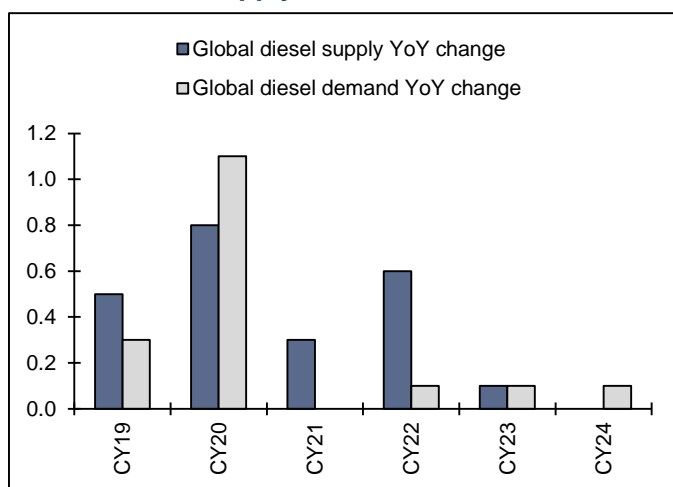
- 0.32m b/d in Q3CY19
- 0.83m b/d in Q4CY19
- 0.9m b/d in CY20

**Chart 7: IEA estimates IMO to boost diesel demand by 0.2-0.9m b/d in CY19-CY20**



Source: IEA, I-Sec research

**Chart 8: IEA estimates diesel demand boosted by IMO to exceed supply in CY20**



Source: IEA, I-Sec research

**Extent of GRM gains from IMO to depend on compliance**

IEA in its base case estimates compliance with IMO-mandated sulphur content in marine fuel at 84% with global diesel demand exceeding supply by 0.1m b/d in CY20 in this scenario. IEA estimates diesel demand exceeding supply by 0.8m b/d if

compliance is 100%. Fall in OECD diesel inventory in CY20 would imply 7%-58% fall in OECD diesel inventory depending on whether compliance is 84% or 100%. Thus, the extent of compliance with IMO norms would significantly determine the extent of boost to diesel cracks and GRM.

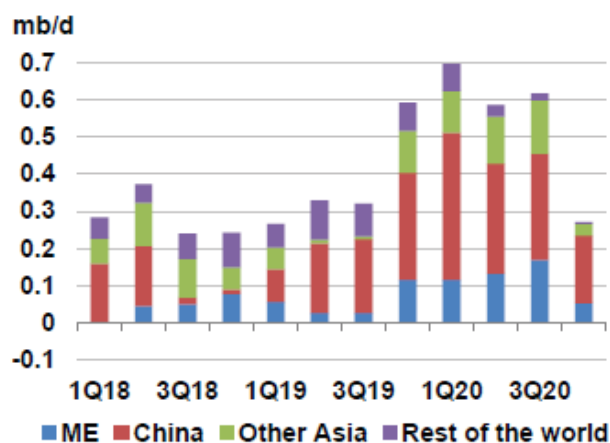
### Large refining capacity addition & weak demand risks to GRM

IEA estimates refining capacity addition at 3.5m b/d to exceed refined products demand growth of 1.6m b/d in CY19-CY20E. Global demand growth being lower than estimated cannot be ruled out.

### IEA estimates refined products supply surplus in 3 quarters of CY20

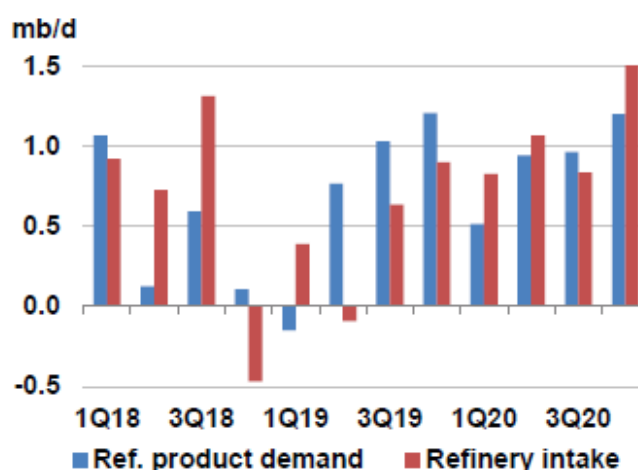
IEA estimates refined products demand growth at 1.0-1.2m b/d to exceed refined products supply growth of 0.6-0.9m in Q3-Q4CY19. It forecasts that, of the 3.5m b/d refining capacity addition in CY19-CY20, peak addition of 1.4m b/d would be in Q4CY19. IEA therefore estimates global refined products supply growth to exceed demand growth in three of the four quarters (except Q3) of CY20.

**Chart 9: Throughput from capacity additions to surge in Q4CY19-Q3CY20**



Source: IEA, I-Sec research

**Chart 10: Demand growth to exceed supply in H2CY19, but supply excess expected in CY20**



Source: IEA, I-Sec research

## Raise OMCs' marketing margin GRM and EPS estimates

### Raise OMCs' FY20 auto fuel net marketing margin estimate by 25%

As discussed, auto fuel net marketing margin:

- Has been strong/super-normal since Q3FY19 at Rs1.3-4.6/l.
- Was super-normal at Rs1.83/l in FY19
- Is super normal at Rs1.89/l in FY20-TD and at Rs1.5/l on 2-Aug'19

Thus, upside to our earlier auto fuel marketing margin estimate of Rs1/l in FY20 appears imminent. We have therefore raised our net auto fuel marketing margin estimate by 25% to Rs1.25/l in FY20. Our revised estimate implies net margin of just Rs0.92/l in the rest of FY20. Further upside to our estimate is not ruled out.

### OMCs' GRM rebounds to US\$5.9-6.6/bbl in Q2-TD; US\$3.5-4/bbl in Q1

We estimate HPCL's and BPCL's Q1FY20 GRM at US\$3.8-4.0/bbl in Q1FY20 after factoring-in inventory loss of US\$0.3-0.4/bbl. IOC has reported GRM of US\$4.69/bbl

including inventory gain of US\$1.1/bbl in Q1FY20. We estimate OMCs' GRM has rebounded to US\$5.9-6.6/bbl in Q2FY20-TD.

**Table 1: Estimate Q1FY20 GRM of OMCs at US\$3.5-4.0/bbl and Q2FY20-TD at US\$5.92-6.56/bbl**

(US\$/bbl)	Q1FY20E	Q2FY20-TD
HPCL	3.84	6.56
BPCL	4.01	6.26
IOC (including inventory gain of US\$1.1/bbl)	4.69	5.92

Source: Reuters, I-Sec research

### IMO likely to boost diesel cracks and keep GRM strong in H2FY20

Diesel cracks have already recovered to US\$14.85/bbl in Q2FY20-TD and were at US\$15.3/bbl in the week ended 2-Aug'19. They are likely to rise as ships increase marine gasoil (MGO) consumption to comply with IMO sulphur specs (0.5% from 3.5%) in marine fuel. Diesel cracks could well rise to US\$20/bbl or higher. However, fuel oil cracks, which are very strong currently, are like to decline sharply as ships switch from high sulphur fuel oil (HSFO) to MGO.

### Refineries shutdown for Euro VI may support GRM but hit volumes

All Indian refineries would be shut down one by one for 15-45 days during Jul'19-Mar'20, as they prepare to comply with Euro VI auto fuel norms from Apr'20. Throughput of Indian refineries is therefore likely to be lower YoY in FY20, which may also support GRM in the rest of FY20.

### Raise OMCs' FY20E-FY21E GRM to US\$5.75-6.75/bbl

As discussed, GRM of OMCs, which have already recovered smartly in Q2FY20-TD, are likely to remain strong due to rise in diesel demand due to IMO. The permanent shutdown of 335k b/d Philadelphia refinery, which reduced diesel and petrol supply by 100-160k b/d respectively has resulted in sharp recovery in GRM. IMO, which IEA expects to boost global diesel demand by 0.83m b/d in Q4CY19 and 0.9m b/d in CY20, could thus boost GRM even more significantly. We have therefore raised HPCL's and BPCL's FY20 GRM estimates to US\$5.75-6.0/bbl from US\$4.5/bbl for both earlier and FY21 GRM estimates to US\$6.25-6.75/bbl from US\$5.0-6.0/bbl earlier.

### Upgrade BPCL / HPCL to BUY / ADD; BPCL top pick

#### BPCL better placed than peers, hence our top pick

BPCL is our preferred pick among OMCs for the following reasons:

- BPCL is likely to gain the most among OMCs if IMO drives GRM strength. IMO is expected to boost diesel cracks but hit fuel oil cracks. BPCL has more diesel and less fuel oil in its product slate than its peers.

**Table 2: BPCL has more diesel and less fuel oil in its product slate than other OMCs**

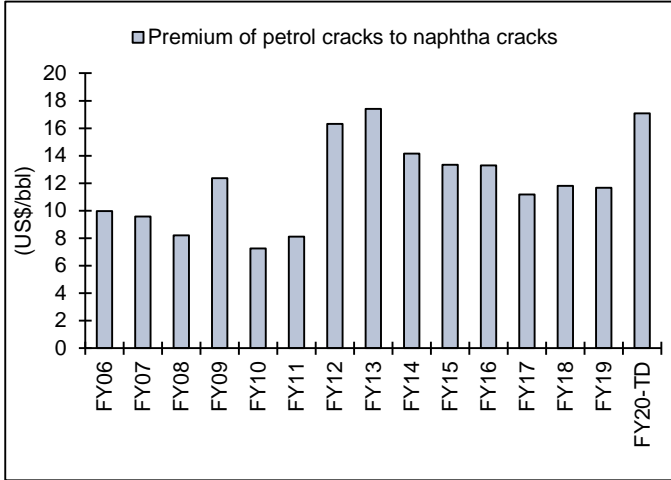
	Share in product slate:		
	HPCL	BPCL	IOC
Diesel	43%	50%	47%
FO	11%	3%	6%

Source: Company data, I-Sec research

- BPCL's GRM would also be boosted by projects, which by mid-FY21 will increase petrol and propylene yield and not produce any naphtha in its Kochi refinery. Petrol

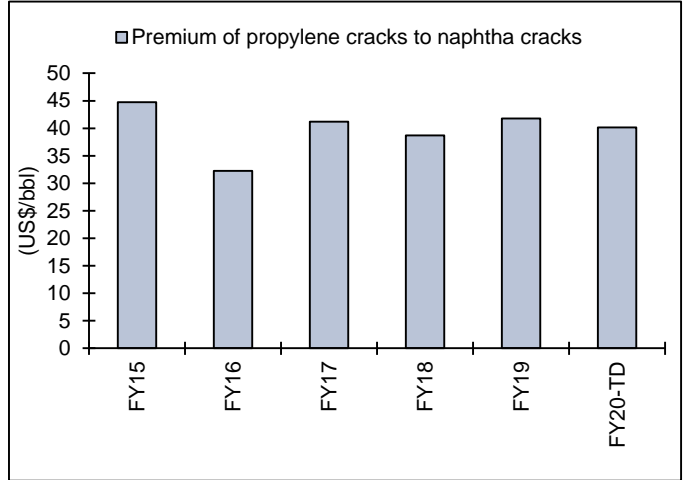
cracks have been at premium of US\$7-17/bbl to naphtha in FY10-FY20-TD and propylene cracks have been at premium of US\$32-45/bbl to naphtha cracks in FY15-FY20-TD.

**Chart 11: Petrol cracks at US\$7-17/bbl premium to naphtha cracks in FY10-FY20-TD**



Source: Reuters, I-Sec research

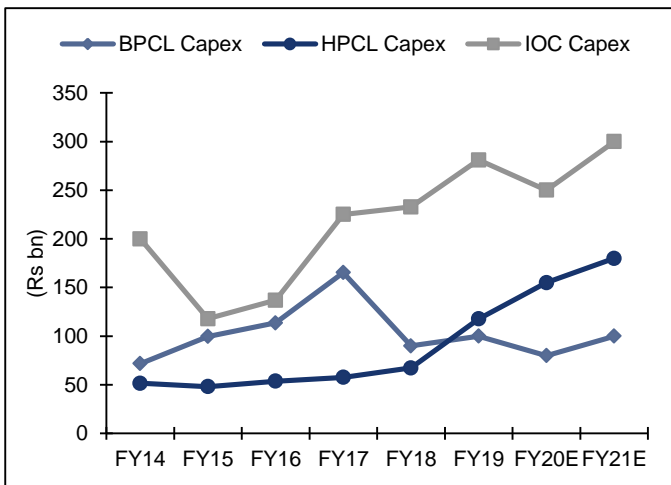
**Chart 12: Propylene cracks at US\$32-45/bbl premium to naphtha cracks in FY15-FY20-TD**



Source: Reuters, Bloomberg, I-Sec research

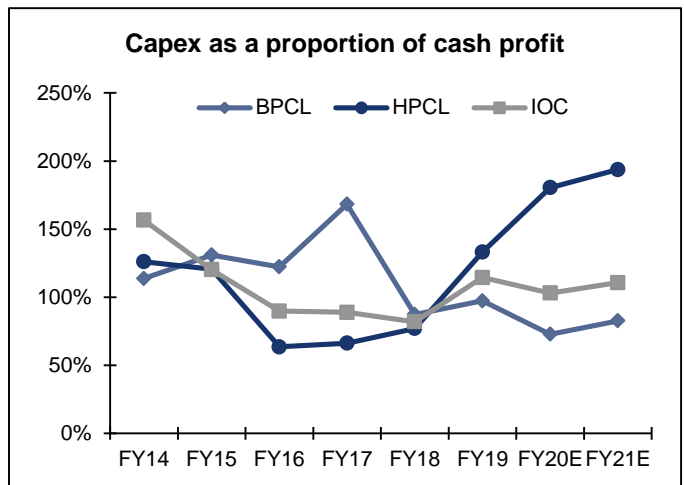
- BPCL would be the least impacted among OMCs from Euro VI related refinery shutdowns and hence likely YoY fall in its throughput would be lower than that of peers. While BPCL is likely to take 15-20 day shutdown, IOC would take 20-30 day shutdown and HPCL 30-45 day shutdown.
- BPCL's high capex phase is done while that of its peers especially HPCL would be in the next two years. BPCL's debt is likely to reduce as its proposed capex would be 73%-83% of its cash profits in FY20E-FY21E. HPCL's debt is likely to rise as its proposed capex would be 180%-194% of its estimated cash profit.

**Chart 13: BPCL's large capex phase is in the past while that of peers is in FY20-FY21**



Source: Reuters, I-Sec research

**Chart 14: BPCL best placed in terms of capex as % of cash profit; IOC better than HPCL**



Source: Reuters, Bloomberg, I-Sec research



## Gol stake sale may hurt stock performance except in case of HPCL

Gol's stake in BPCL stands at 53.3% and that in IOC at 52.2%. In the past Gol would not cut its equity stake in these OMCs below 51%. However, it was announced in the Jul'19 budget that Gol may dilute its stake in PSUs below 51% in cases where other government entities like Life Insurance Corporation (LIC) hold stake. LIC's stake in BPCL and IOC is currently at 5.9%-6.5%. In case of IOC, other oil PSUs like ONGC hold another 19.4%. Gol has set a divestment target of Rs1.05trn for FY20. Gol's lofty divestment target for FY20 and indication that it may reduce its stake in PSUs below 51% has led to concern that it may continue to sell stake in BPCL and IOC through ETFs and QIPs thereby creating a supply overhang. This has and may continue to hurt stock performance of BPCL and IOC. However, HPCL is not impacted as Gol no longer holds any stake in HPCL after it sold its stake to ONGC. However, in the recent correction HPCL has corrected more than its peers – 24% vs 19%-21%.

## EPS and fair value sensitivity analysis

### HPCL to gain most if auto fuel net margins higher than estimated

Auto fuel net margin was Rs1.83/l in FY19 and is Rs1.89/l in FY20-TD while we are assuming net margin at Rs1.25/l in FY20E. **We expect oil prices to be weak in H2FY20 in general and in Q4FY20 in particular; ramp-up in US oil production after resolution of pipeline bottlenecks in the Permian basin are resolved is likely to lead to global oil oversupply and pressure oil prices.** Such an environment is ideal for auto fuel net margins to rise as was the case in Q4FY18. Among OMCs, HPCL would gain the most if auto fuel net margins are higher than our estimate. Upside to FY20E EPS if auto fuel net margins are Rs1.5-1.75/l would be:

- 8.2%-16.3% in case of HPCL
- 7.1%-14.2% in case of BPCL
- 6.4%-12.8% in case of IOC

	BPCL	HPCL	IOC
FY20E EPS if autofuel net margin at			
Rs1.25/l (base case)	43.7	43.4	17.7
Rs1.5/l	46.9	46.9	18.8
Rs1.75/l	50.0	50.4	20.0
Upside to base case EPS if autofuel net margin at			
Rs1.5/l	7.1%	8.2%	6.4%
Rs1.75/l	14.2%	16.3%	12.8%

### BPCL most sensitive to change in GRM among OMCs

We are assuming OMCs' GRM at US\$5.7-6.0/bbl in FY20. Among OMCs, BPCL is the most sensitive to change in GRM. Change in FY20 EPS for US\$1/bbl change in base case GRM would be:

- 18% in case of BPCL
- 16% in case of IOC
- 14% in case of HPCL

	BPCL	HPCL	IOC
FY20E EPS if GRM at			
US\$6/bbl (base case)	43.7	43.4	17.7
Change in EPS for US\$1/bbl change in GRM	18%	14%	16%

**IOC's fair value most sensitive to GRM & HPCL's to marketing margin**

IOC's fair value is the most sensitive to changes in GRM as for every US\$1/bbl change in GRM its fair value would change by 15.5%, while that of both HPCL and BPCL would change by 14.5%-14.6%. HPCL's fair value is the most sensitive to change in auto fuel marketing margin with change at 12.1% for every Rs0.25/l change in net margin while that of IOC and BPCL is 7.1%-7.3%.

	<b>BPCL</b>	<b>HPCL</b>	<b>IOC</b>
Target price/ fair value	412	289	155
Change in fair value for Rs0.25/l change in auto fuel net marketing margin	7.3%	12.1%	7.1%
Change in fair value for US\$1/bbl change in GRM	14.6%	14.5%	15.5%

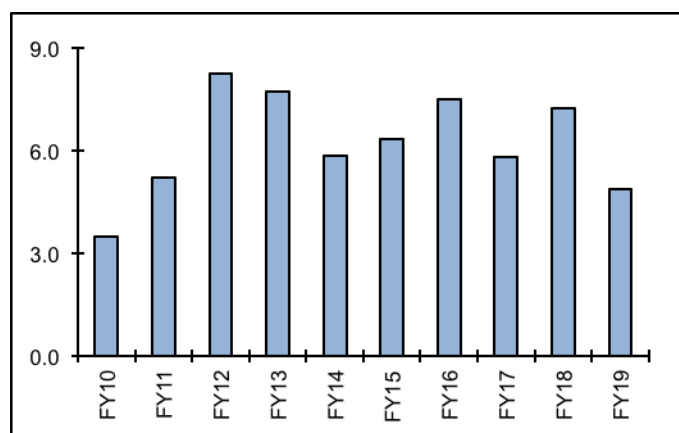
## GRM rebounds; IMO to keep GRM strong up to CY20

Singapore GRM at 9-year low in FY19; at US\$3.3/bbl in H1CY19

### Singapore GRM at 9-year low in FY19; only higher than that after GFC

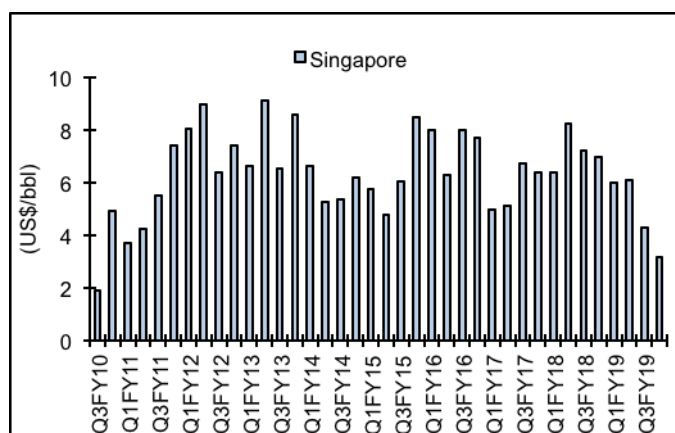
Oil prices fell sharply in CY14 due to global oversupply as OPEC as well as non-OPEC producers led by US continued to increase oil production. Falling oil prices boosted demand for petrol globally in general and in the largest market, the US, in particular. This led to a recovery in GRM from Q3FY15 with Singapore GRM being at US\$7.3/bbl in H2FY15 and US\$7.5/bbl in FY16 boosted by petrol cracks strength. As oil prices surged in FY19, Reuters' Singapore GRM fell to a 9-year low of US\$4.9/bbl in FY19 hit mainly by weakness in petrol cracks. Singapore GRM in FY19 was only lower than the US\$3.5/bbl in FY10 after the global financial crisis (GFC), which triggered global oil demand decline in CY08 and CY09.

**Chart 15: Singapore GRM at 9-year low of US\$4.9/bbl in FY19**



Source: Reuters, I-Sec research

**Chart 16: Singapore GRM at 37-quarter low of US\$3.2/bbl in Q4FY19**



Source: Reuters, I-Sec research

### Singapore GRM at 33-37 quarter lows of US\$4.3-3.2/bbl in Q3-Q4FY19

Singapore GRM was strong at US\$6.0-6.1/bbl in Q1-Q2FY19, but declined to a 33-quarter low of US\$4.3/bbl in Q3FY19. It further declined in Q4FY19 to a 37-quarter low of US\$3.2/bbl, which is the lowest GRM since US\$1.9/bbl in Q3FY10 after the GFC. Singapore GRM recovered but was still weak at US\$3.5/bbl in Q1FY20. The GRM recovery was driven entirely by 2x QoQ rise in petrol cracks on a low base while all other cracks were down QoQ and all, except fuel oil cracks, down YoY.

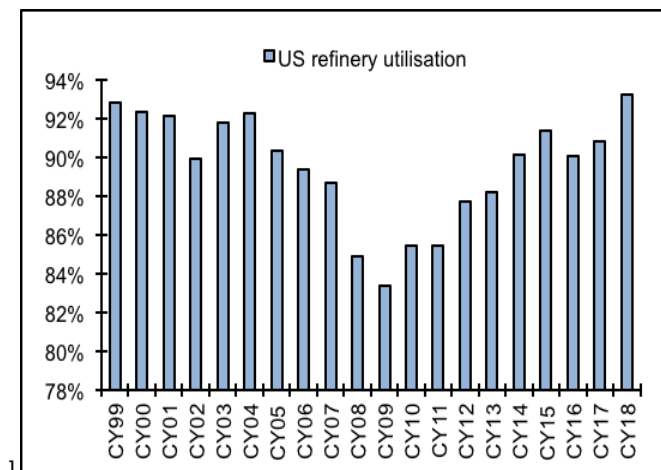
### GRM hit by US & China exports rise, and weak China demand

US refiners have become very competitive due to US oil price being at discount to Brent and Dubai. US refiners are therefore operating at high rates, exporting products to rest of the world and thereby hitting GRM globally. China's petrol and diesel exports are up YoY for the last six consecutive years, which has also hurt GRM. Singapore GRM weakness in the last few quarters was due to:

- US refinery utilisation being at 20-year high in CY18
- US turning net exporter of petroleum products in CY11 and surge in its net exports since then.
- US turning net exporter of petrol in CY17 and its net petrol exports being up 18% YoY in CY18.

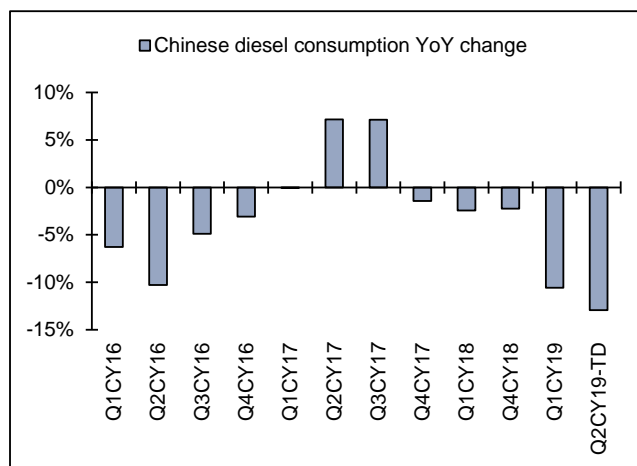
- Chinese petrol and diesel exports rising YoY for the last six consecutive years up to CY18. Exports have been boosted since CY16 by rise in utilisation at its teapot refineries after they were allowed to import crude directly from mid-CY15.
- Chinese diesel demand declining by 4.6%-6.8% YoY in CY18 and by 11.5% YoY in CY19-TD.

**Chart 17: US refinery utilisation were at 20-year high in CY18**



Source: Bloomberg, I-Sec research

**Chart 18: Chinese diesel consumption was down 10.6% YoY in Q1CY19 & 12.9% YoY in Q2CY19-TD**



Source: Bloomberg, I-Sec research

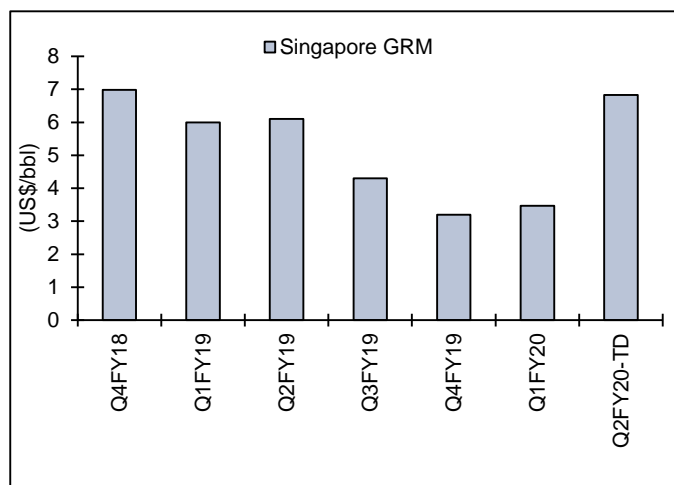
**Singapore GRM recovery to 6-quarter high in Q2FY20-TD**

**Q2FY20-TD Singapore GRM at US\$6.8/bbl up 12% YoY and 97% QoQ**

Reuters' Singapore GRM in the first four weeks of Q2FY20 is at a 6-quarter high at US\$6.83/bbl. Q2FY20-TD Singapore GRM is up:

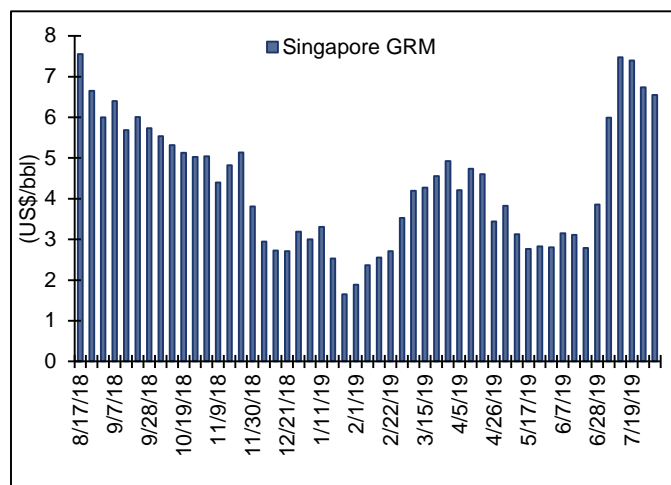
- 12% YoY vs US\$6.1/bbl in Q2FY19.
- 97% QoQ vs US\$3.47/bbl in Q1FY20.

**Chart 19: Singapore GRM is at 6-quarter high of US\$6.83/bbl in Q2FY20-TD**



Source: Reuters, I-Sec research

**Chart 20: Singapore GRM surged to US\$6.86/bbl in Jul'19; at 47-week high in W.E. 12-Jul'19**



Source: Reuters, I-Sec research

### Petrol and fuel oil main drivers of GRM rise; all cracks except LPG up

Reuters' Singapore GRM has surged by 135% from US\$2.79/bbl in the week ended (W.E.) 21-Jun'19 to US\$6.55/bbl in the W.E. 2-Aug'19. Singapore GRM touched a 47-week high of US\$7.47/bbl. GRM recovery has been driven by rise in:

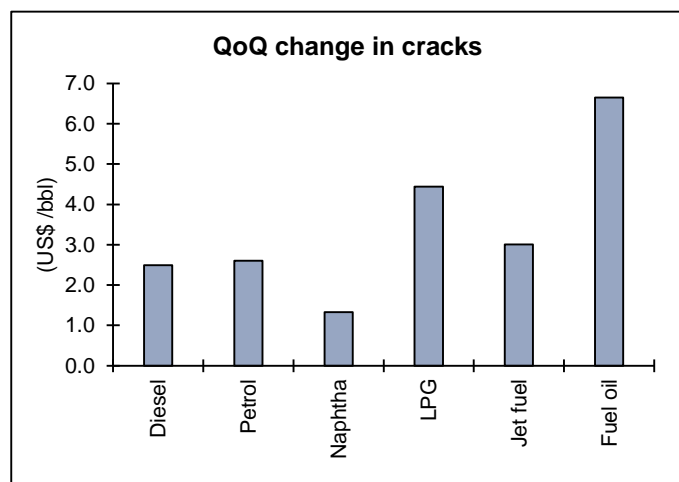
- Petrol cracks by US\$3.9/bbl (78%) from US\$5/bbl to US\$8.9/bbl; it constitutes 32% of Reuters' product slate. Petrol cracks were at a 60-week high in the W.E. 19-Jul'19.
- Fuel oil cracks by US\$5.7/bbl from minus US\$5.1/bbl to US\$0.85/bbl; it constitutes 23% of Reuters' product slate.

Rise in jet fuel and diesel cracks is more modest at US\$2.8-2.9/bbl (22%-23%). They account for 19%-16% of Reuters' product slate.

### All product cracks up US\$1.3-6.7/bbl QoQ in Q2FY20-TD

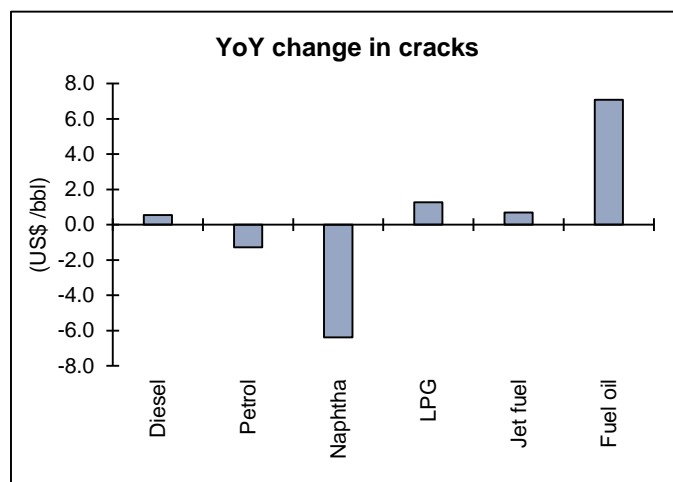
Reuters' Singapore GRM at US\$6.83/bbl in Q2FY20-TD is up 97% QoQ as all product cracks are up QoQ. While fuel oil cracks are up US\$6.7/bbl QoQ, jet fuel cracks are up US\$3.0/bbl QoQ, petrol up US\$2.6/bbl QoQ and diesel cracks up US\$2.5/bbl QoQ.

**Chart 21: All product cracks are up US\$1.4-6.7/bbl QoQ in Q2FY20-TD**



Source: Reuters, I-Sec research

**Chart 22: All product cracks except petrol and naphtha are up YoY in Q2FY20-TD**

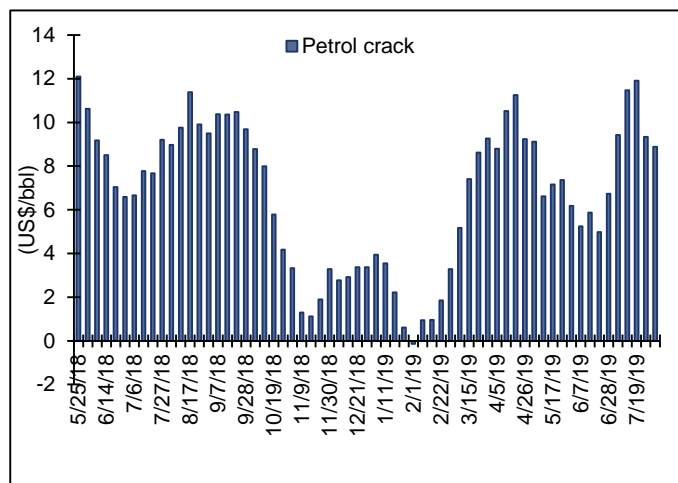


Source: Reuters, I-Sec research

### All product cracks except petrol and naphtha up YoY in Q2FY20-TD

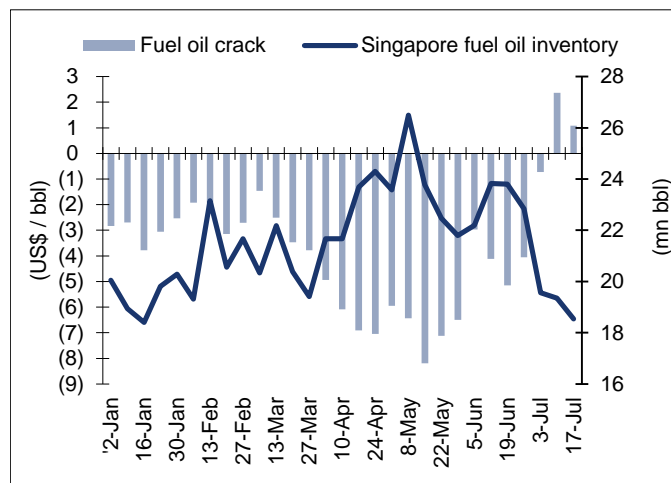
All product cracks except petrol and naphtha are also up YoY in Q2FY20-TD. Petrol and naphtha cracks are down by US\$1.3-6.4/bbl YoY in Q2FY20-TD. The YoY rise in GRM has been driven mainly by fuel oil cracks, which are up US\$7.1/bbl YoY. The YoY rise in most other product cracks is modest.

**Chart 23: Petrol cracks at US\$8.9/bbl last week; 60-week high of US\$11.9/bbl in W.E. 19-Jul'19**



Source: Reuters, I-Sec research

**Chart 24: HSFO cracks were boosted by 29% fall in Singapore inventory over the last five weeks**



Source: Bloomberg, I-Sec research

### GRM boosted by US refinery closure & Singapore FO inventory plunge

Singapore GRM recovery in the last few weeks has been mainly driven by:

- Accident on 21-Jun'19 followed by announcement of permanent closure of 335k b/d Philadelphia refinery during peak petrol demand US driving season, which boosted petrol cracks. This shutdown has reduced petrol and diesel supply on the US east coast by 100-160k b/d and boosted imports.
- Rise in fuel oil cracks due to 29% fall in Singapore (world's biggest bunker port) inventories over the last five weeks due to clearance by suppliers ahead of the IMO-mandated cut in sulphur content from Jan'20.
- Seasonal surge in FO demand from power plants in the Middle East to meet the rising demand for cooling.

### Diesel demand boost due to IMO to support GRM up to CY20

#### Gains from Philadelphia refinery closure may wear off by early-Sep'19

As discussed, permanent closure of 335k b/d Philadelphia refinery from 21-Jun'19 led to a cut in diesel and petrol supply by 100-160k b/d during peak gasoline demand US driving season. The closure has triggered sharp recovery in GRM. The gains to GRM from this shutdown are likely to wane when peak gasoline demand US driving season ends in early-Sep'19.

#### IMO to boost diesel demand by 0.3-0.9m b/d in Q3-Q4CY19 and CY20

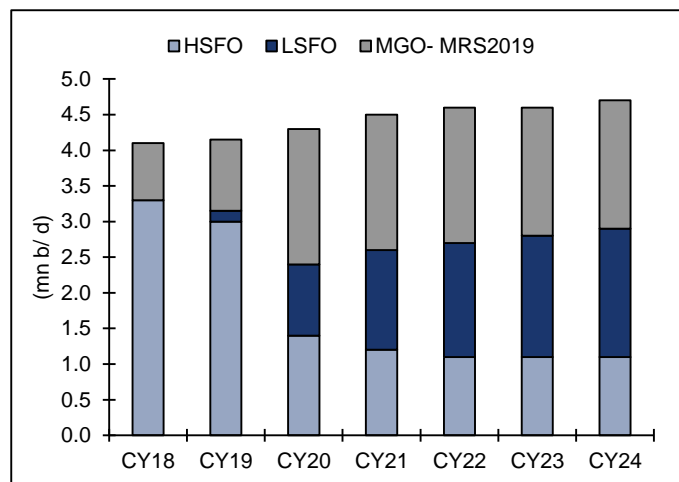
IMO requires ships to switch to marine fuel with sulphur content of 0.5% from 3.5% earlier. IMO-mandated change in sulphur content is expected to boost diesel demand, cracks and GRM. Impact may become visible from H2CY19 as the largest ships and those operating on longest routes are expected to switch to 0.5% sulphur marine fuel from Jul'19 and majority of the global fleet by Oct'19. IEA estimates that IMO would boost global diesel demand by:

- 0.32m b/d in Q3CY19
- 0.83m b/d in Q4CY19
- 0.9m b/d in CY20.

## Non-compliant fuel carriage ban from Mar'20

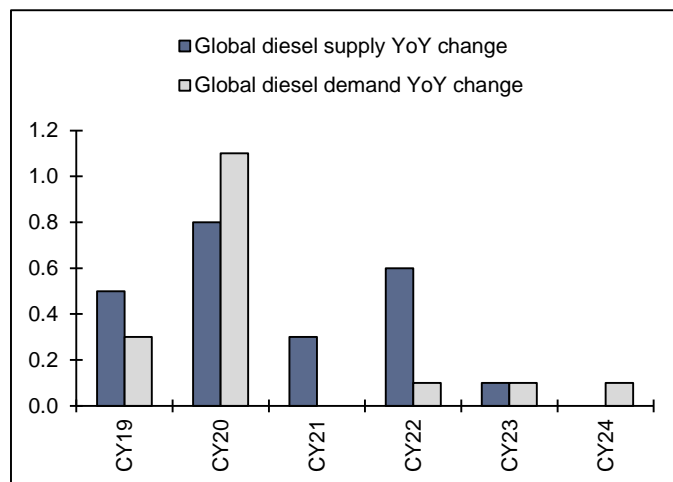
All ships would have to switch to compliant fuel latest by 10-Dec'19. From Mar'20, there would also be non-compliant fuel carriage ban, which implies ships cannot even carry such fuel.

**Chart 25: IEA estimates IMO to boost diesel demand by 0.2-0.9m b/d in CY19-CY20**



Source: IEA, I-Sec research

**Chart 26: IEA estimates diesel demand boosted by IMO to exceed supply in CY20**



Source: IEA, I-Sec research

## MGO demand to rise by 0.2-0.9m b/d in CY19-CY20 driven by IMO

IEA estimates:

- High sulphur fuel oil (HSFO) consumption by ships would decline by 0.3mb/d from 3.3mb/d in CY18 to 3m b/d in CY19 and by a further 1.6m b/d to 1.4m b/d in CY20 assuming 84% compliance.
- Low sulphur fuel oil (LSFO) consumption would rise from zero in CY18 to 0.15m b/d in CY19 and by another 0.85m b/d YoY to 1m b/d in CY20. Supply would be the constraint with not enough LSFO produced to replace HSFO.
- Demand for MGO would rise by 0.2m b/d YoY to 1.0m b/d in CY19 and by a further 0.9m b/d YoY to 1.9m b/d in CY20.

**Table 3: Decline in OECD diesel inventory estimated at 7%-58% in CY20 depending on whether compliance with IMO is 84% or 100%**

(m b/d)	IMO Compliance enforced	
	Not strictly (84%)	Strictly (100%)
OECD middle distillate inventory Dec'18	533	533
Less jet fuel inventory (20%)	107	107
<b>Diesel inventory in Dec'18</b>	<b>426</b>	<b>426</b>
Rise in diesel inventory in CY19	73	73
<b>Diesel inventory in Dec'19</b>	<b>499</b>	<b>499</b>
<b>Fall in diesel inventory in CY20</b>	<b>-36</b>	<b>-292</b>
<b>Diesel inventory in Dec'20</b>	<b>463</b>	<b>207</b>
<b>Fall in diesel inventory in CY20</b>	<b>-7%</b>	<b>-58%</b>

Source: IEA, I-Sec research

## Extent of GRM gains from IMO to depend on compliance

IEA in its base case estimates compliance with IMO-mandated sulphur content in marine fuel at 84%. This is based on the assumption that the US, Europe, Singapore, China, Korea and Japan comply with IMO regulation. In the base case, it estimates global diesel demand to exceed supply by 0.1m b/d in CY20. We estimate it would imply 7% fall in OECD diesel inventory in CY20, which would modestly boost diesel

cracks. IEA believes 100% compliance is very unlikely but, if achieved, diesel demand would exceed supply by 0.8m b/d. This would imply 58% fall in OECD diesel inventory in CY20, which would lead to a surge in diesel cracks. Thus, the extent of compliance with IMO norms would significantly determine the extent of boost to diesel cracks and GRM.

### Indian refineries shutdown for Euro VI may also support GRM

All Indian refineries would be shut down one by one for 15-45 days during Jul'19-Mar'20, as they prepare to comply with Euro VI auto fuels from Apr'20. IOC has indicated its throughput may decline by 5% YoY due to Euro-VI compliance in FY20. Lower Indian crude throughput may also support GRM in Q2-Q4FY20.

### GRM may remain strong in H2, but supply surge may hit in CY20

#### Refining capacity addition to exceed demand growth in CY19-CY20

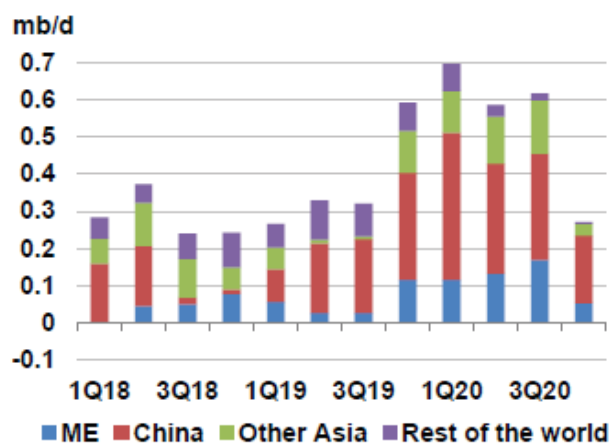
IEA estimates refining capacity addition at 3.5m b/d to exceed refined products demand growth of 1.6m b/d in CY19-CY20E. IEA estimates:

- Refining capacity addition of 2.4m b/d vs demand growth of 0.7m b/d in CY19
- Refining capacity addition of 1.1m b/d vs demand growth of 0.9m b/d in CY20

#### Throughput from capacity addition to be high in Q4CY19-Q3CY20

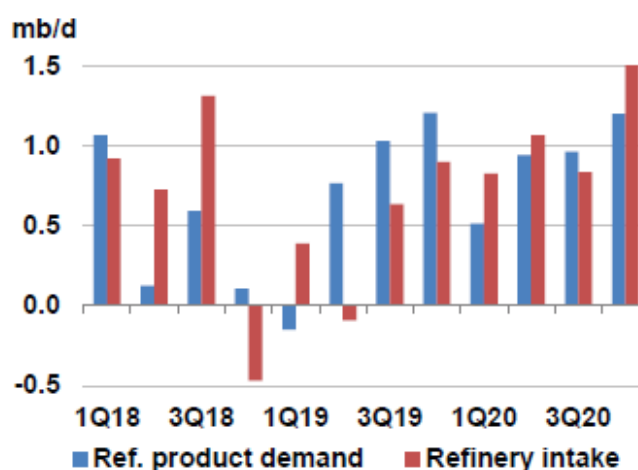
IEA estimates that of the 3.5m b/d refining capacity addition in CY19-CY20, peak addition of 1.4m b/d would be in Q4CY19. Assuming rolling averages of capacity addition over four quarters, IEA estimates rise in throughput from capacity additions of just 0.25-0.35m b/d in Q1-Q3CY19. It estimates incremental crude throughput from capacity additions to be high at 0.55-0.7m b/d in Q4CY19-Q3CY20.

**Chart 27: Throughput from capacity additions to surge in Q4CY19-Q3CY20**



Source: IEA, I-Sec research

**Chart 28: Demand growth to exceed supply in H2CY19, but supply excess expected in CY20**



Source: IEA, I-Sec research

### GRM may remain strong in H2CY19 as demand growth exceeds supply

IEA estimates refined products demand growth to exceed refined products supply growth in Q3-Q4CY19. It estimates refined products demand growth at 1.0-1.2m b/d and refinery throughput increase at 0.6-0.9m b/d implying supply deficit of 0.4m b/d and 0.3m b/d in Q3 and Q4CY19 respectively. This would augur well for GRM outlook. IEA expects refined products demand growth to exceed throughput from refining capacity additions in Q3-Q4CY19 due to:



- IMO boosting diesel demand by 0.32-0.83m b/d in Q3-Q4CY19
- Low throughput from refining capacity additions in Q3CY19 as big chunk of refining capacity addition of 1.4m b/d is expected only in Q4CY19

### **H2CY19 demand growth may disappoint; H1 demand growth was weak**

Refined products demand growth in Q3-Q4CY19 may be lower than IEA's estimate of 1.0-1.2m b/d given the lacklustre demand trend in H1CY19; refined products demand was down 0.15m b/d in Q1CY19 while it was up by 0.75m b/d in Q2. IEA estimates Chinese oil demand growth to recover to 0.51m b/d in H2CY19 vs growth of just 0.18-0.32m b/d in Q1-Q2CY19. IEA estimates IMO to drive strong diesel growth in H2CY19, but may not be factoring-in weakness/decline in onland demand growth in H1CY19 continuing in H2CY19. In Jan-May'19, Chinese diesel consumption was down 11.5% YoY while IEA estimates that US petrol and diesel consumption was also down YoY in H1CY19. Indian diesel consumption growth has decelerated from 3.5% YoY in Q1CY19 to 2.1% YoY in Q2CY19.

### **Supply growth to exceed demand growth in three quarters of CY20**

IEA estimates refined products supply growth to exceed demand rise in three of the four quarters of CY20. IEA estimates refined products supply rise at:

- 0.85m b/d to exceed demand rise of 0.5m b/d in Q1CY20
- 1.05m b/d to exceed demand rise of 0.9m b/d in Q2CY20
- 1.5m b/d to exceed demand rise of 1.2m b/d in Q4CY20
- 0.85m b/d to lag demand growth of 0.95m b/d in Q3CY20

### **Large capacity addition may pull utilisation down and hit GRM in CY20**

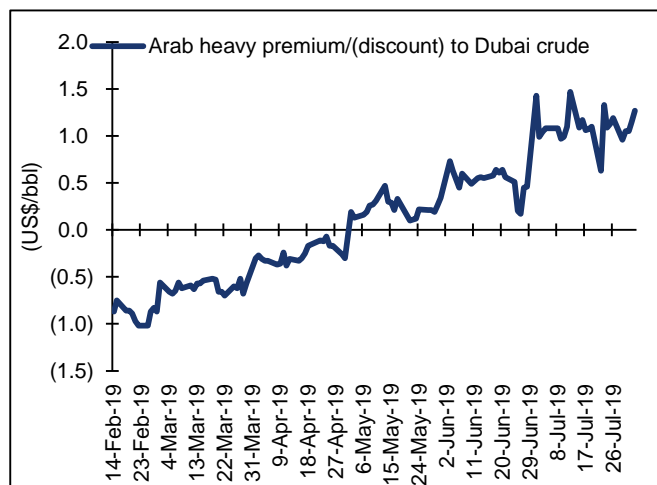
As discussed, IEA estimates global net refining capacity addition of 3.5m b/d to be more than 2x of global refined products demand growth of 1.6m b/d in CY19-CY20. As a large chunk of the 2.4m b/d refining capacity addition in CY19 would be in Q4 at 1.4m b/d, the impact of supply from this addition would be far more significant in CY20 than in CY19. Much weaker refined products demand growth than potential incremental supply from capacity addition would mean global refining capacity utilisation will decline in CY20, thereby hurting CY20 GRM outlook. Refined products supply rise of 0.5m b/d is likely to lag demand rise of 0.7m b/d in CY19, but supply rise of 1.1m b/d is likely to exceed demand rise of 0.9m b/d in CY20.

### **Light-heavy crude spread may remain low even in CY20**

#### **Arab heavy crude at premium to Dubai since May'19**

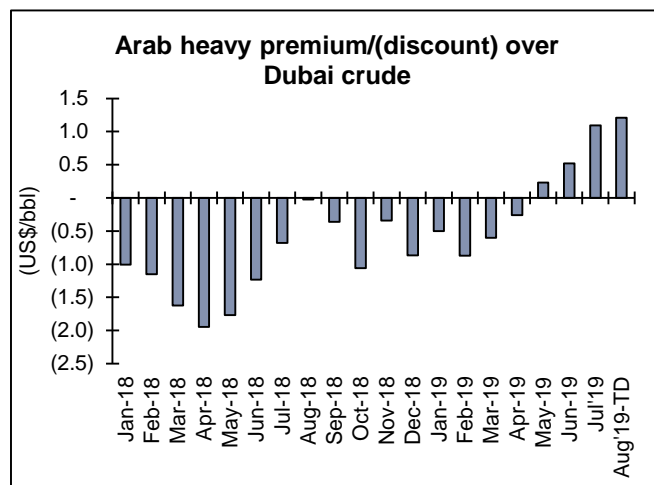
Decline in heavy crude supply from Iran, Venezuela and strong FO cracks have led to Arab heavy crude trading at premium to lighter Dubai crude. Arab heavy premium to Dubai has expanded from US\$0.2/bbl in May'19 to US\$0.5/bbl in Jun'19 and US\$1.1/bbl in the week ended 2-Aug'19. This does not augur well for GRM of complex refineries.

**Chart 29: Arab heavy at premium to lighter Dubai in most of Q1FY20 & throughout Q2FY20-TD**



Source: Reuters, I-Sec research

**Chart 30: Arab heavy at premium to lighter Dubai since May'19**



Source: Reuters, I-Sec research

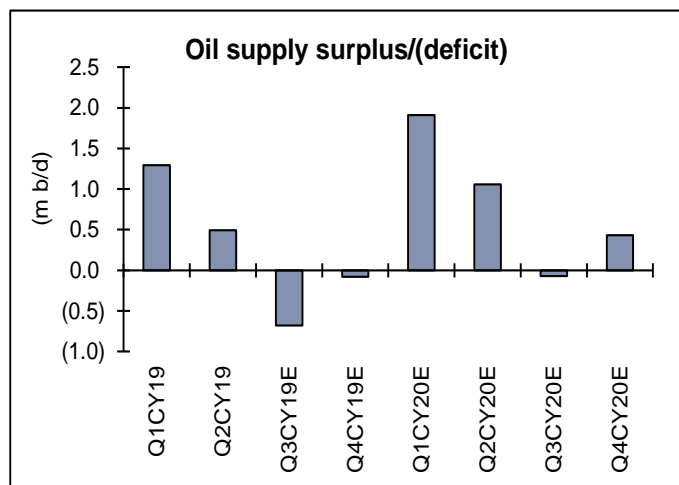
**Call on OPEC oil likely to fall in CY20**

IEA estimates call on OPEC oil at:

- 28m b/d in Q1CY19
- 28.9m b/d in Q2CY19
- 30m b/d in Q3CY19
- 29.5m b/d in Q4CY19

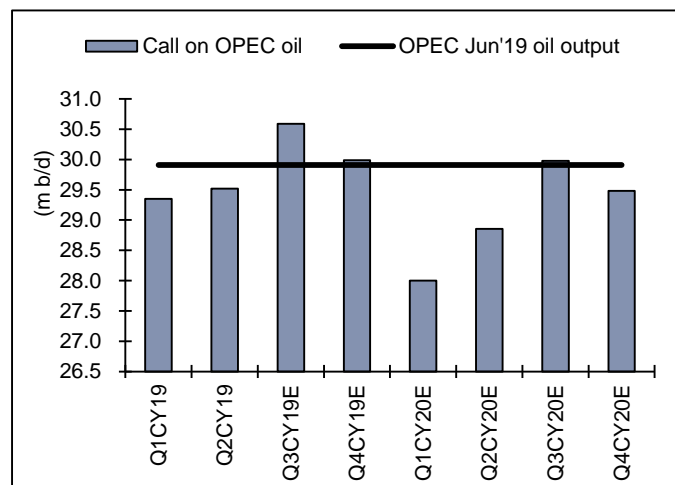
OPEC oil output was at 29.91m b/d in Jun'19. This implies call on OPEC oil at 28.0-29.5m b/d would be lower than its Jun'19 output in Q1, Q2 and Q4CY19. Call on OPEC oil would be 29.1m b/d in CY20 down from 29.9m b/d in CY19.

**Chart 31: Global supply deficit 0.7m b/d in Q3CY19 but 1.1-1.9m b/d surplus in Q1-Q2CY120E**



Source: IEA, I-Sec research

**Chart 32: Call on OPEC oil at 28-29.5m b/d in 3 of 4 quarters of CY20 lower than Jun'19 output of 29.9m b/d**



Source: IEA, I-Sec research

**OPEC may cut output further in CY20 to prevent large over-supply**

As discussed call on OPEC oil at 29.1m b/d in CY20 would be 0.8m b/d lower than OPEC's oil output of 29.9m b/d in Jun'19. In three of the four quarters of CY20, call on OPEC oil would be lower than OPEC's Jun'19 output by 0.4-1.9m b/d. There would therefore be pressure on OPEC to cut output further to prevent large global over-supply and plunge in oil prices. OPEC would need to cut output by as much as 1.9m b/d in Q1CY20 and 1.1m b/d in Q2CY20 to prevent global over-supply.

**OPEC cutting output does not augur well for light-heavy crude spread**

Outlook for light-heavy crude spread does not appear to be good in CY20 as:

- OPEC cutting output of its medium/heavy crude would reduce global medium/heavy crude supply.
- Surge in US light and sweet shale output on resolution of Permian basin pipeline bottleneck would boost supply of light and sweet crude.

If Iran and Venezuela's heavy crude output remains subdued it would also not augur well for light-heavy crude spread in CY20.

## Auto fuel marketing margin to be strong in FY20

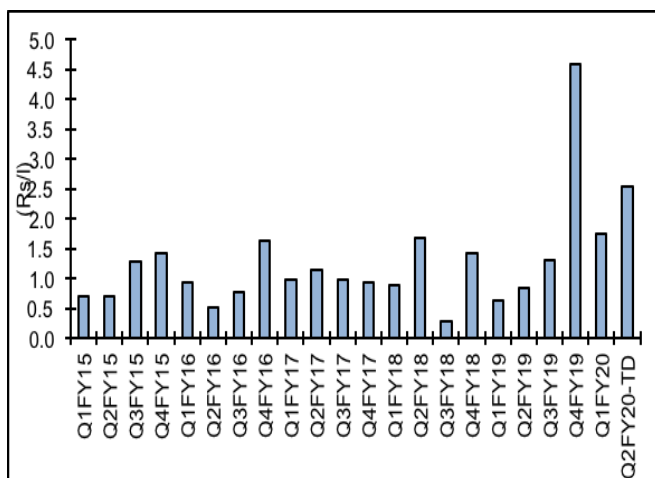
Auto fuel net marketing margin super-normal in FY19 & FY20-TD

**Auto fuel net margin ~Rs1/l in FY15-FY18; subsidized in FY06-H1FY15**

Auto fuels petrol and diesel were deregulated in Apr'02 and deregulation worked well in FY03 and FY04. A secular rise in oil prices coinciding with a weak government meant auto fuels were somehow kept deregulated in FY05 and deregulation was eventually derailed in FY06. A stronger government in power in May'09 meant petrol was deregulated again in Jun'10 and has remained deregulated since then. Diesel was deregulated in Oct'14 and has remained deregulated since. Thus both auto fuels were subsidised in FY06 to Q1FY11 and diesel until Q2FY15. Net auto fuel marketing margin was ~Rs1/l in FY15-FY18 as follows:

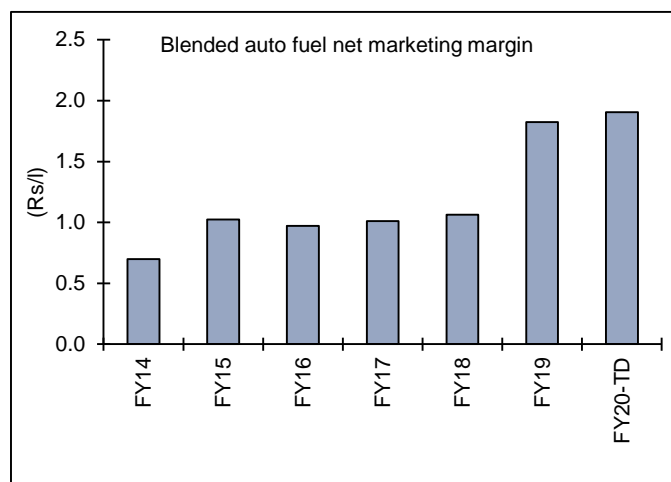
- Rs1.03/l in FY15.
- Rs0.97/l in FY16.
- Rs1.01/l in FY17.
- Rs1.07/l in FY18.

**Chart 33: Net auto fuel marketing margin, which was weak in H1FY19, super-normal since Q4FY19**



Source: Reuters, I-Sec research

**Chart 34: Net marketing margin super-normal Rs1.8-1.89/l in FY19-FY20-TD vs ~Rs1/l in FY15-18**



Source: Reuters, I-Sec research

### Net auto fuel marketing margin super-normal in FY19 on surge in H2

Net auto fuel marketing margin, which was weak at Rs0.62-0.83/l in Q1-Q2FY19, recovered to Rs1.3/l in Q3FY19 and then surged to super-normal level of Rs4.59/l in Q4FY19. In a falling oil price environment the full benefit of falling prices was not passed on to consumers leading to super-normal margins in Q4FY19. Very high net marketing margin in Q4FY19 took average net margin to super-normal level of Rs1.83/l in FY19 vs Rs0.97-1.07/l in FY15-FY18.

### Net margin super-normal at Rs1.89/l in FY20-TD

Net margin is also super-normal at Rs1.89/l in FY20-TD. Net auto fuel marketing margin was Rs1.75/l in Q1FY20 and is at Rs2.27/l in Q2FY20-TD and at Rs1.5/l on 2-Aug'19.

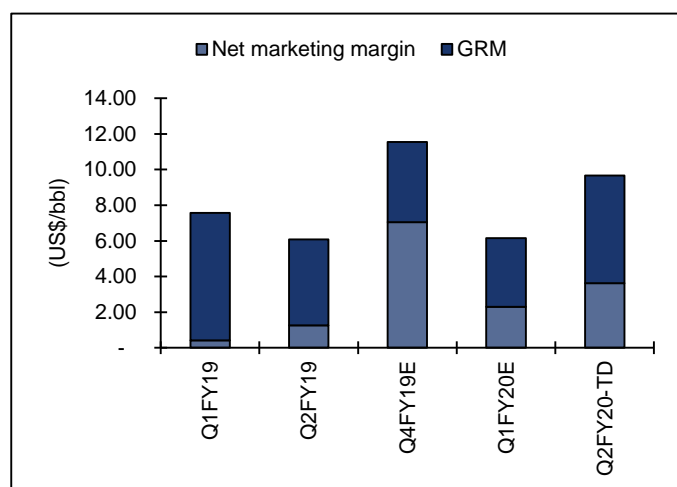
**Table 4: Q2FY20-TD auto fuel net marketing margin at Rs2.27/l, up 173% YoY and 29% QoQ, and FY20-TD at Rs1.89/l, up 4% YoY**

(Rs/l)	Diesel	Petrol	Blended
<b>Net marketing margin</b>			
Q2FY20-TD	2.69	0.98	2.27
QoQ change	12%	-548%	29%
YoY change	177%	141%	173%
Q1FY20	2.40	-0.22	1.75
QoQ change	-50%	NM	-62%
YoY change	234%	NM	182%
FY20-TD	2.48	0.10	1.89
YoY change	29%	-94%	4%
FY19	1.93	1.51	1.83
FY18	1.06	1.10	1.07
YoY change	81%	37%	70%

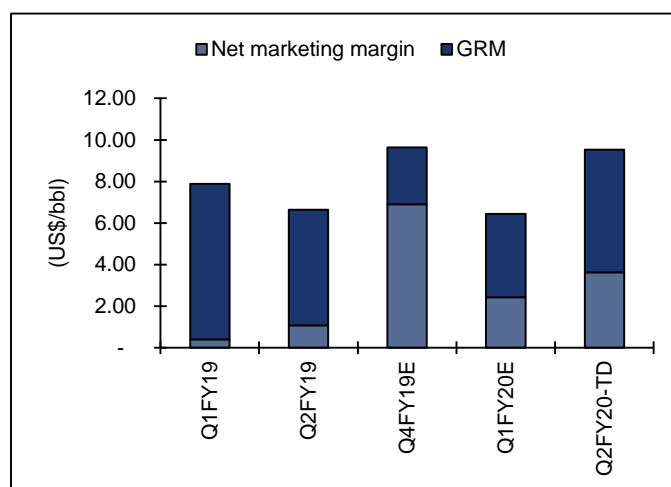
Source: PPAC, I-Sec research

**Q2FY20-TD integrated margin up QoQ & YoY; down in Q1****OMCs' Q1FY20E integrated margin down QoQ and YoY**

Q1FY20E integrated GRM and net marketing margin of OMCs at US\$6.0-6.4/bbl is down 18%-43% YoY and 33%-47% QoQ. While marketing margin is down QoQ but up YoY, OMCs' Q1FY20 GRM is estimated to be down both QoQ and YoY.

**Chart 35: HPCL's integrated margin at US\$9.7/bbl in Q2FY20-TD vs US\$7.6/bbl in Q1FY19**

Source: PPAC, company data, I-Sec research

**Chart 36: BPCL's integrated margin at US\$9.5/bbl in Q2FY20-TD vs US\$7.9/bbl in Q1FY19**

Source: PPAC, company data, I-Sec research

**OMCs' integrated margin in Q2FY20-TD up YoY and QoQ**

Integrated GRM and net marketing margin of OMCs at US\$9.0-9.7/bbl in Q2FY20-TD is up 48%-57% QoQ and 15%-59% YoY. OMCs' marketing margin is up QoQ as well as YoY; their GRM in Q2FY20-TD is estimated to be up QoQ as well as YoY.

## Q1FY20 consumption decline not all negative

Petrol volume growth strong; diesel growing but growth weak

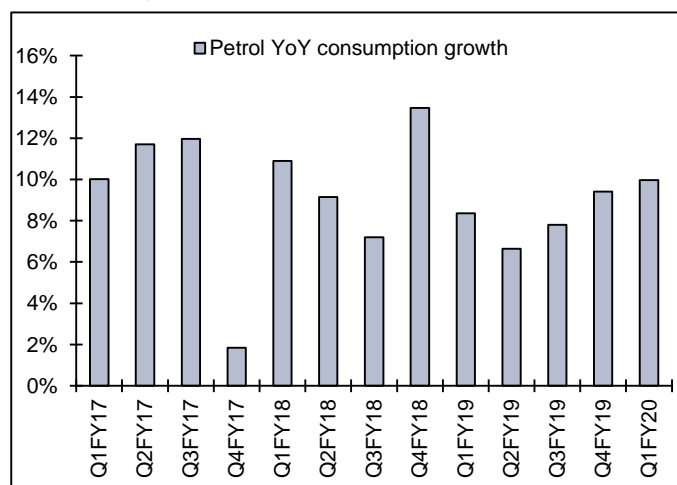
### Petroleum product consumption down 0.2% YoY in Q1FY20

India's petroleum product consumption was down 1.7% YoY in Jun'19 and 0.2% YoY in Q1FY20. Consumption was up 2.6% YoY in Apr'19 but down 1.5% YoY in May'19.

### Petrol demand growth at 5-quarter high in Q1FY20; stronger than FY19

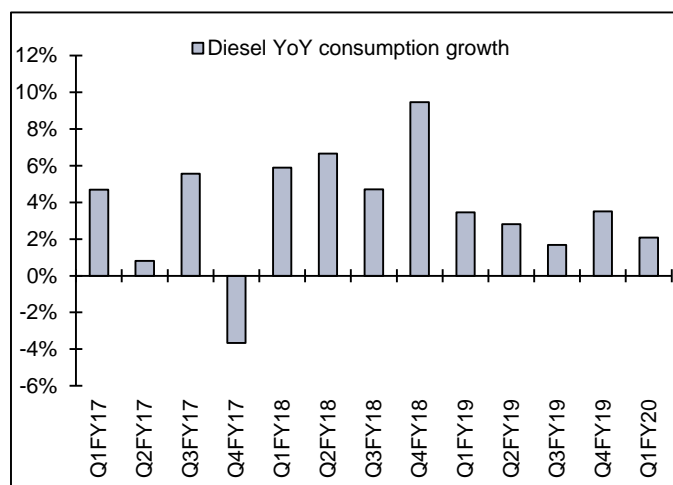
India petrol consumption growth at 10% YoY in Q1FY20 is the strongest in five quarters. India's petrol consumption growth in FY20-TD at 10% YoY is stronger than 8.1% YoY in FY19.

**Chart 37: Indian petrol consumption growth at 5-quarter high of 10% YoY in Q1FY20**



Source: PPAC, company data, I-Sec research

**Chart 38: Diesel demand growth at 2.1% YoY in Q1FY20 weaker than 3.5% YoY in Q4FY19**



Source: PPAC, company data, I-Sec research

### Q1FY20 diesel demand growth at 2.1% YoY weaker than in FY19

Indian diesel consumption growth at 2.1% YoY in Q1FY20 is weaker than 3.0% YoY in FY19. Demand growth was last weaker than in Q1FY20 at 2% YoY in Q3FY19.

### Subsidised fuels demand fall in Q1FY20 is good news

#### LPG consumption down 1.5% YoY in Q1FY20; first fall in a long time

LPG consumption was down 7.1% YoY in Jun'19 and 1.5% YoY in Q1FY20. This is the first quarterly decline in LPG consumption in a very long time. LPG consumption was up 6.8% YoY in FY19 and up 0.9%-11.7% YoY in Q1-Q4FY19.

#### LPG penetration ~96% due to PMUY; growth likely to slow in FY20

LPG penetration has risen due to Prime Minister Ujjwala Yojana (PMUY). Under PMUY 72m connections out of the target of 80m connections were given as of Mar'19. The balance 8m connections are estimated to be given in H1FY20. It appears LPG demand decline in Q1FY20 is due to high penetration of well over 90%.

## Kerosene consumption fall in Q1FY20 steeper than in FY19

India's kerosene consumption is down 13.4% YoY in Q1FY20 and 10.1% YoY in FY19. Kerosene consumption has been declining for at least the last 13 quarters.

## Q1FY20 kerosene consumption down 50%-54% on 3-4 year ago levels

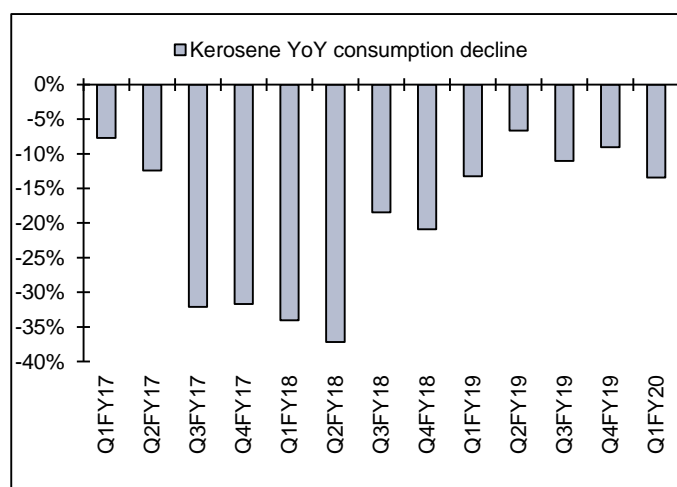
Indian kerosene consumption in Jun'19 is down 51%-54% over Jun'16 and Jun'15 levels. Q1FY20 kerosene consumption is down 50%-54% over Q1FY17 and Q1FY16 levels. FY19 kerosene consumption is down 36% over levels in FY17 and 49% over levels in FY16.

## Multi-pronged strategy led to slump in subsidised kerosene demand

Kerosene is subsidised in India for below poverty line (BPL) families, who use it either for cooking or lighting. However, there is leakage of subsidised kerosene from the system, which is then used for adulteration of petrol and diesel. Govt put in place the following multi-pronged strategy to stop the leakage of subsidised kerosene:

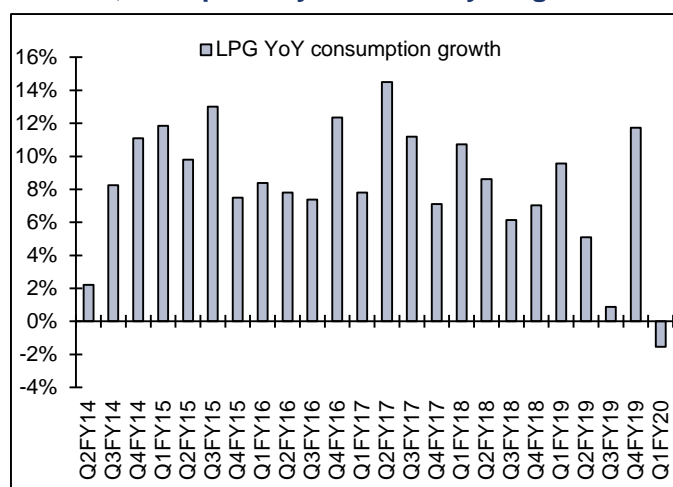
- Weeding out of millions of fake or duplicate ration cards against which subsidised kerosene is supplied to BPL families
- Supply of LPG to erstwhile kerosene users under *Pradhan Mantri Ujwal Yojana*
- Electrification of 18,374 villages since Aug'14
- Direct Benefit rollout (DBT) for kerosene subsidy in some states

**Chart 39: Kerosene demand YoY fall at 13.4% YoY in Q1FY20 vs 9.0% YoY in Q4**



Source: PPAC, company data, I-Sec research

**Chart 40: LPG consumption down 1.5% YoY in Q1FY20; first quarterly fall in a very long time**



Source: PPAC, company data, I-Sec research

## Fall in LPG & kerosene demand in Q1FY20 implies lower subsidy

LPG and kerosene consumption decline by 1.5%-13.4% YoY in Q1FY20 is a positive as low volumes would imply lower subsidy; OMCs' marketing margins on LPG and kerosene are also negative or low.

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Company update and  
reco change

## Oil & Gas

Target price: Rs412

### Earnings revision

(%)	FY20E	FY21E
Sales	↓ 23.8	↓ 29.1
EBITDA	↑ 13.2	↑ 15.8
EPS	↑ 25.9	↑ 12.5

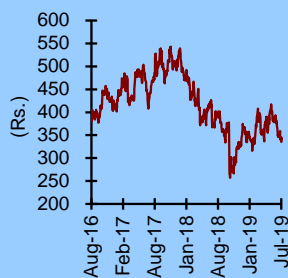
### Target price revision

Rs412 from Rs383

### Shareholding pattern

	Dec '18	Mar '19	Jun '19
Promoters	53.9	53.3	53.3
Institutional investors	30.6	31.0	31.0
MFs and others	9.0	8.0	8.3
Banks / FIs	0.2	0.2	0.2
Insurance Cos.	6.8	7.2	7.2
FII	14.6	15.6	15.3
Others	15.5	14.7	15.7

### Price chart



### Research Analysts:

#### Vidyadhar Ginde

vidyadhar.ginde@icicisecurities.com  
+91 22 6637 7274

#### Mohit Mehra

mohit.mehra@icicisecurities.com  
+91 22 6637 7386

# INDIA

## Bharat Petroleum Corporation

### BUY

Upgrade from Hold

Best positioned to gain from improved outlook

### Rs342

Auto fuel net marketing margin is supernormal in FY20-TD (as in FY19). Singapore GRM (US\$3.3/bbl in H1CY19) has recovered to US\$6.8/bbl in Q2FY20-TD. Sulphur content change in marine fuel mandated by IMO is likely to boost diesel demand and cracks until CY20-end. Bharat Petroleum (BPCL) would gain the most among OMCs as it has more diesel in its product slate than peers. BPCL is also boosting its petrol output and diversifying into petrochemicals, which too would shore up its GRM and earnings. We have raised FY20E-FY21E GRM by 33%-13% and marketing margin by 25%, which has led to upgrade in FY20E-FY21E EPS by 26%-12% and target price by 8% to Rs412 (20% upside). We upgrade BPCL to BUY from *Hold*. The stock is our top pick among OMCs.

- Auto fuel marketing margins super-normal; GRM outlook has improved:** Auto fuel net marketing margin in FY19 was super-normal at Rs1.83/l (72%-88% higher than the 'normal' level in FY15-FY18). It remains super-normal at Rs1.89/l in FY20-TD. The re-election of a strong government, during whose last tenure margin was strong, augurs well for marketing margin outlook. Likely weakness in oil prices due to global oversupply in Q4FY20 also may boost marketing margins like in Q4FY19. Reuters' Singapore GRM, which was weak at US\$3.3/bbl in H1CY19, has recovered to US\$6.8/bbl in Q2FY20-TD driven by permanent shutdown of 335k b/d US east coast refinery. IMO-mandated change in sulphur in marine fuel is estimated to boost diesel demand by 0.2-0.9m b/d and reduce fuel oil demand by 0.3-1.6m b/d in CY19-CY20. GRM outlook would thus improve for refiners producing more diesel and less, or no, fuel oil. Weaker than expected demand and large refining capacity additions are risks to GRM.
- Best placed to gain from strong diesel cracks; projects to improve product slate:** BPCL has more diesel and less fuel oil in its product slate than peers. BPCL is thus best placed among OMCs to gain from GRM strength due to IMO. Company is also implementing projects that increase petrol production and produce propylene derivatives instead of naphtha at its Kochi refinery. These projects would boost GRM as petrol (US\$7-17/bbl in FY10-FY20-TD) and propylene (US\$32-45/bbl in FY15-FY20-TD) cracks consistently have been at premium to naphtha cracks. BPCL's large capex phase (Rs80bn-100bn in FY20E-FY21E vs Rs165bn in FY17) is behind us unlike some of its peers. BPCL's throughput would also be less impacted than peers by Euro VI related shutdown in FY20.
- Raise FY20E-FY21E EPS, target price and upgrade to BUY:** We have raised our FY20E-FY21E auto fuel net marketing margin estimates by 25% to Rs1.25/l (vs Rs1.89/l in FY20-TD); our revised estimate may prove to be conservative. We have also raised FY20E-FY21E GRM estimates of BPCL by 33%-13% to US\$6.0-6.75/bbl. This has meant upgrade in FY20E-FY21E EPS by 26%-12% and our target price (6x FY20E EV/EBITDA) by 8% to Rs412 (20% upside). We upgrade BPCL to **BUY** (from *Hold*).

Market Cap	Rs743bn/US\$10.7bn	Year to March	FY18	FY19P	FY20E	FY21E
Reuters/Bloomberg	BPCL.BO/BPCL IN	Revenue (Rs mn)	2,793,127	3,408,792	3,384,477	3,232,914
Shares Outstanding (mn)	2,169.2	Net Income (Rs mn)	90,086	78,023	86,036	112,270
52-week Range (Rs)	417/257	EPS (Rs)	45.8	39.7	43.7	57.1
Free Float (%)	46.7	% Chg YoY	-4.1%	-13.4%	10.3%	30.5%
FII (%)	15.3	P/E (x)	7.5	8.6	7.8	6.0
Daily Volume (US\$'000)	30,235	CFPS (Rs)	57.9	56.0	60.5	75.3
Absolute Return 3m (%)	(9.5)	EV/E (x)	6.2	7.5	5.6	4.4
Absolute Return 12m (%)	(10.3)	Dividend Yield (%)	1%	2%	2%	2%
Sensex Return 3m (%)	(4.1)	RoCE (%)	18%	15%	14%	15%
Sensex Return 12m (%)	1.2	RoE (%)	27%	21%	20%	22%

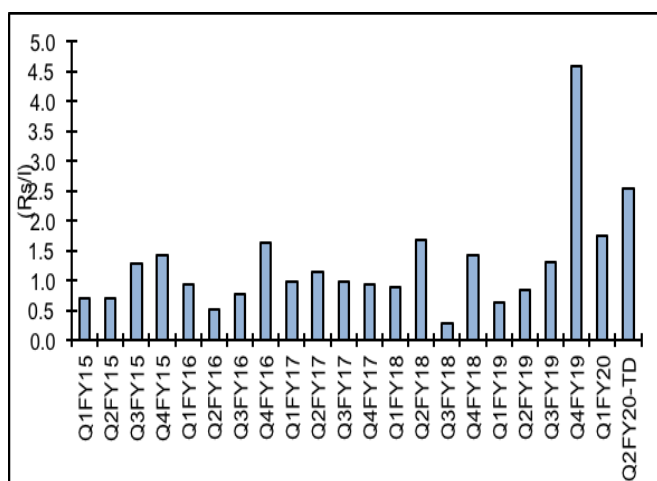
## BPCL best positioned to gain from improved outlook

Marketing margin super-normal; recent GRM recovery to sustain

### Net auto fuel marketing margin super-normal in FY19 and FY20-TD

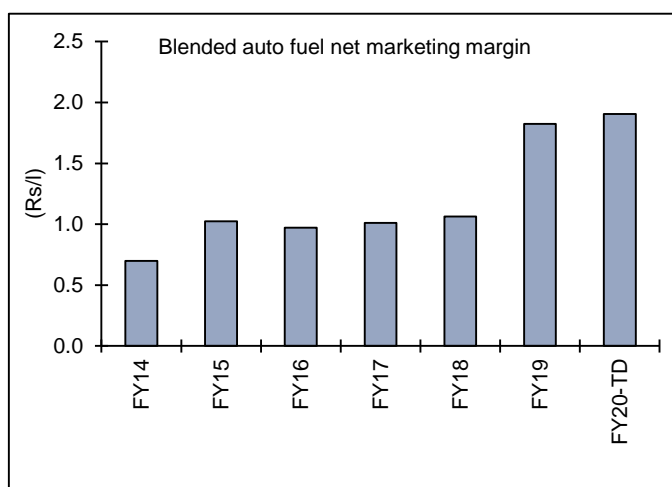
Net auto fuel marketing margin was supernormal in FY19 at Rs1.83/l, which is 72%-88% higher than normal margin of Rs0.97-1.06/l in FY15-FY18. Net margin was weak at Rs0.62-0.83/l in Q1-Q2FY19, but recovered to Rs1.3/l in Q3FY19 and then surged to a super-normal level of Rs4.59/l in Q4FY19 as full benefit of falling prices was not passed on to consumers. Net margin is also super-normal at Rs1.89/l in FY20-TD. Net auto fuel marketing margin was Rs1.75/l in Q1FY20 and is at Rs2.27/l in Q2FY20-TD and at Rs1.5/l on 2-Aug'19.

**Chart 1: Net auto fuel marketing margin, which was weak in H1FY19, super-normal since Q4FY19**



Source: Reuters, I-Sec research

**Chart 2: Net marketing margin at a super-normal Rs1.8-1.89/l in FY19-FY20-TD vs ~Rs1/l in FY15-18**



Source: Reuters, I-Sec research

### Marketing margin outlook good as strong government re-elected

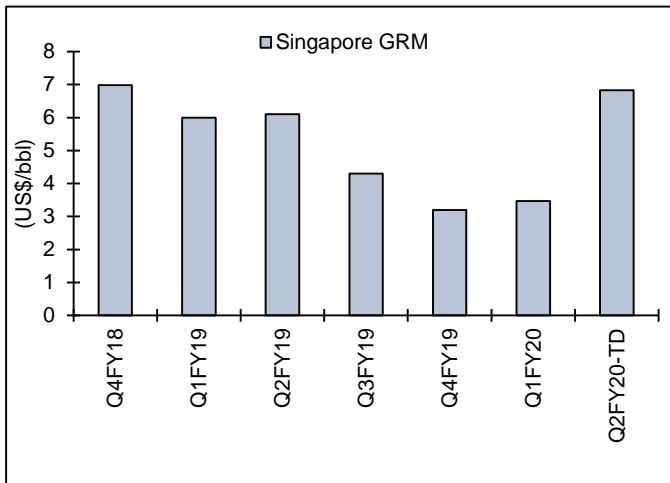
The National Democratic Alliance (NDA) government has been re-elected in CY19 with an even bigger majority than in 2014. During the previous NDA regime, auto fuels remained deregulated and auto fuel marketing margins were healthy/super-normal during FY15-FY19. This augurs well for auto fuel marketing margin outlook not just in FY20 but in rest of the NDA's five-year term.

### Singapore GRM at 6-quarter high in Q2FY20-TD after 3 weak quarters

Reuters' Singapore GRM was at a 9-year low of US\$4.9/bbl in FY19 and at 33-37 quarter lows of US\$4.3-3.2/bbl in Q3FY19 and Q4FY19. Singapore GRM rebounded modestly to US\$3.5/bbl in Q1FY20 and has surged to a 6-quarter high of US\$6.8/bbl in Q2FY20-TD. Singapore GRM has been mainly boosted by:

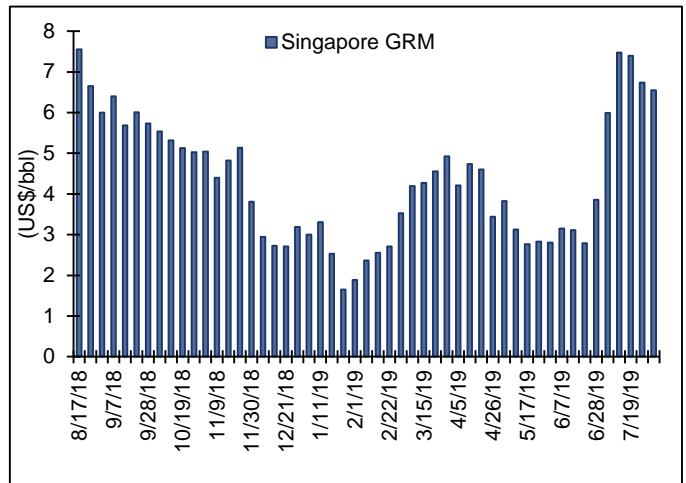
- Accident on 21-Jun'19 followed by announcement of permanent closure of 335k b/d Philadelphia refinery during US driving season (when petrol demand is at its peak), which boosted petrol cracks
- Rise in fuel oil cracks due to 29% fall in Singapore (world's biggest bunker port) inventories over the last five weeks due to clearance by suppliers ahead of the IMO-mandated cut in sulphur content from Jan'20. Surge in demand from Middle East power plants to meet rising cooling demand also boosted fuel oil cracks.

**Chart 3: Singapore GRM at 6-quarter high of US\$6.83/bbl in Q2FY20-TD**



Source: Reuters, I-Sec research

**Chart 4: Singapore GRM up sharply in Jul'19; at 47-week high in W.E. 12-Jul'19**



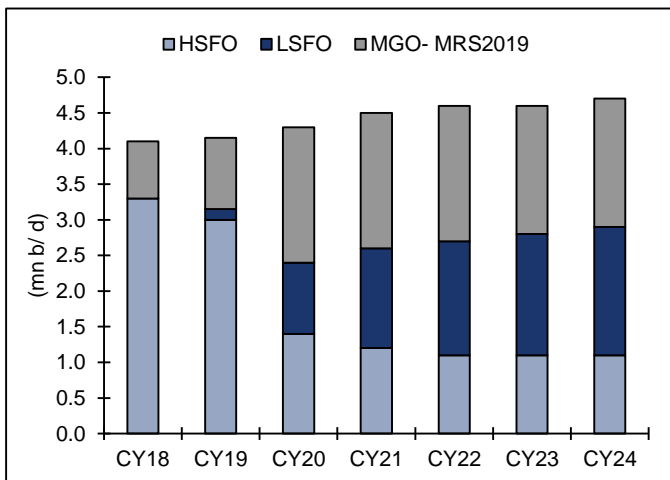
Source: Reuters, I-Sec research

**Boost to diesel demand from IMO likely to sustain GRM strength**

The GRM gains from permanent shutdown of Philadelphia refinery may wane off by early-Sep'19 when US summer driving season ends. However, the IMO-mandated change in sulphur content in marine fuel from Jan'20 is expected to boost diesel demand, cracks and GRM from H2CY19 in general and Q4CY19 in particular. IEA estimates that IMO would boost global diesel demand by:

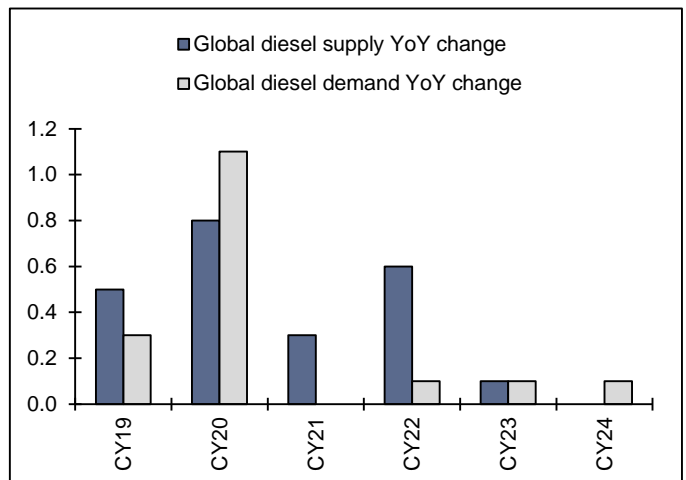
- 0.32m b/d in Q3CY19
- 0.83m b/d in Q4CY19
- 0.9m b/d in CY20

**Chart 5: IEA estimates IMO to boost diesel demand by 0.2-0.9m b/d in CY19-CY20**



Source: IEA, I-Sec research

**Chart 6: IEA estimates diesel demand boosted by IMO to exceed supply in CY20**



Source: IEA, I-Sec research

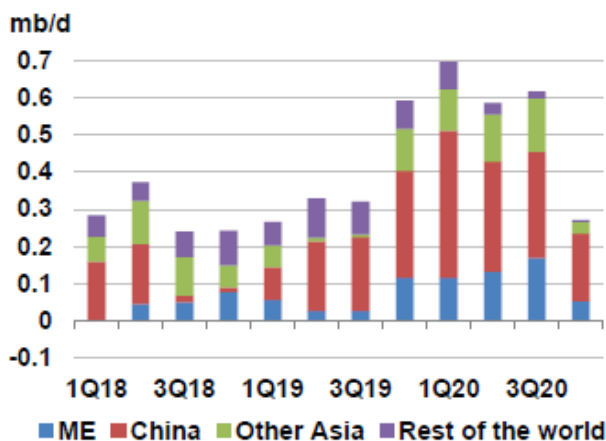
**Large refining capacity addition and weak demand are risks to GRM**

IEA estimates refining capacity addition at 3.5m b/d to exceed refined products demand growth of 1.6m b/d in CY19-CY20E. Global demand growth being lower than estimated cannot be ruled out.

### IEA estimates refined products supply surplus in 3 quarters of CY20

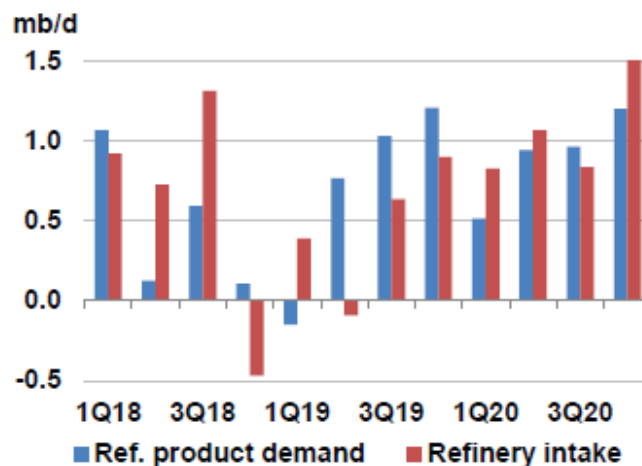
IEA estimates refined products demand growth at 1.0-1.2m b/d to exceed refined products supply growth of 0.6-0.9m in Q3-Q4CY19. It forecasts that, of the 3.5m b/d refining capacity addition in CY19-CY20, peak addition of 1.4m b/d would be in Q4CY19. IEA therefore estimates global refined products supply growth to exceed demand growth in three of the four quarters (except Q3) of CY20.

**Chart 7: Throughput from capacity additions to surge in Q4CY19-Q3CY20**



Source: IEA, I-Sec research

**Chart 8: Demand growth to exceed supply in H2CY19, but supply excess expected in CY20**



Source: IEA, I-Sec research

### BPCL best positioned to gain from emerging environment

#### IMO likely to boost diesel cracks but hit fuel oil cracks

The IMO mandated change in sulphur content in marine fuel is likely to lead to ships switching from high sulphur fuel oil (HSFO) to marine gasoil (MGO). IEA expects demand for MGO to rise by 0.32-0.83m b/d in Q3-Q4CY19 and 0.9m b/d in CY20. It forecasts demand for HSFO to decline by 0.3m b/d in CY19 and by 1.6m b/d in CY20. This switch in demand from HSFO to MGO is likely to boost diesel cracks and hit fuel oil (FO) cracks.

#### BPCL has more diesel and less FO in its product slate than peers

Refiners with more diesel and less or no fuel oil in their product slate are likely to gain most from GRM strength driven by IMO. Among the OMCs, BPCL has the most diesel and least fuel oil in its product slate. BPCL therefore is the best positioned among OMCs to gain if IMO boosts GRM in H2CY19 and CY20.

**Table 1: BPCL's has more diesel and less fuel oil in its product slate than other OMCs**

	Share in product slate:		
	HPCL	BPCL	IOC
Diesel	43%	50%	47%
FO	11%	3%	6%

Source: Company data, I-Sec research

**FY21 GRM to exceed HPCL’s by US\$0.8-1.6/bbl in likely cracks range**

A likely scenario in FY21E is diesel cracks would be at US\$15-20/bbl and fuel oil cracks at minus US\$10-15/bbl. In this scenario, BPCL’s GRM at US\$5.9-8.9/bbl would be US\$0.8-1.6/bbl higher than HPCL’s GRM of US\$4.8-7.7/bbl.

**Table 2: BPCL’s GRM at US\$5.9-8.9/bbl if diesel & FO cracks at US\$15-20/bbl & minus US\$10-15/bbl**

(US\$/bbl)		Diesel cracks	
		15.0	20.0
Fuel oil cracks	-15.0	6.0	8.9
	-20.0	5.9	8.8

Source: Company data, I-Sec research

**Table 3: HPCL’s GRM at US\$4.8-7.7/bbl if diesel & FO cracks at US\$15-20/bbl & minus US\$10-15/bb**

(US\$/bbl)		Diesel cracks	
		15.0	20.0
Fuel oil cracks	-15.0	5.3	7.7
	-20.0	4.8	7.2

Source: Company data, I-Sec research

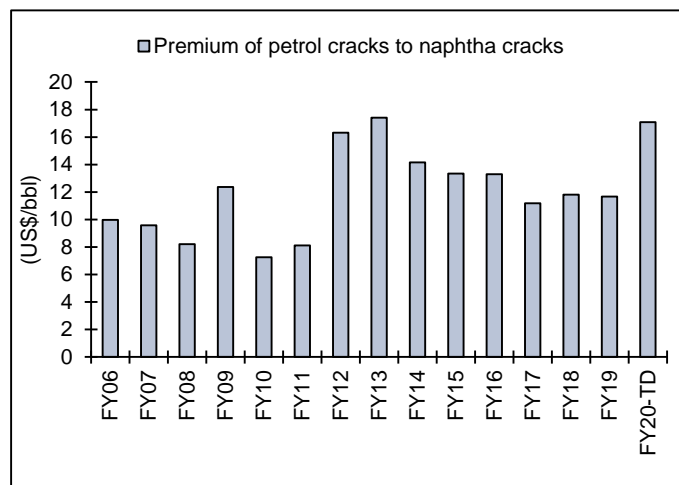
**Petrol & propylene output to rise at the expense of naphtha and LPG**

BPCL is implementing the following two projects at its Kochi refinery:

- Propylene derivative petrochemical project (PDPP), which would produce acrylic acid, oxo alcohols and acrylates from 0.25mtpa propylene produced from the petro FCCU
- Motor Spirit Block Project (MSBP), which would produce more petrol (Euro VI compliant) at the expense of naphtha production

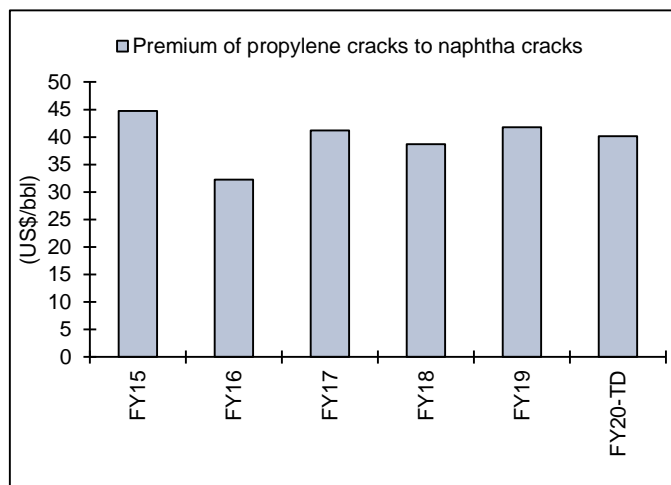
Petrol production would rise, propylene production would start, no naphtha would be produced and LPG production would decline at the Kochi refinery after these projects are commissioned and ramped up. Kochi refinery produced 0.75mmt of naphtha in FY19. PDPP is likely to be commissioned in Q4FY20 and MSBP in Q2FY21.

**Chart 9: Petrol cracks at US\$7-17/bbl premium to naphtha cracks in FY10-FY20-TD**



Source: Reuters, I-Sec research

**Chart 10: Propylene cracks at US\$32-45/bbl premium to naphtha cracks in FY15-FY20-TD**



Source: Reuters, Bloomberg, I-Sec research

**PDPP and MSBP would boost GRM of the Kochi refinery**

The PDPP and MSBP projects, which produce petrol and propylene instead of naphtha, would boost BPCL’s Kochi refinery GRM. This is because petrol and propylene cracks tend to be significantly higher than naphtha cracks as is apparent from the fact that:

- Petrol cracks have been at US\$7-17/bbl premium to naphtha cracks in FY10-FY20-TD.
- Propylene cracks have been at US\$32-45/bbl premium to naphtha cracks in FY15-FY20-TD

**PDPP to mark foray of BPCL into petrochemicals; more to follow**

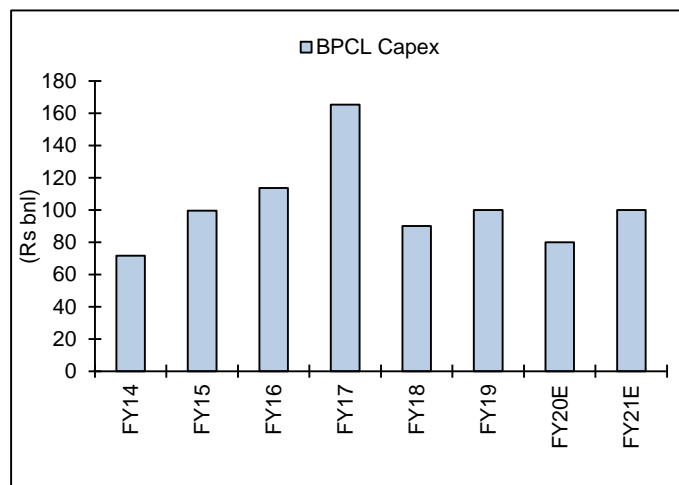
The PDPP project would also mark BPCL’s foray into petrochemicals. BPCL will produce niche products like acrylic acid, oxo alcohols and acrylates, which are used in the production of paints, detergents, adhesives, sealants and solvents. India is currently a net importer of most of these products. BPCL’s board has also approved a Rs113bn project to produce polyols, propylene glycol and mono ethylene glycol (MEG) at its Kochi refinery using 0.25mmt propylene as feedstock. This project is scheduled to be commissioned in CY22. BPCL is also considering a petrochemical and coker project at Rasayni near its Mumbai refinery so as to stop producing naphtha and fuel oil even at its Mumbai refinery.

**BPCL’s throughput to be least hit by Euro VI related shutdowns**

All Indian refineries would be shut in FY20 to comply with Euro VI auto fuel norms from Apr’20. BPCL would be the least impacted among OMCs by these shutdowns in FY20 due to the following reasons:

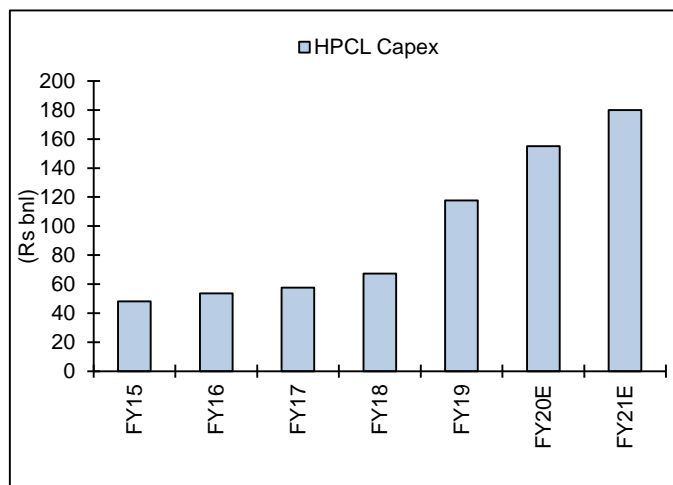
- BPCL’s integrated refinery expansion project (IREP) at the Kochi refinery completed in CY17 included quality upgradation of auto fuels to Euro VI standards. Its peers are implementing similar projects now.
- BPCL’s refineries would be shut for 15-20 days (in Dec’19) while IOC’s 11 refineries would be shut for 20-30 days and HPCL’s two refineries for 30-45 days to comply with Euro-VI auto fuel norms. Only a part of BPCL’s crude distillation capacity is likely to be shut in Dec’19. IOC expects its FY20 throughput to be 5% YoY lower due to the shutdowns.

**Chart 11: BPCL’s capex peaked in FY17 at Rs165bn; guided at Rs80bn-100bn in FY20-FY21**



Source: BPCL, I-Sec research

**Chart 12: HPCL’s capex surged to Rs118bn in FY19; guided to rise to Rs150bn-180bn in FY20-21**



Source: HPCL, I-Sec research

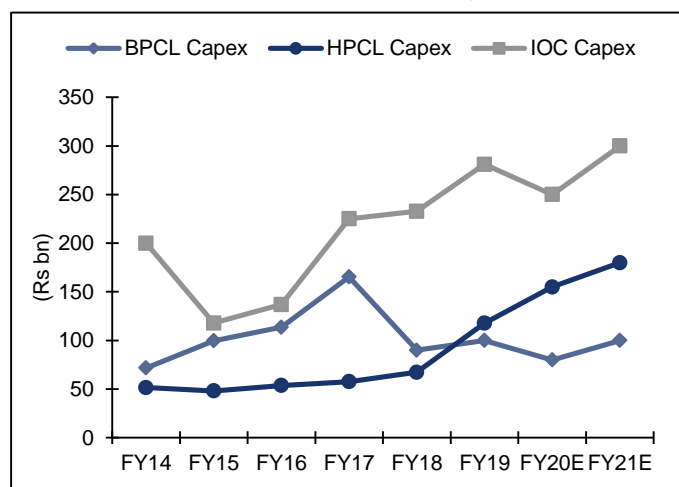
**BPCL’s capex peaked in FY17; HPCL’s capex to peak in FY21E**

BPCL has completed its large capex phase and is well prepared for IMO gains and Euro VI auto fuel norms before its peers. BPCL’s capex was Rs100bn in FY19 and estimates it to be Rs80bn-100bn in FY20-FY21. Its capex peaked at Rs165bn in FY17 when it was implementing the IREP project at the Kochi refinery. HPCL’s capex was at Rs118bn in FY19 and it estimates capex at Rs150bn-160bn in FY20 and Rs180bn in FY21. IOC estimates capex at Rs250bn-300bn in FY20E-FY21E.

**BPCL’s capex estimated to be 73%-83% of FY20-21 cash profit**

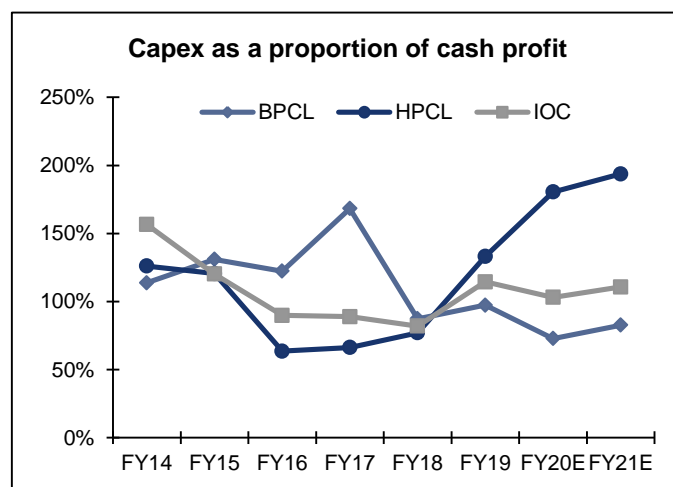
BPCL’s FY20-FY21 capex is estimated to be 73%-83% of its cash profits. On the other hand HPCL’s FY20-FY21 capex is estimated to be 180%-194% of its cash profit implying likely significant rise in its debt. IOC’s FY20-FY21 capex is estimated to be 103%-111% of its cash profits, which suggests internal accruals could fund large part of its capex.

**Chart 13: BPCL capex trending down from FY17 peak while that of HPCL set to surge in FY20-FY21**



Source: Company, I-Sec research

**Chart 14: BPCL’s capex estimated to be 73%-83% of its cash profit in FY20-FY21**



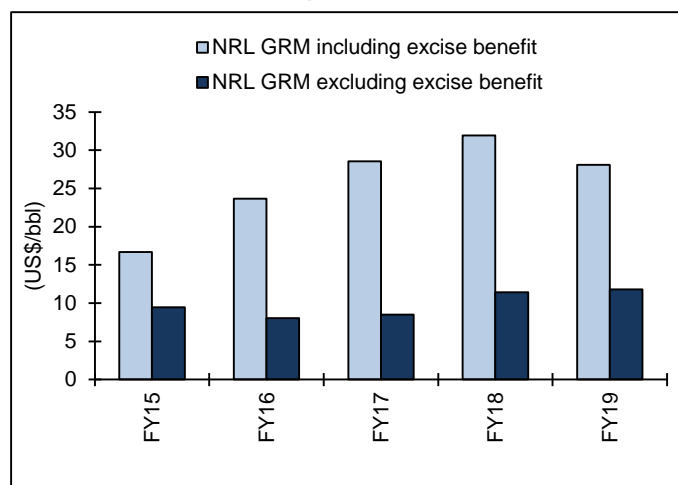
Source: Company, I-Sec research

**Profitability and projects at BPCL’s refining subsidiary and JV**

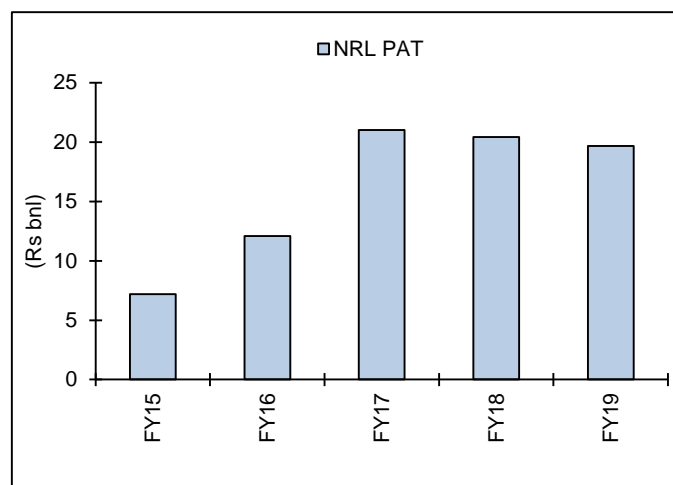
**Refining subsidiary NRL one of the most profitable refineries in India**

BPCL’s refining subsidiary (61.6% stake) Numaliagarh Refinery (NRL) is one of the most profitable refineries in India. One of the reasons for its high profitability is the 50% excise duty exemption all refineries in the North-East enjoy; North-East refiners are allowed to retain 50% of excise duty they collect from consumers as income. NRL’s:

- GRM including excise duty benefit was US\$16.7-31.9/bbl in the last five years with GRM in FY19 being US\$28.1/bbl.
- GRM excluding excise duty benefit was US\$9.5-11.8/bbl in the last five years with GRM in FY19 being US\$11.8/bbl.
- Net profit was Rs7.2bn-21.0bn in the last five years with net profit in FY19 being Rs19.7bn.
- Distillate yield at 86.7%-90.7% in the last five years (87.1% in FY19) is one of the highest among Indian refineries.
- Debt was just Rs380mn in FY19.

**Chart 15: NRL's GRM US\$10-12/bbl excluding & US\$17-32/bbl including excise benefit in FY15-19**

Source: PPAC, I-Sec research

**Chart 16: NRL's net profit Rs7.2bn-21.0bn in FY15-FY19**

Source: PPAC, I-Sec research

**NRL to gain from excise duty increase of Rs2/l in Jul'19 budget**

As discussed, NRL gets to keep 50% of excise duty it collects from consumers as income. The increase in excise duty on petrol and diesel of Rs2/l made in the Jul'19 budget would thus boost NRL's excise duty gains and its profit in FY20 and FY21.

**NRL expanding to 9mmtpa at cost of Rs226bn**

NRL is expanding its capacity from existing 3mmtpa to 9mmtpa at a cost of Rs226bn. The project includes a 1,398-km crude oil pipeline with 9mmtpa capacity from Paradip to Numaligarh and a 654-km product pipeline with 6mmtpa capacity from Numaligarh to Siliguri. The project is to be completed within 48 months after all approvals and clearances are received. Project is to be funded by equity of Rs23.07bn from the promoters including BPCL, debt of Rs151bn, viability gap funding of Rs10.2bn from government of India (GoI) and balance from internal accruals.

**Table 4: BPCL has invested Rs34.7bn as equity and Rs12.5bn as debt in BORL**

	Rs bn
Equity	8.9
Warrant	15.9
Convertible	10.0
<b>Equity and quasi equity</b>	<b>34.7</b>
Debt	12.5
<b>Total investment</b>	<b>47.3</b>

Source: BPCL, I-Sec research

**BPCL has invested Rs34.7bn in equity/convertibles of JV BORL**

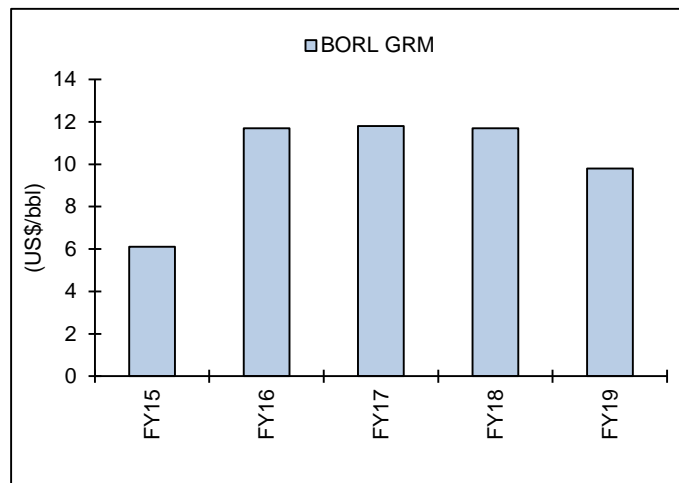
Bharat Oman Refineries Ltd (BORL) is BPCL's 50%:50% joint venture (JV) with Oman Oil Company. BPCL has invested Rs34.7bn in equity, warrants and convertibles in BORL as follows:

- Rs8.9bn in equity (50% of equity of Rs17.77bn)
- Rs15.85bn in share warrants
- Rs10bn in zero coupon compulsorily convertible debentures



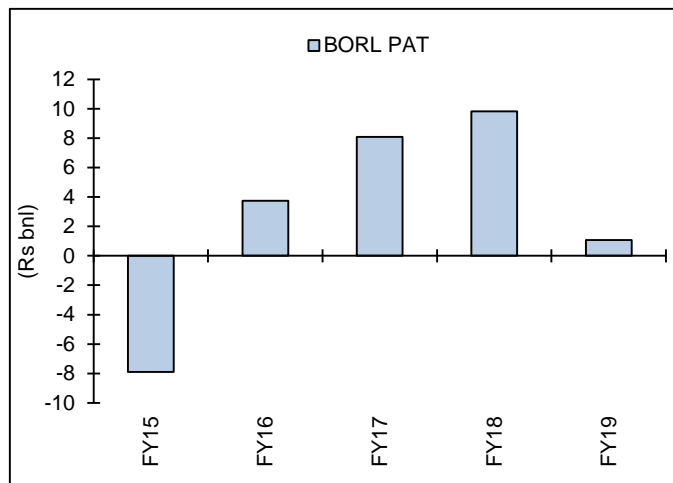
BPCL has also given a loan of Rs12.54bn to BORL and thus invested Rs47.3bn in equity, convertibles and debt of BORL.

**Chart 17: BORL’s GRM US\$6.1-11.8/bbl in FY15-FY19**



Source: BPCL, I-Sec research

**Chart 18: BORL’s net profit Rs1.1-9.8bn in FY16-FY19 and loss of Rs7.9bn in FY15**



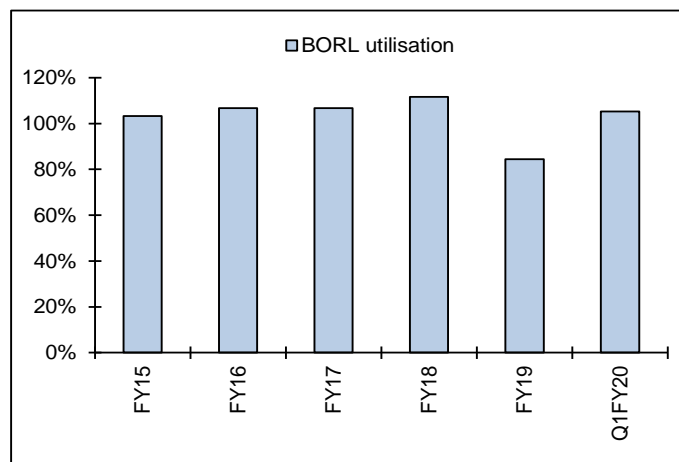
Source: BPCL, I-Sec research

**BORL not as profitable as NRL**

BORL is not as profitable as NRL. BORL’s:

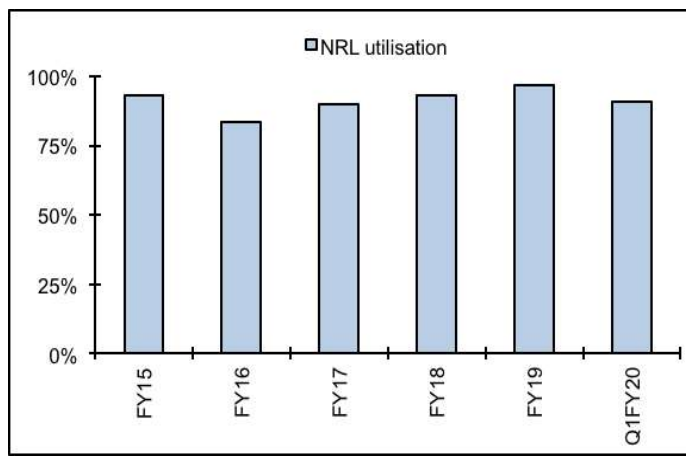
- GRM was US\$6.1-11.8/bbl in the last five years with GRM in FY19 being US\$9.8/bbl.
- Net profit was Rs1.1bn-9.8bn in the last four years (loss of Rs7.9bn in FY15) with net profit in FY19 being Rs1.1bn.

**Chart 19: BORL’s utilisation over 100% in most years; 105% in Q1FY20 on expanded capacity**



Source: PPAC, I-Sec research

**Chart 20: NRL’s refinery utilisation 83%-97% in FY15-FY19 and 91% in Q1FY20**



Source: PPAC, I-Sec research

**BORL’s refinery utilisation higher than that of NRL**

BORL’s refinery utilisation is higher than that of NRL in most years as follows::

- BORL’s refinery utilisation was 103%-112% in FY15-FY18, but dipped to 84% in FY19 when it had an unscheduled shutdown followed by a 45-day scheduled shutdown to expand capacity from 6mmtpa to 7.8mmtpa at a cost of Rs30.7bn. BORL’s Q1FY20 utilisation is 105% on the expanded capacity.

- NRL's refinery utilisation was 83%-97% in the last five years – at 97% in FY19 and at 91% in Q1FY20.

## Mozambique LNG FID to lead to monetising gas discoveries

### **FID done for Mozambique LNG in Jun'19; BPCL holds 10% stake**

FID on Area-1 LNG project in Mozambique was taken on 18-Jun'19. The project involves two trains with total capacity of 12.88mtpa at a cost of US\$20bn. LNG production is expected to start in CY24. The operator Anadarko holds 26.5% stake and Bharat Petro Resources Ltd (BPRL), 100% subsidiary of BPCL for E&P, holds 10% in the asset.

### **12.88mmt LNG output in first phase by CY24; expansion likely later**

Anadarko has made discoveries with gas resources of over 60tcf in Area-1 in Mozambique. 18tcf of these gas resources would be developed for the two-train 12.88mtpa project. Furthermore, LNG capacity expansion is imminent since just 30% of gas resources are enough to support the initial capacity.

### **Occidental to acquire Anadarko, but to sell Mozambique asset to Total**

Occidental is set to acquire Anadarko for US\$38bn mainly to fortify its position in the US Permian basin. To part fund the acquisition, Occidental has entered into a binding agreement with Total SA to sell Anadarko's assets in Africa for US\$8.8bn. Besides the large gas resources in Mozambique, African assets include oil producing assets in Algeria and Ghana and exploration acreage in South Africa.

### **Total to bring LNG experience to the table**

Neither Anadarko nor its other partners in Mozambique have any LNG liquefaction project experience. Total is the second largest LNG player in the world with 20mtpa of liquefaction capacity, trading portfolio of 40mtpa and 20mtpa regasification capacity.

### **Mozambique LNG to generate large free cashflows**

Total SA expects over US\$1bn of free cashflows per annum from Anadarko's African assets from CY25 after start of Mozambique LNG. We estimate cash profit from Mozambique at US\$1.3bn-4.1bn at Brent of US\$40-75/bbl and LNG to Brent price slope of 13%.

### **BPRL to invest US\$800m in Mozambique LNG in next 3-4 years**

The total cost of the Mozambique LNG project of US\$20bn is proposed to be funded 60% by way of debt and 40% by way of equity. BPRL's share of the equity would be US\$800m. BPRL would invest US\$800m over the next 3-4 years.

### **Dividend of US\$150m received from Russian assets in FY19**

BPRL as part of an Indian consortium has invested in two producing assets in Russia. BPRL and its partners get dividend from the SPVs of these assets. BPRL received US\$150m as dividend in FY19. It may receive similar amount of dividend in FY20-21.

## Subsidiary BGRL to run BPCL's expanding gas business

### Gas business: CGD, gas marketing, stake in PLNG and gas pipelines

BPCL's gas business includes:

- **Gas and LNG marketing (bulk) business:** Marketing business includes marketing rights to RasGas, Gorgon LNG and spot LNG trading business. Volumes of this business are 2mmt with RasGas being 0.8mmt, Gorgon and spot being balance. BPCL consumes 1mmt LNG (0.5mmt each) in its two refineries and sells balance to others.
- **12.5% stake in Petronet LNG (PLNG)**
- **City Gas distribution (CGD):** BGRL, which was formed in Sep'18, bid and got 13 GAs in the 9th and 10th rounds of CGD bidding. BPCL had been allotted four CGD GAs in the 6th round and stake in six CGDs (IGL, MNGL, CUGL, Ahmedabad SGL, GNGPL north Goa and Haridwar).

### BPCL to transfer gas assets and investments to BGRL in Oct'19

BPCL has formed Bharat Gas Resources Ltd (BGRL) as a 100% subsidiary and is set to transfer its entire gas sector assets and investments to it. BPCL board has approved slump sale (no tax implications) to BGRL and all approvals except that of PLNG shareholders are in place. PLNG's AGM is due in Aug'19. The transfer is likely to be effective from 1-Oct'19.

### Rs50bn-100bn investment in CGD in 5-8 years; debt equity 2:1

Likely investment in CGD would be Rs100bn in eight years and Rs50bn in five years to be funded by debt and equity in the ratio of 2:1. Rs23bn of equity has been invested by BPCL in BGRL. Operating cashflow would be Rs2.5bn-3.0bn p.a.

### 2-3 years for CGD to turn profitable and free cashflow by 6-8 years

GAs would turn profitable in 2-3 years but would generate free cashflow in 6-8 years. In some areas like Bellary, BGRL expects industrial demand to be big and drive profitability.

## Raise BPCL's FY20-FY21 EPS & target price; upgrade to BUY

### Raise BPCL' FY20E-FY21E marketing and refining margin

We have raised BPCL's

- Auto fuel marketing margin estimates for FY20E-FY21E by 25% to Rs1.25/l from Rs1/l earlier. Our revised estimate implies net margin of just Rs0.92/l in the rest of FY20.
- FY20E-FY21E GRM estimate by 33%-13% to US\$6.0-6.75/bbl from US\$4.5-6.0/bbl earlier. The upgrade in FY21E GRM also factors-in gains from rise in petrol and propylene yield and reduction in naphtha yield in BPCL's product slate.

**Table 5: BPCL's FY20-FY21E GRM estimate raised by 33%-13% to US\$6-6.75/bbl**

	FY20E	FY21E
<b>BPCL's GRM</b>		
Revised estimate	6.0	6.75
Old estimate	4.5	6.0
Change	33%	13%

Source: I-Sec research

### Raise BPCL' FY20E-FY21E EPS by 26%-12% YoY

The upgrade in auto fuel marketing margin and GRM estimates has meant upgrade in BPCL's:

- FY20E EPS by 26% to Rs43.7
- FY21E EPS by 12% to Rs57.1

**Table 6: BPCL's FY20E-FY21E EPS estimate raised by 26%-12% to Rs43.7-57.1**

	FY20E	FY21E
<b>BPCL's EPS</b>		
Revised estimate	43.7	57.1
Old estimate	34.7	50.7
Change	26%	12%

Source: I-Sec research

### 7%-14% upside to FY20E EPS if net auto fuel margin is Rs1.5-1.75/l

The upside to BPCL's FY20 EPS if auto fuel net marketing margin is:

- Rs1.5/l would be 7% at Rs46.9
- Rs1.75/l would be 14% Rs50.0

**Table 7: BPCL's FY20E EPS would change by Rs6.6 for every US\$1/bbl change in GRM**

		GRM (US\$/bbl)					
		4.0	5.0	5.5	6.0	6.5	7.0
	<b>1.00</b>	27.32	34.08	37.36	40.64	43.92	47.20
Marketing	<b>1.25</b>	30.44	37.20	40.48	43.76	47.04	50.31
margin (Rs/l)	<b>1.50</b>	33.56	40.32	43.59	46.87	50.15	53.43
	<b>1.75</b>	36.67	43.43	46.71	49.99	53.27	56.55

Source: I-Sec research

### Raise BPCL's target price 8% to Rs412/share

The upgrade in FY20E auto fuel marketing margin and GRM estimates has meant upgrade in BPCL's target price by 8% to Rs412/share from Rs383/share earlier. Our target price of BPCL is based on:

- 6x FY20E EBITDA as reduced by FY20E net debt
- Market value of minority stakes
- 10% stake in Mozambique gas reserves valued at US\$1bn (Rs69bn).

### FV to change by Rs30 for Rs0.25/l auto margin & US\$0.5/bbl GRM change

BPCL's fair value (FV) would change by Rs30/share for every Rs0.25/l change in auto fuel net marketing margin or for US\$0.5/bbl change in its standalone GRM. BPCL's FV would be:

- Rs473 if FY20 GRM is at US\$6.5/bbl and auto fuel net margin at Rs1.5/l
- Rs321 if FY20 GRM is at US\$5/bbl and net auto fuel marketing margin at Rs1/l

**Table 8: FV to change by Rs30/share for Rs0.25/l change in auto fuel marketing margin or US\$0.5/bbl change in GRM**

		GRM (US\$/bbl)					
		4.0	5.0	5.5	6.0	6.5	7.0
	<b>1.00</b>	261	321	351	382	412	442
Marketing	<b>1.25</b>	292	352	382	412	442	472
margin (Rs/l)	<b>1.50</b>	322	382	412	443	473	503
	<b>1.75</b>	353	413	443	473	503	533

Source: I-Sec research

**Upside to BPCL's fair value Rs60 if Mozambique valued same as Total**

We estimate Total is paying US\$8.8bn for:

- 360m bbls of 2P oil reserves in Algeria and Ghana
- 840mmboe (18tcf) 2P gas reserves in Mozambique
- 2bn boe (42tcf) gas resources in Mozambique.

We estimate Total is valuing Anadarko's 26.5% stake in Mozambique at US\$7bn. On the same basis, value of BPCL's 10% stake works out to US\$2.7bn (Rs95/share), which is Rs60/share upside to our valuation.

**Table 9: Total valued Anadarko's African assets 2P reserves and resources at US\$8.8bn; we estimate 26.5% stake in Mozambique valued at US\$7bn**

	2P reserves & resources (mmboe)	Valuation	
		EV/boe	US\$ mn
<b>Anadarko's African assets 2P reserves in</b>			
Ghana	360		
Algeria		4.9	1,753
Mozambique	840	3.4	2,863
	<b>1,200</b>	<b>3.8</b>	<b>4,615</b>
Mozambique gas resources	2,000	2.1	4,184
<b>2P reserves and resources</b>	<b>3,200</b>	<b>2.75</b>	<b>8,800</b>

Source: Total SA, I-Sec research

## Financial summary

**Table 10: Profit & loss statement**
*(Rs mn, year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Op. Income (Sales)</b>	<b>2,793,127</b>	<b>3,408,792</b>	<b>3,384,477</b>	<b>3,232,914</b>
<b>Operating Expenses</b>	<b>2,641,400</b>	<b>2,856,379</b>	<b>3,223,279</b>	<b>3,038,300</b>
<b>EBITDA</b>	<b>151,727</b>	<b>151,122</b>	<b>161,199</b>	<b>194,613</b>
% margins	5.4%	4.4%	4.8%	6.0%
Depreciation & Amortisation	-28,850	-34,178	-36,164	-39,626
Gross Interest	-11,857	-17,640	-19,331	-18,895
Other Income	17,827	20,375	22,174	22,423
<b>Recurring PBT</b>	<b>128,846</b>	<b>119,681</b>	<b>127,877</b>	<b>158,516</b>
Less: Taxes	85,030	75,905	82,822	108,450
<b>Net Income (Reported)</b>	<b>90,086</b>	<b>78,023</b>	<b>86,036</b>	<b>112,270</b>
<b>Recurring Net Income</b>	<b>90,086</b>	<b>78,023</b>	<b>86,036</b>	<b>112,270</b>

Source: Company data, I-Sec research

**Table 11: Balance sheet**
*(Rs mn, year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Assets</b>				
Total Current Assets	392,454	541,907	509,923	488,325
of which cash & cash eqv.	13,539	6,625	121,627	161,942
Total Current Liabilities & Provisions	376,088	463,891	443,749	450,490
<b>Net Current Assets</b>	<b>16,366</b>	<b>78,016</b>	<b>66,174</b>	<b>37,835</b>
<b>Investments</b>	<b>244,069</b>	<b>191,078</b>	<b>111,429</b>	<b>111,429</b>
<b>Net Fixed Assets</b>	<b>455,390</b>	<b>556,764</b>	<b>692,086</b>	<b>700,586</b>
Capital Work-in-Progress	98,754	72,929	91,925	141,925
<b>Total Assets</b>	<b>828,117</b>	<b>905,413</b>	<b>1,083,241</b>	<b>1,153,716</b>
<b>Liabilities</b>				
<b>Borrowings</b>	<b>369,973</b>	<b>429,145</b>	<b>495,190</b>	<b>494,190</b>
Equity Share Capital	19,669	19,669	19,669	19,669
Face Value per share (Rs)	10.0	10.0	10.0	10.0
Reserves & Surplus	294,254	307,120	396,801	451,380
<b>Net Worth</b>	<b>366,186</b>	<b>387,647</b>	<b>486,873</b>	<b>552,793</b>
<b>Total Liabilities</b>	<b>828,117</b>	<b>905,413</b>	<b>1,083,241</b>	<b>1,153,716</b>

Source: Company data, I-Sec research

**Table 12: Quarterly trend**
*(Rs bn, year ending March 31)*

	Jun'18	Sep'18	Dec'18	Mar'19
Net sales	824.3	828.8	882.4	882.4
% growth (YoY)	23	29	26	26
EBITDA	38.8	24.2	7.4	7.4
EBITDA Margin (%)	5	3	0.8	0.8
Other income	5.5	5.4	9.7	9.7
Extraordinary items	-	-	466	466
<b>Net profit</b>	<b>22.9</b>	<b>12.2</b>	<b>12.2</b>	<b>12.2</b>

Source: Company data, I-Sec research

**Table 13: Cashflow statement**
*(Rs mn, year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Operating Cashflow</b>	<b>113,880</b>	<b>110,083</b>	<b>118,986</b>	<b>148,077</b>
Working Capital Changes	104,224	61,650	(11,842)	(28,340)
<b>Operating Cashflow</b>	<b>9,657</b>	<b>48,433</b>	<b>130,828</b>	<b>176,417</b>
Capital Commitments	(189,503)	(42,870)	(149,806)	(101,065)
<b>Cashflow from Investing Activities</b>	<b>(170,257)</b>	<b>10,121</b>	<b>(70,156)</b>	<b>(101,066)</b>
Inc (Dec) in Borrowings	55,243	59,172	66,045	(1,000)
Dividend paid	19,220	28,830	26,612	28,830
<b>Cashflow from Financing Activities</b>	<b>42,579</b>	<b>30,343</b>	<b>39,433</b>	<b>(29,830)</b>
<b>Chg. in Cash &amp; Bank balances</b>	<b>(118,021)</b>	<b>88,896</b>	<b>100,105</b>	<b>45,522</b>

Source: Company data, I-Sec research

**Table 14: Key ratios**
*(Year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Per Share Data (Rs)</b>				
EPS (Basic Recurring)*	45.8	39.7	43.7	57.1
Diluted Recurring EPS	45.8	39.7	43.7	57.1
Recurring Cash flow per share	57.9	56.0	60.5	75.3
Dividend per share (DPS)	8.7	13.0	12.0	13.0
Book Value per share (BV)	186.2	197.1	247.5	281.1
<b>Growth Ratios (%)</b>				
Operating Income	14.6	22.0	-0.7	-4.5
EBITDA	12.3	-0.4	6.7	20.7
Recurring Net Income	-4.1	-13.4	10.3	30.5
Diluted Recurring EPS	-4.1	-13.4	10.3	30.5
Cash flow per share	7.8	-3.3	8.1	24.4
<b>Valuation Ratios (x)</b>				
P/E	7.5	8.6	7.8	6.0
P/CEPS	5.9	6.1	5.7	4.5
P/BV	1.8	1.7	1.4	1.2
EV / EBITDA	6.2	7.5	5.6	4.4
EV / Operating Income	6.1	6.2	7.5	5.6
<b>Operating Ratios</b>				
Other Income / PBT (%)				
Effective Tax Rate (%)	13.8	17.0	17.3	14.1
NWC / Total Assets (%)	32.0	26.8	29.5	36.8
D/E Ratio (%)	2.0	8.6	6.1	3.3
	101.0	110.7	101.7	89.4
<b>Return/Profitability Ratios (%)</b>				
Recurring Net Income Margins				
RoCE	3.2	2.3	2.5	3.5
RoNW	18.1	15.1	13.9	15.3
Dividend Payout Ratio	26.7	20.7	19.7	21.6
Dividend Yield	21.5	35.9	31.2	30.7
EBITDA Margins	1.4	2.2	2.0	2.2

\*EPS calculated net of treasury shares as per Ind-AS regulation

Source: Company data, I-Sec research

Company update and  
reco change

## Oil & Gas

Target price: Rs289

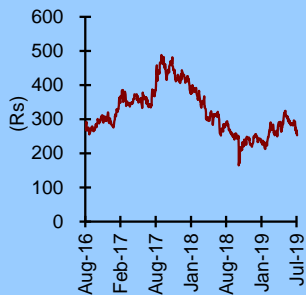
### Earnings revision

(%)	FY20E	FY21E
Sales	↓ 13.6	↓ 19.1
EBITDA	↑ 1.3	↑ 2.9
EPS	↑ 40.4	↑ 42.0

### Shareholding pattern

	Dec '18	Mar '19	Jun '19
Promoters	51.1	51.1	51.1
Institutional investors	36.8	35.7	36.8
MFs and others	12.7	12.1	12.4
Banks / FIs	4.9	4.9	4.8
Insurance Cos.	-	-	-
FIs	19.2	18.7	19.6
Others	12.1	13.2	13.1

### Price chart



### Research Analysts:

#### Vidyadhar Ginde

vidyadhar.ginde@icicisecurities.com  
+91 22 6637 7274

#### Mohit Mehra

mohit.mehra@icicisecurities.com  
+91 22 6637 7386

# Hindustan Petroleum Corporation

**ADD**

Upgrade from Hold

Risk/reward better with improved earnings outlook

**Rs253**

Auto fuel net marketing margin is supernormal in FY20-TD (also in FY19). Singapore GRM has also recovered smartly in Q2FY20-TD after being weak for three quarters. IMO-mandated sulphur content change in marine fuel is likely to boost diesel demand and cracks and keep GRM strong until CY20. To factor-in these trends and expectations, we have raised FY20E-FY21E auto fuel net marketing margin and GRM of HPCL leading to upgrade in EPS. However, the target price remains unchanged at Rs289 (14% upside) due to rise in debt, now factored-in by us to reflect HPCL's aggressive capex plans. Company's share price is down 24% from its Jun'19 peak and, with earnings outlook now having improved, the risk/reward appears better. We therefore upgrade HPCL to **ADD** from **Hold**. Among OMCs, HPCL would gain the most if auto fuel net marketing margin is higher than our estimate, which appears likely.

- ▶ **Auto fuel marketing margins super-normal; IMO to boost diesel but hit fuel oil cracks:** Auto fuel net marketing margin was super-normal at Rs1.83/l in FY19 and remains super-normal at Rs1.89/l in FY20-TD vs a 'normal' level of Rs0.97-1.06/l in FY15-FY18. The re-election of a strong government and likely weakness in oil prices due to global oversupply in Q4FY20 augurs well for marketing margin outlook. Reuters' Singapore GRM, which was weak at US\$3.3/bbl in H1CY19, has recovered to US\$6.8/bbl in Q2FY20-TD driven by permanent shutdown of a 335k b/d US east coast refinery. IMO-mandated change in sulphur in marine fuel is estimated to boost diesel demand by 0.2-0.9m b/d, but reduce high sulphur fuel oil (HSFO) demand by 0.3-1.6m b/d in CY19-CY20. Thus, IMO is likely to boost diesel cracks and hit fuel oil (FO) cracks.
- ▶ **Better off if FO cracks do not plunge, but diesel cracks rise:** HPCL has the least diesel and most FO in its product slate among OMCs. It is thus likely to gain the least among OMCs if diesel cracks surge but FO cracks plunge. HPCL would therefore be better off if diesel cracks rise, but FO cracks do not fall.
- ▶ **Aggressive capex plans to bring gain, but after IMO has played out:** Capex was up 75% YoY to Rs118bn in FY19 and is estimated to rise further to Rs150bn-160bn in FY20E and Rs180bn in FY21E. This would mean rise in debt. The ongoing projects would boost refining capacity, diesel yield and cut FO yield, but are unlikely to be completed in time to gain fully from IMO boost to GRM in CY20.
- ▶ **Risk/reward better with improved earnings outlook and share price correction; upgrade to ADD:** We have raised our FY20E-FY21E auto fuel marketing margin estimate by 25% to Rs1.25/l (vs Rs1.89/l in FY20-TD) and also raised GRM estimate to US\$5.75-6.25/bbl. However, the gains from rise in EBITDA would be neutralised by the higher debt we are now assuming, leading to target price remaining unchanged at Rs289. However, the correction in share price has meant our target price implies 14% upside. We upgrade HPCL to **ADD** from **Hold**.

Market Cap	Rs386bn/US\$5.6bn
Reuters/Bloomberg	HPCL.BO/HPCL IN
Shares Outstanding (mn)	1,523.8
52-week Range (Rs)	325/165
Free Float (%)	48.9
FII (%)	19.6
Daily Volume (US\$'000)	25,725
Absolute Return 3m (%)	(7.4)
Absolute Return 12m (%)	(8.1)
Sensex Return 3m (%)	(4.1)
Sensex Return 12m (%)	1.2

Year to March	FY18	FY19P	FY20E	FY21E
Revenue (Rs mn)	2,433,994	2,972,050	1,778,743	1,682,165
Net Income (Rs mn)	72,183	66,906	66,078	73,309
EPS (Rs)	47.4	43.9	43.4	48.1
% Chg YoY	-10.4%	-7.3%	-1.2%	10.9%
P/E (x)	5.3	5.8	5.8	5.3
CFPS (Rs)	84.4	(28.3)	64.6	70.9
EV/E (x)	4.1	5.4	5.5	5.3
Dividend Yield (%)	7%	6%	6%	6%
RoCE (%)	16%	17%	13%	12%
RoE (%)	31%	24%	20%	20%

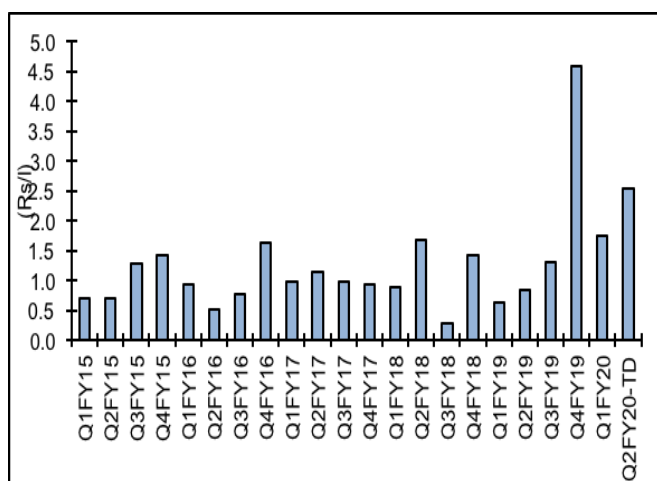
## Risk/reward better as earnings outlook improves

Marketing margin super-normal; recent GRM recovery to sustain

### Net auto fuel marketing margin super-normal in FY19 and FY20-TD

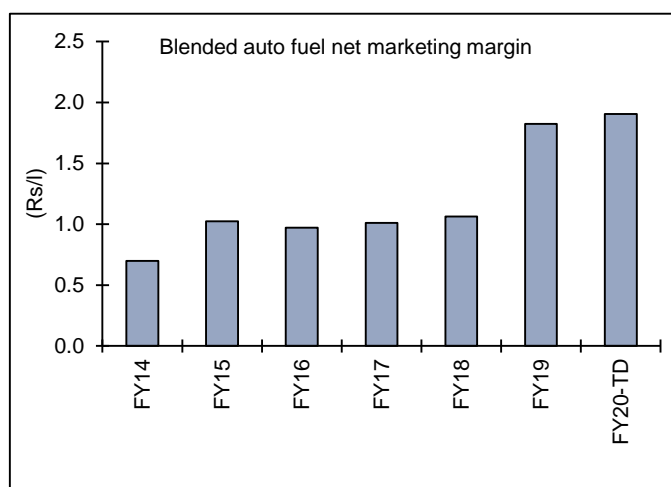
Net auto fuel marketing margin was supernormal in FY19 at Rs1.83/l, which is 72%-88% higher than normal margin of Rs0.97-1.06/l in FY15-FY18. Net margin was weak at Rs0.62-0.83/l in Q1-Q2FY19, but recovered to Rs1.3/l in Q3FY19 and then surged to a super-normal level of Rs4.59/l in Q4FY19 as full benefit of falling prices was not passed on to consumers. Net margin is also super-normal at Rs1.89/l in FY20-TD. Net auto fuel marketing margin was Rs1.75/l in Q1FY20 and is at Rs2.27/l in Q2FY20-TD and at Rs1.5/l on 2-Aug'19.

**Chart 1: Net auto fuel marketing margin, which was weak in H1FY19, super-normal since Q4FY19**



Source: Reuters, I-Sec research

**Chart 2: Net marketing margin at a super-normal Rs1.8-1.89/l in FY19-FY20-TD vs ~Rs1/l in FY15-18**



Source: Reuters, I-Sec research

### Marketing margin outlook good as strong government re-elected

The National Democratic Alliance (NDA) government has been re-elected in CY19 with an even bigger majority than in 2014. During the previous NDA regime, auto fuels remained deregulated and auto fuel marketing margins were healthy/super-normal during FY15-FY19. This augurs well for auto fuel marketing margin outlook not just in FY20 but in rest of the NDA's five-year term.

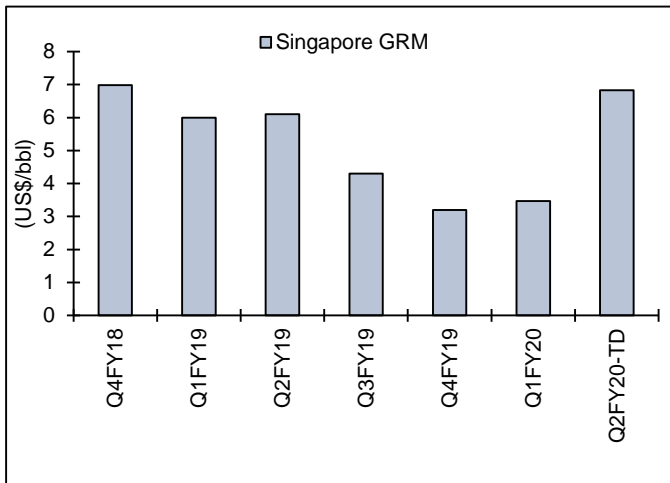
### Singapore GRM at 6-quarter high in Q2FY20-TD after 3 weak quarters

Reuters' Singapore GRM was at a 9-year low of US\$4.9/bbl in FY19 and at 33-37 quarter lows of US\$4.3-3.2/bbl in Q3FY19 and Q4FY19. Singapore GRM rebounded modestly to US\$3.5/bbl in Q1FY20 and has surged to a 6-quarter high of US\$6.83/bbl in Q2FY20-TD. Singapore GRM has been mainly boosted by:

- Accident on 21-Jun'19 followed by announcement of permanent closure of 335k b/d Philadelphia refinery during US driving season (when petrol demand is at its peak), which boosted petrol cracks
- Rise in fuel oil cracks due to 29% fall in Singapore (world's biggest bunker port) inventories over the last five weeks due to clearance by suppliers ahead of the IMO-mandated cut in sulphur content from Jan'20. Surge in demand from Middle East power plants to meet rising cooling demand also boosted fuel oil cracks.

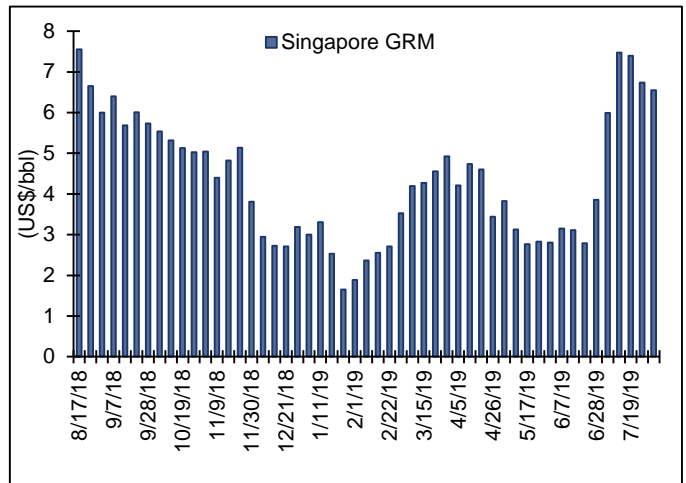


**Chart 3: Singapore GRM at a 6-quarter high of US\$6.83/bbl in Q2FY20-TD**



Source: Reuters, I-Sec research

**Chart 4: Singapore GRM up sharply in Jul'19; at 47-week high in W.E. 12-Jul'19**



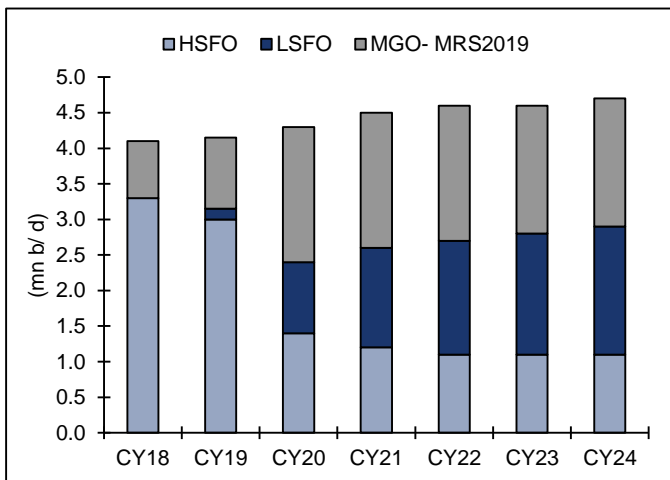
Source: Reuters, I-Sec research

**Boost to diesel demand from IMO likely to sustain GRM strength**

The GRM gains from permanent shutdown of Philadelphia refinery may wane off by early-Sep'19 when US summer driving season ends. However, the IMO-mandated change in sulphur content in marine fuel from Jan'20 is expected to boost diesel demand, cracks and GRM from H2CY19 in general and Q4CY19 in particular. IEA estimates that IMO would boost global diesel demand by:

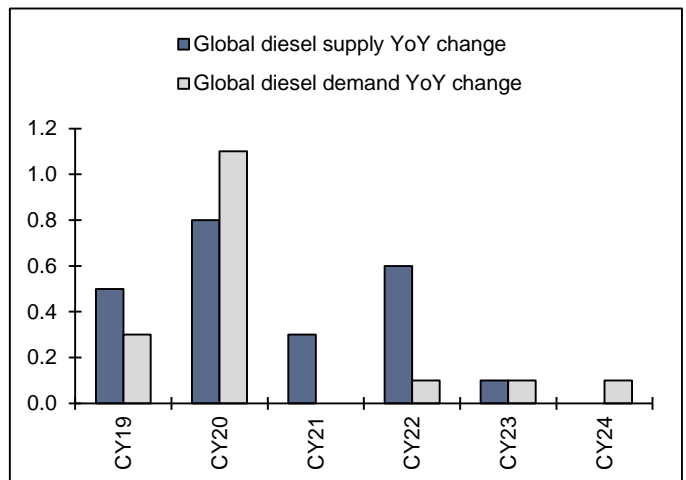
- 0.32m b/d in Q3CY19
- 0.83m b/d in Q4CY19
- 0.9m b/d in CY20

**Chart 5: IEA expects IMO to boost diesel demand by 0.2-0.9m b/d in CY19-CY20**



Source: IEA, I-Sec research

**Chart 6: IEA estimates diesel demand boosted by IMO to exceed supply in CY20**



Source: IEA, I-Sec research

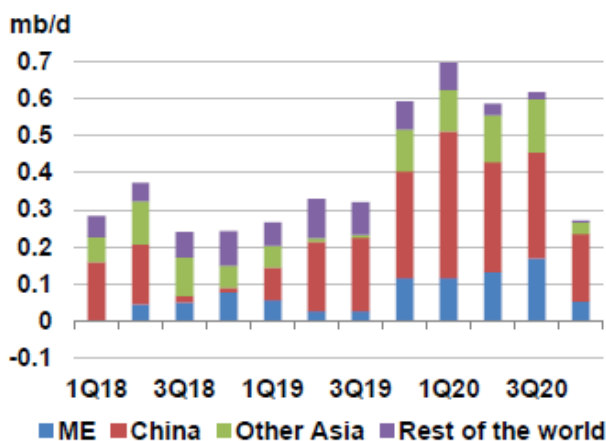
**Large refining capacity addition and weak demand are risks to GRM**

IEA estimates refining capacity addition at 3.5m b/d to exceed refined products demand growth of 1.6m b/d in CY19-CY20E. Global demand growth being lower than estimated cannot be ruled out.

**IEA estimates refined products supply surplus in 3 quarters of CY20**

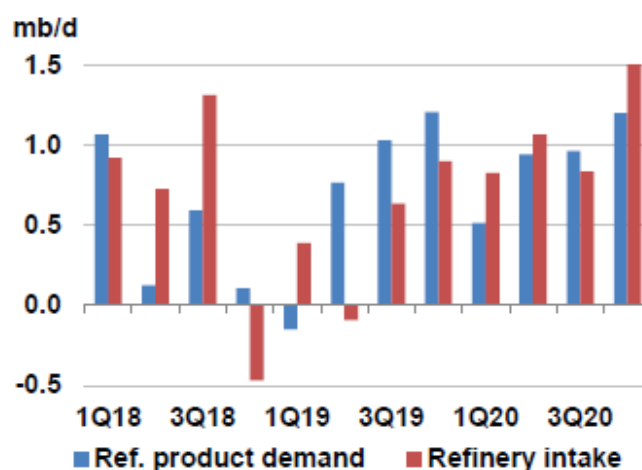
IEA estimates refined products demand growth at 1.0-1.2m b/d to exceed refined products supply growth of 0.6-0.9m in Q3-Q4CY19. It forecasts that, of the 3.5m b/d refining capacity addition in CY19-CY20, peak addition of 1.4m b/d would be in Q4CY19. IEA therefore estimates global refined products supply growth to exceed demand growth in three of the four quarters (except Q3) of CY20.

**Chart 7: Throughput from capacity additions to surge in Q4CY19-Q3CY20**



Source: IEA, I-Sec research

**Chart 8: Demand growth to exceed supply in H2CY19, but supply excess expected in CY20**



Source: IEA, I-Sec research

**Inferior product slate and large capex may cap gains**

**IMO likely to boost diesel cracks, but hit fuel oil cracks**

The IMO mandated change in sulphur content in marine fuel is likely to lead to ships switching from high sulphur fuel oil (HSFO) to marine gasoil (MGO). IEA expects demand for MGO to rise by 0.32-0.83m b/d in Q3-Q4CY19 and 0.9m b/d in CY20. It forecasts demand for HSFO to decline by 0.3m b/d in CY19 and by 1.6m b/d in CY20. This switch in demand from HSFO to MGO is likely to boost diesel cracks and hit fuel oil (FO) cracks.

**HPCL has less diesel and more FO in its product slate than peers**

Refiners with more diesel and less, or no, fuel oil in their product slate are likely to gain the most from the IMO-driven GRM strength. Among the OMCs, HPCL has the least proportion of diesel and most proportion of fuel oil in its product slate. Among OMCs, HPCL is therefore likely to gain the least if IMO regulations boost diesel cracks, but hit fuel oil cracks.

**Table 1: HPCL has less diesel and more fuel oil in its product slate than other OMCs**

	Share in product slate:		
	HPCL	BPCL	IOC
Diesel	43%	50%	47%
FO	11%	3%	6%

Source: Company data, I-Sec research

### GRM US\$0.8-1.6/bbl lower than BPCL's in likely cracks range

A likely scenario in FY21 is that diesel cracks would be at US\$15-20/bbl and fuel oil cracks are at minus US\$10-15/bbl. In this scenario, HPCL's GRM at US\$4.8-7.7/bbl would be US\$0.8-1.6/bbl lower than BPCL's GRM of US\$5.9-8.9/bbl.

**Table 2: HPCL's GRM at US\$4.8-7.7/bbl if diesel & FO cracks are US\$15-20/bbl & minus US\$10-15/bbl**

(US\$/bbl)		Diesel cracks	
		15.0	20.0
Fuel oil cracks	-15.0	5.3	7.7
	-20.0	4.8	7.2

Source: Company data, I-Sec research

**Table 3: BPCL's GRM at US\$5.9-8.9/bbl if diesel & FO cracks are US\$15-20/bbl & minus US\$10-15/bbl**

(US\$/bbl)		Diesel cracks	
		15.0	20.0
Fuel oil cracks	-15.0	6.0	8.9
	-20.0	5.9	8.8

Source: Company data, I-Sec research

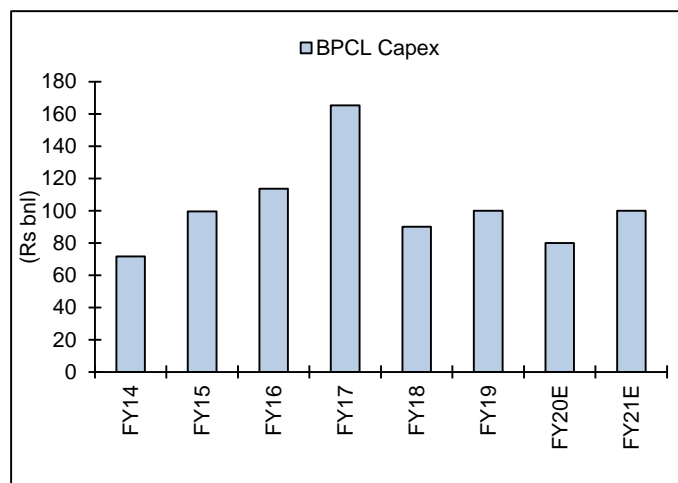
### HPCL may be most impacted by Euro VI related shutdown

All Indian refineries would be shut in FY20 to comply with Euro VI auto fuel norms from Apr'20. HPCL may be the most impacted among OMCs by these shutdowns in FY20 as its refineries would be shut for 30-45 days while that of BPCL for 15-20 days and that of IOC for 20-30 days to comply with Euro-VI auto fuel norms.

### HPCL in the midst of large capex phase unlike BPCL

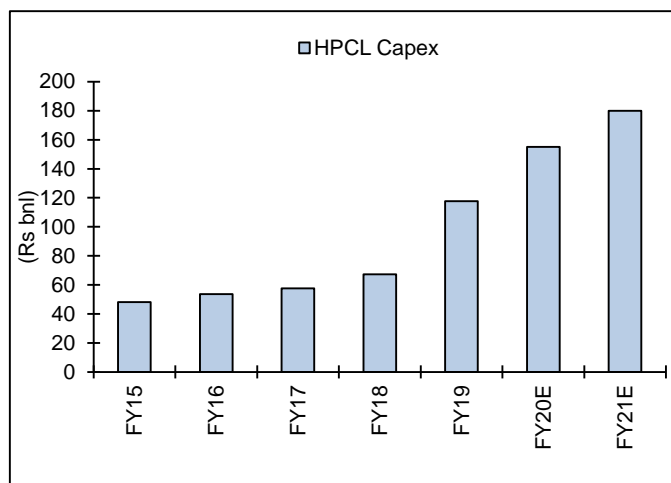
HPCL's capex was up 75% YoY at Rs118bn in FY19. It estimates capex to ramp up further to Rs150bn-160bn in FY20 and Rs180bn in FY21E. On the other hand, BPCL has completed its large capex phase. BPCL's capex peaked at Rs165bn in FY17 when it was implementing the IREP project at the Kochi refinery. It was down to Rs89bn-100bn in FY18-FY19. BPCL estimates its capex to be Rs80bn-100bn in FY20-FY21.

**Chart 9: BPCL's capex peaked in FY17 at Rs165bn; guided at Rs80bn-100bn in FY20-FY21**



Source: BPCL, I-Sec research

**Chart 10: HPCL's capex surged to Rs118bn in FY19; guided to rise to Rs150bn-180bn in FY20-21**



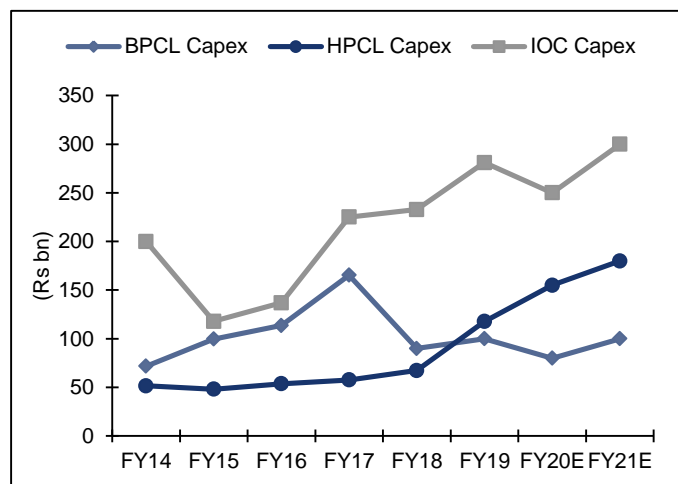
Source: HPCL, I-Sec research

### HPCL's debt likely to rise as capex well ahead of cash profits

HPCL's FY20-FY21 capex is estimated to be 180%-194% of its cash profit implying likely significant rise in its debt. On the other hand BPCL's FY20-FY21 capex is estimated to be 73%-83% of its cash profits in FY20-FY21. IOC's FY20-FY21 capex is estimated to be 103%-111% of its cash profits, which suggests internal accruals could

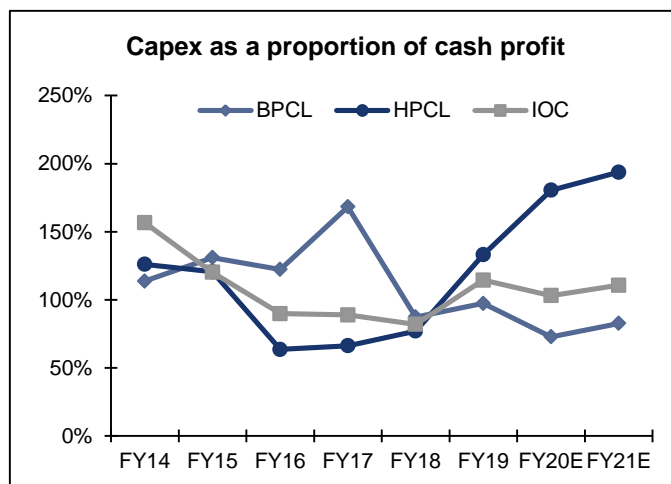
fund a large part of its capex. Government reimbursement of subsidy may also play key role in determining extent to which OMCs' debt rises.

**Chart 11: HPCL's capex set to surge in FY20-FY21 while that of BPCL trending down from FY17 peak**



Source: Company, I-Sec research

**Chart 12: HPCL's debt likely to rise as capex 180%-194% of its cash profit in FY20-FY21**



Source: Company, I-Sec research

### Product slate improvement may come after IMO gains peak in CY20

HPCL is implementing projects at its refineries, which would not only increase its refining capacity, but also increase diesel yield and eliminate fuel oil production at its Vizag refinery. However, while Mumbai refinery project may be commissioned by Dec'20, the Vizag project is likely to be commissioned in H2FY22 with FY23 to be the first full year of production. Thus, HPCL may completely miss out on, or at best only partly benefit from, strong diesel cracks and may be hit by weak fuel oil cracks likely in CY20 on implementation of IMO's marine fuel regulations.

### Profitability and projects at HPCL's refining JV and associate

#### JV HMEL's GRM US\$12-17/bbl & profit Rs15bn-31bn in FY16-FY19

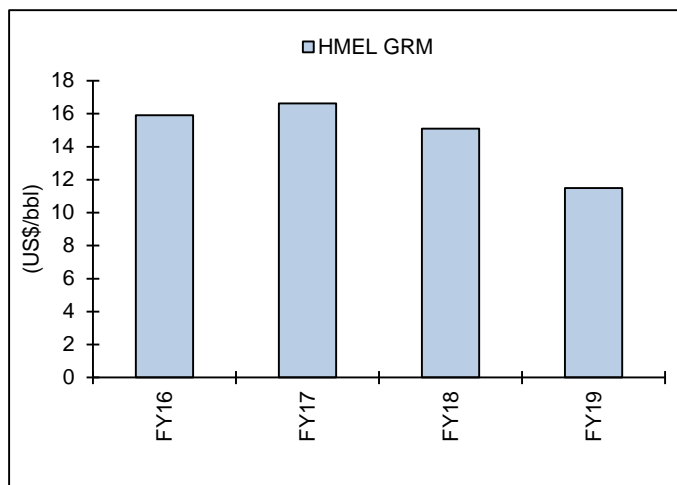
HPCL's refining JV (49% stake), Hindustan Mittal Energy Ltd (HMEL), was commissioned in CY12. HMEL commissioned 440ktpa polypropylene project in CY13. Within 2-3 years of HMEL's commissioning, global GRMs improved. HMEL's:

- Refinery utilisation was 92%-119% in FY16-FY19 including 111% in FY19 on expanded capacity
- GRM has been US\$11.5-16.6/bbl in FY16-FY19 with GRM in FY19 being US\$11.5/bbl.
- Net profit was Rs14.7bn-30.9bn in FY16-FY19 with net profit in FY19 being Rs14.7bn.

#### HMEL is implementing 1.2mmtpa ethylene cracker at Rs217bn

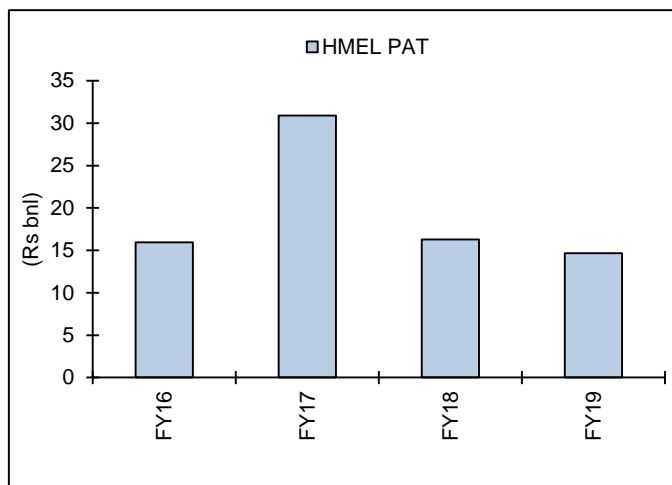
HMEL is implementing 1.2mmtpa ethylene cracker at a cost of Rs228bn scheduled to be commissioned in Apr'22. HMEL plans to fund the project with debt equity of 2:1. Company's debt stood at Rs204.5bn as of Sep'18.

**Chart 13: HMEL's GRM was US\$11.5-16.6/bbl in FY16-FY19**



Source: HPCL, I-Sec research

**Chart 14: HMEL's net profit was Rs14.7bn-30.9bn in FY16-FY19**



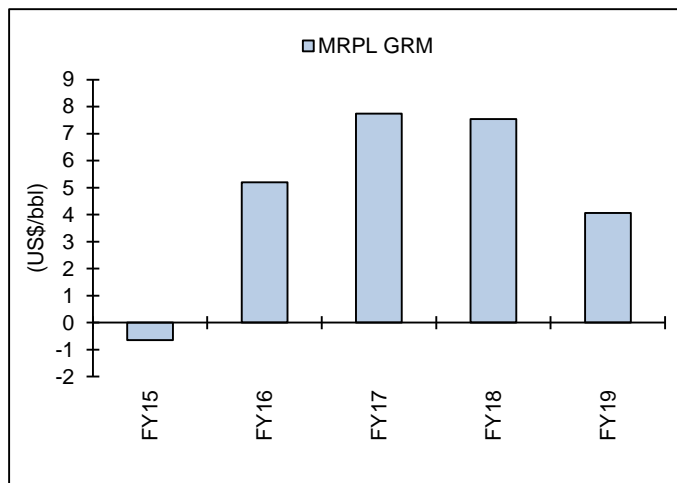
Source: HPCL, I-Sec research

### HPCL associate MRPL's earnings volatile

MRPL was a joint venture between HPCL and Aditya Birla group commissioned in FY1997. Weak GRM during and after the Asian crisis meant MRPL's performance was poor. However, in FY04, ONGC bought out the Birlas and infused more equity thereby increasing its stake to 72% and reducing HPCL's stake to 17%. The earnings performance of MRPL has been volatile while its operational performance has been strong. MRPL's:

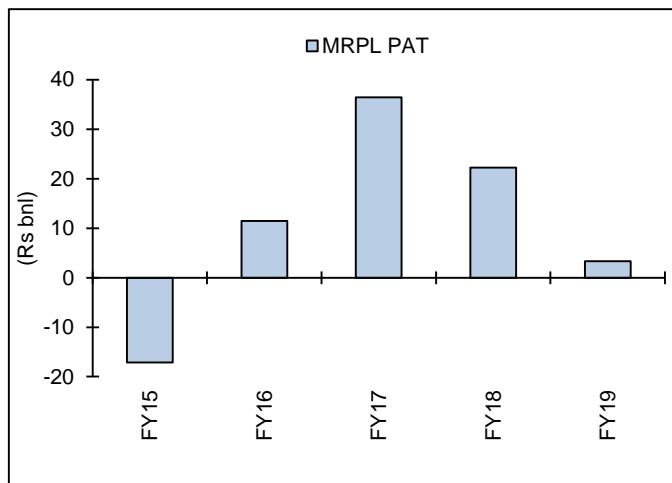
- Refinery utilisation was 97%-108% in FY15-FY19 with that in FY19 being 108%.
- GRM was US\$4.1-7.8/bbl in FY16-FY19 (GRM was negative at minus US\$0.6/bbl in FY15 due to crude inventory loss) with GRM in FY19 being US\$4.1/bbl.
- Net profit was Rs3.3bn-36.4bn in FY16-FY19 (loss of Rs17.1bn in FY15) with net profit in FY19 being Rs3.3bn.

**Chart 15: MRPL's GRM was US\$4.1-7.8/bbl in FY16-FY19; negative in FY15**



Source: PPAC, I-Sec research

**Chart 16: MRPL's net profit was Rs3.3bn-36.4bn in FY16-FY19 and loss of Rs17.1bn in FY15**



Source: PPAC, I-Sec research

## Raise HPCL's FY20E-FY21E EPS; upgrade to **ADD**

### Raise HPCL's FY20E-FY21E marketing and refining margin

We have raised HPCL's:

- Auto fuel marketing margin estimates for FY20E-FY21E by 25% to Rs1.25/l from Rs1/l earlier. Our revised estimate implies net margin of just Rs0.94/l in the rest of FY20.
- FY20E-FY21E GRM estimate by 28%-25% to US\$5.75-6.25/bbl from US\$4.5-5.0/bbl earlier.

**Table 4: HPCL's FY20-FY21E GRM estimate raised by 28%-25% to US\$6-6.75/bbl**

	FY20E	FY21E
<b>BPCL's GRM</b>		
Revised estimate	5.8	6.25
Old estimate	4.5	5.0
Change	28%	25%

Source: I-Sec research

### Raise HPCL's FY20E-FY21E EPS by 41%-42% YoY

The upgrade in auto fuel marketing margin and GRM estimates has meant upgrade in BPCL's:

- FY20E EPS by 41% to Rs43.4
- FY21E EPS by 42% to Rs48.1

**Table 5: HPCL's FY20E-FY21E EPS estimate raised by 41%-42% to Rs43.4-48.1**

	FY20E	FY21E
<b>BPCL's EPS</b>		
Revised estimate	43.4	48.1
Old estimate	30.8	33.8
Change	41%	42%

Source: I-Sec research

### HPCL's target price unchanged at Rs289/share

The upgrade in FY20E auto fuel marketing margin and GRM estimates has boosted HPCL's EPS, but the rise in debt to fund its aggressive capex has meant target price based on 6x FY20E EV/EBITDA remains unchanged at Rs289/share

### Sensitivity of FY20 EPS to GRM and auto fuel net marketing margin

HPCL's FY20 EPS would change by:

- Rs3.5/share for every Rs0.25/l change in auto fuel net marketing margin
- Rs5.5/share for every US\$1/bbl change in GRM

**Table 6: HPCL's FY20E EPS would change by Rs5.5 for every US\$1/bbl change in GRM and by Rs3.5 for every Rs0.25/l change in auto fuel marketing margin**

		GRM (US\$/bbl)					
		4.0	5.0	5.5	6.0	6.5	7.0
Marketing	<b>1.00</b>	30.24	35.75	38.50	41.26	44.01	46.77
margin (Rs/l)	<b>1.25</b>	33.75	39.26	42.01	44.77	47.52	50.28
	<b>1.50</b>	37.26	42.77	45.52	48.28	51.03	53.79
	<b>1.75</b>	40.77	46.28	49.03	51.79	54.54	57.30

Source: I-Sec research

**8%-16% upside to FY20E EPS if net auto fuel margin is Rs1.5-1.75/l**

The upside to HPCL's FY20 EPS if auto fuel net marketing margin is:

- Rs1.5/l would be 8% at Rs46.9
- Rs1.75/l would be 16% Rs50.4

**FV to change by Rs21-35 for US\$0.5/bbl GRM and Rs0.25/l auto margin change**

HPCL's fair value (FV) would change by

- Rs35/share for every Rs0.25/l change in auto fuel net marketing margin
- Rs21/share for every US\$0.5/bbl change in its standalone GRM.

HPCL's FV would be:

- Rs356 if FY20 GRM is at US\$6.5/bbl and auto fuel net margin at Rs1.5/l
- Rs223 if FY20 GRM is at US\$5/bbl and net auto fuel marketing margin at Rs1/l

**Table 7: FV to change by Rs35/share for Rs0.25/l change in auto fuel marketing margin and by Rs21/share for US\$0.5/bbl change in GRM**

		GRM (US\$/bbl)					
		4.0	5.0	5.5	6.0	6.5	7.0
Marketing margin (Rs/l)	1.00	181	223	243	264	285	306
	1.25	216	258	279	300	320	341
	1.50	251	293	314	335	356	376
	1.75	287	328	349	370	391	412

Source: I-Sec research

## Financial summary

**Table 8: Profit & loss statement**
*(Rs mn, year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Op. Income (Sales)</b>	<b>2,433,994</b>	<b>2,972,050</b>	<b>1,778,743</b>	<b>1,682,165</b>
<b>Operating Expenses</b>	<b>2,335,492</b>	<b>2,856,379</b>	<b>1,671,277</b>	<b>1,564,224</b>
<b>EBITDA</b>	<b>98,502</b>	<b>115,671</b>	<b>107,466</b>	<b>117,941</b>
% margins	4.0%	3.9%	6.0%	7.0%
Depreciation & Amortisation	-28,344	-30,853	-32,313	-34,678
Gross Interest	-6,179	-7,856	-8,791	-10,636
Other Income	23,906	14,133	14,840	15,582
<b>Recurring PBT</b>	<b>87,885</b>	<b>91,095</b>	<b>81,201</b>	<b>88,208</b>
Less: Taxes	-28,919	-33,486	-27,608	-29,991
<b>Net Income (Reported)</b>	<b>72,183</b>	<b>66,906</b>	<b>66,078</b>	<b>73,309</b>
<b>Recurring Net Income</b>	<b>72,183</b>	<b>66,906</b>	<b>66,078</b>	<b>73,309</b>

Source: Company data, I-Sec research

**Table 9: Balance sheet**
*(Rs mn, year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Assets</b>				
Total Current Assets	253,733	393,059	294,795	288,765
of which cash & cash eqv.	72,096	2,185	18,872	45,800
Total Current Liabilities & Provisions	221,178	434,245	351,155	357,838
<b>Net Current Assets</b>	<b>32,555</b>	<b>-41,185</b>	<b>-56,360</b>	<b>-69,073</b>
<b>Investments</b>	<b>143,832</b>	<b>142,975</b>	<b>142,975</b>	<b>142,975</b>
<b>Net Fixed Assets</b>	<b>386,951</b>	<b>439,177</b>	<b>429,690</b>	<b>455,012</b>
Capital Work-in-Progress	40,105	95,187	165,187	235,187
<b>Total Assets</b>	<b>675,539</b>	<b>638,339</b>	<b>700,363</b>	<b>809,901</b>
<b>Liabilities</b>				
<b>Borrowings</b>	<b>205,354</b>	<b>260,365</b>	<b>280,365</b>	<b>342,365</b>
Equity Share Capital	15,242	15,242	15,242	15,242
Face Value per share (Rs)	10	10	10	10
Reserves & Surplus	239,685	288,765	330,789	378,326
<b>Net Worth</b>	<b>255,324</b>	<b>304,007</b>	<b>346,031</b>	<b>393,568</b>
<b>Total Liabilities</b>	<b>675,539</b>	<b>638,339</b>	<b>700,363</b>	<b>809,901</b>

Source: Company data, I-Sec research

**Table 10: Quarterly trend**
*(Rs bn, year ending March 31)*

	Jun'18	Sep'18	Dec'18	Mar '19
Net sales	729.2	730.7	771.8	771.8
% growth (YoY)	22	35	23	23
EBITDA	29	18	9.6	9.6
EBITDA Margin (%)	4	2	1.2	1.2
Other income	6.0	7.2	3.9	3.9
Add: Extraordinaries	-	-	-	-
<b>Net profit</b>	<b>17.1</b>	<b>10.9</b>	<b>2.5</b>	<b>3.5</b>

Source: Company data, I-Sec research

**Table 11: Cashflow statement**
*(Rs mn, year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Operating Cashflow</b>	<b>128,637</b>	<b>(43,134)</b>	<b>98,390</b>	<b>107,987</b>
Working Capital Changes	(12,310)	(73,740)	(15,175)	(12,713)
<b>Operating Cashflow</b>	<b>140,947</b>	<b>30,606</b>	<b>113,565</b>	<b>120,700</b>
Capital Commitments	(67,963)	(84,605)	(120,000)	(130,000)
<b>Cashflow from Investing Activities</b>	<b>(75,615)</b>	<b>(83,748)</b>	<b>(120,000)</b>	<b>(130,000)</b>
Inc (Dec) in Borrowings	(23,415)	55,011	20,000	62,000
Dividend paid	29,208	27,318	24,053	25,772
<b>Cashflow from Financing Activities</b>	<b>(47,544)</b>	<b>27,693</b>	<b>(4,053)</b>	<b>36,228</b>
<b>Chg. in Cash &amp; Bank balances</b>	<b>17,788</b>	<b>(25,448)</b>	<b>(10,488)</b>	<b>26,929</b>

Source: Company data, I-Sec research

**Table 12: Key ratios**
*(Year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Per Share Data (Rs)</b>				
EPS (Basic Recurring)	47.4	43.9	43.4	48.1
Diluted Recurring EPS	47.4	43.9	43.4	48.1
Recurring Cash flow per share	84.4	(28.3)	64.6	70.9
Dividend per share (DPS)	17.0	15.9	14.0	15.0
Book Value per share (BV)	167.6	199.5	227.1	258.3
	33	81	16	71
<b>Growth Ratios (%)</b>				
Operating Income				
EBITDA	14	22	-40	-5
Recurring Net Income	-6	17	-7	10
Diluted Recurring EPS	-12	-7	-1	11
Cash flow per share	-10	-7	-1	11
<b>Valuation Ratios (x)</b>				
P/E	5.3	5.8	5.8	5.3
P/CEPS	3.0	(9.0)	3.9	3.6
P/BV	1.5	1.3	1.1	1.0
EV / EBITDA	4.1	5.4	5.5	5.3
EV / Operating Income	4.1	5.4	5.5	5.3
<b>Operating Ratios</b>				
Other Income / PBT (%)	27.2	15.5	18.3	17.7
Effective Tax Rate (%)	-32.9	-36.8	-34.0	-34.0
NWC / Total Assets (%)	-1.8	-11.6	-2.2	-1.6
D/E Ratio (%)	80.4	85.6	81.0	87.0
<b>Return/Profitability Ratios (%)</b>				
Recurring Net Income Margins	3.0	2.3	3.7	4.4
RoCE	15.6	16.5	12.6	12.2
RoNW	31.0	23.9	20.3	19.8
Dividend Payout Ratio	40.7	42.1	39.8	39.3
Dividend Yield	6.7	6.3	5.5	5.9
EBITDA Margins	4.0	3.9	6.0	7.0

Source: Company data, I-Sec research



## Company update

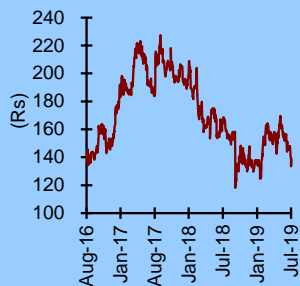
## Oil&amp;Gas

Target price Rs155

## Shareholding pattern

	Dec '18	Mar '19	Jun '19
Promoters	56.8	52.2	52.2
Institutional investors			
MFs and other	18.8	20.8	20.9
Banks / FIs	5.9	6.4	5.8
Insurance Cos.	0.1	0.1	0.2
FIs	7.3	7.2	7.2
Others	5.5	7.0	7.7
	27.4	27.0	26.9

## Price chart



INDIA

## Indian Oil Corporation

**ADD**  
**Maintain**  
**Rs135**

Well placed to gain from emerging scenario

Auto fuel net marketing margin in FY20 may well be higher than our estimate of Rs1.25/l (it is Rs1.83-1.89/l in FY19-FY20-TD). If it is Rs1.5-1.75/l, upside to FY20E EPS of Indian Oil Corporation (IOC) would be 6%-13%. Singapore GRM was weak at US\$3.3/bbl in H1CY19, but has rebounded to US\$6.8/bbl in Q2FY20-TD due to shutdown of a 335k b/d US east coast refinery. IMO-mandated change in sulphur specs in marine fuel is likely to cause a much bigger disruption – boost global shipping industry's demand for diesel by 0.2-0.9m b/d and reduce its demand for fuel oil (FO) by 0.3-1.6m b/d in CY19-CY20. This would boost GRM of refiners with more diesel and less FO. IOC is reasonably well placed to gain from this disruption, but BPCL is best placed. We reiterate ADD on IOC, but BPCL is our top pick among OMCs.

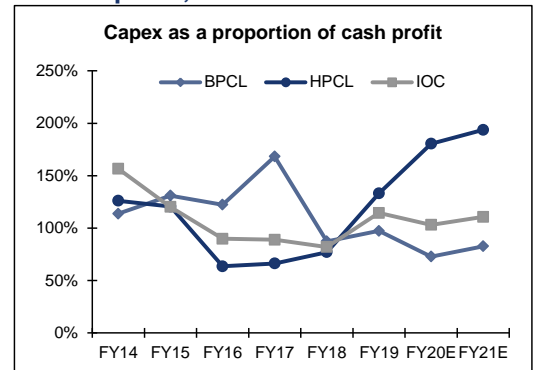
- ▶ **Well placed to gain from emerging scenario, but BPCL best placed:** Singapore GRM has surged in Q2FY20-TD driven by permanent shutdown of a US east coast refinery. IMO-mandated change in sulphur in marine fuel appears to be a much bigger disruption. IOC is well placed to gain from this change, but BPCL is best placed as it has more diesel and less FO in its product slate than IOC. Even in terms of FY20E-FY21E capex as proportion of cash profit and impact from Euro VI related shutdown, BPCL is best placed but IOC is better placed than HPCL.

**HPCL to gain the most and IOC to gain least if auto fuel net margin is higher**

	IOC	HPCL	BPCL
<b>Upside to FY20 EPS if auto fuel net margin at:</b>			
Rs1.5/l	6%	8%	7%
Rs1.75/l	13%	16%	14%

Source: Company data, I-Sec research

**BPCL best placed in terms of capex as % of cash profit; IOC better than HPCL**



Source: Company, I-Sec research

- ▶ **Upside risk to auto fuel net margin:** The re-election of a strong government and likely weakness in oil prices due to global oversupply in Q4FY20 augurs well for marketing margin outlook. Auto fuel net marketing margin is likely to be higher than our estimate of Rs1.25/l in FY20 (it is Rs1.83-1.89/l in FY19 and FY20-TD). If FY20 net auto fuel margin is higher at Rs1.5-1.75/l, upside to IOC's FY20 EPS would be 6%-13%. HPCL would gain the most with upside to its FY20 EPS at 8%-16%.

Market Cap	Rs1273bn/US\$18.3bn
Reuters/Bloomberg	IOC.BO / IOCL IN
Shares Outstanding (mn)	9,414.2
52-week Range (Rs)	170/118
Free Float (%)	47.8
FII (%)	7.7
Daily Volume (US\$'000)	32,735
Absolute Return 3m (%)	(14.5)
Absolute Return 12m (%)	(14.1)
Sensex Return 3m (%)	(4.1)
Sensex Return 12m (%)	1.2

Year to March	FY18	FY19P	FY20E	FY21E
Revenue (Rs mn)	5,155,419	6,160,878	6,525,570	7,051,657
Net Income (Rs mn)	226,264	173,767	166,735	198,843
EPS (Rs)	24.0	18.5	17.7	21.1
% Chg YoY	-10.9%	-23.0%	-4.3%	19.3%
P/E (x)	5.6	7.3	7.6	6.4
CEPS (Rs)	11.3	30.3	26.1	29.7
EV/E (x)	2.2	5.4	5.4	4.8
Dividend Yield	7%	7%	5%	6%
RoCE (%)	20%	14%	11%	12%
RoE (%)	20%	14%	12%	13%

## Research Analysts:

## Vidyadhar Ginde

vidyadhar.ginde@icicisecurities.com  
+91 22 6637 7274

## Mohit Mehra

mohit.mehra@icicisecurities.com  
+91 22 6637 7386

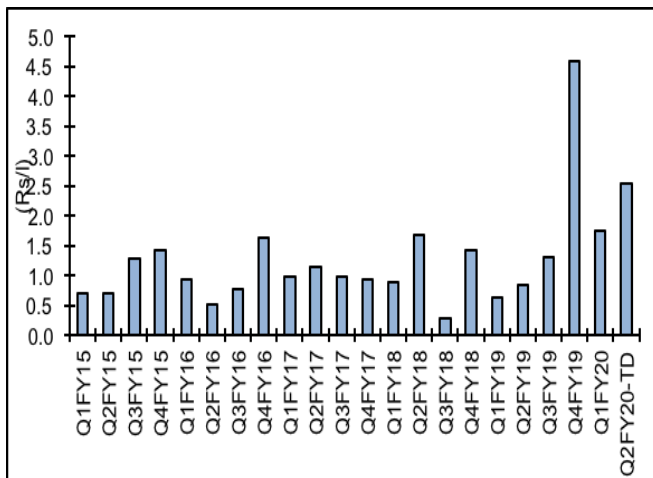
## Risk/reward better as earnings outlook improves

Marketing margin super-normal; recent GRM recovery to sustain

### Net auto fuel marketing margin super-normal in FY19 and FY20-TD

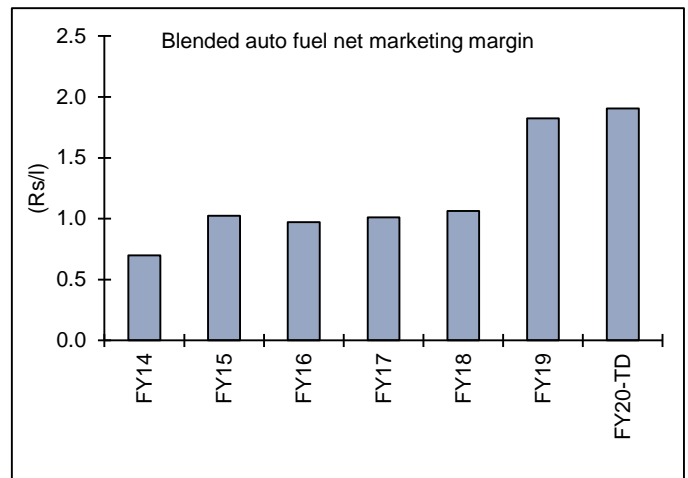
Net auto fuel marketing margin was supernormal in FY19 at Rs1.83/l, which is 72%-88% higher than a 'normal' margin of Rs0.97-1.06/l in FY15-FY18. Net margin was weak at Rs0.62-0.83/l in Q1-Q2FY19, but recovered to Rs1.3/l in Q3FY19 and then surged to a super-normal level of Rs4.59/l in Q4FY19 as full benefit of falling prices was not passed on to consumers. Net margin is also super-normal at Rs1.89/l in FY20-TD. Net auto fuel marketing margin was Rs1.75/l in Q1FY20 and is at Rs2.27/l in Q2FY20-TD and at Rs1.5/l on 2-Aug'19.

**Chart 1: Net auto fuel marketing margin, which was weak in H1FY19, has been super-normal since Q4FY19**



Source: Reuters, I-Sec research

**Chart 2: Net marketing margin at a super-normal Rs1.8-1.89/l in FY19-FY20-TD vs ~Rs1/l in FY15-FY18**



Source: Reuters, I-Sec research

### Marketing margin outlook good as strong government re-elected

The National Democratic Alliance (NDA) government has been re-elected in CY19 with an even bigger majority than in 2014. During the previous NDA regime, auto fuels remained deregulated and auto fuel marketing margins were healthy/super-normal during FY15-FY19. This augurs well for auto fuel marketing margin outlook not just in FY20 but in rest of the NDA's five-year term.

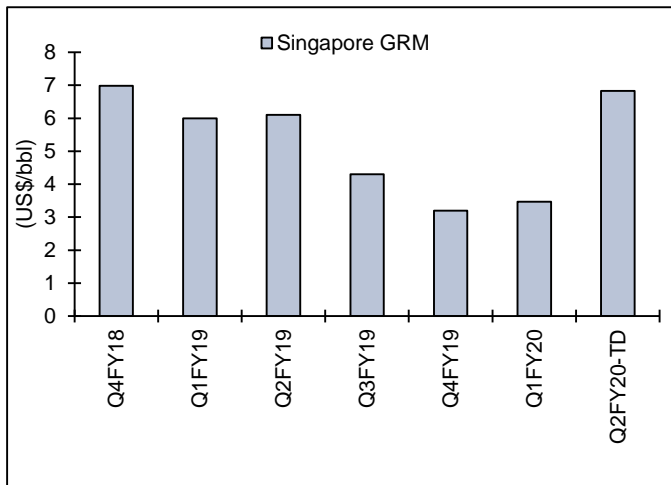
### Singapore GRM at 6-quarter high in Q2FY20-TD after 3 weak quarters

Reuters' Singapore GRM was at a 9-year low of US\$4.9/bbl in FY19 and at 33-37 quarter lows of US\$4.3-3.2/bbl in Q3FY19 and Q4FY19. Singapore GRM rebounded modestly to US\$3.5/bbl in Q1FY20 and has surged to a 6-quarter high of US\$6.83/bbl in Q2FY20-TD. Singapore GRM has been mainly boosted by:

- Accident on 21-Jun'19 followed by announcement of permanent closure of 335k b/d Philadelphia refinery during US driving season (when petrol demand is at its peak), which boosted petrol cracks
- Rise in fuel oil cracks due to 29% fall in Singapore (world's biggest bunker port) inventories over the last five weeks due to clearance by suppliers ahead of the

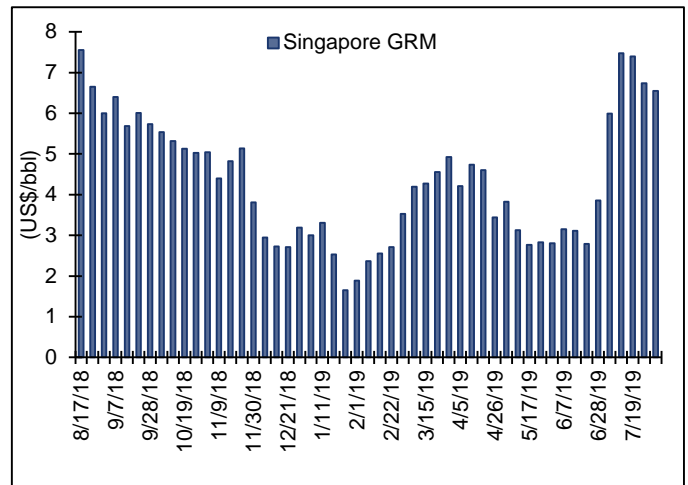
IMO-mandated cut in sulphur content from Jan'20. Surge in demand from Middle East power plants to meet rising cooling demand also boosted fuel oil cracks.

**Chart 3: Singapore GRM at 6-quarter high of US\$6.83/bbl in Q2FY20-TD**



Source: Reuters, I-Sec research

**Chart 4: Singapore GRM up sharply in Jul'19; at 47-week high in W.E. 12-Jul'19**



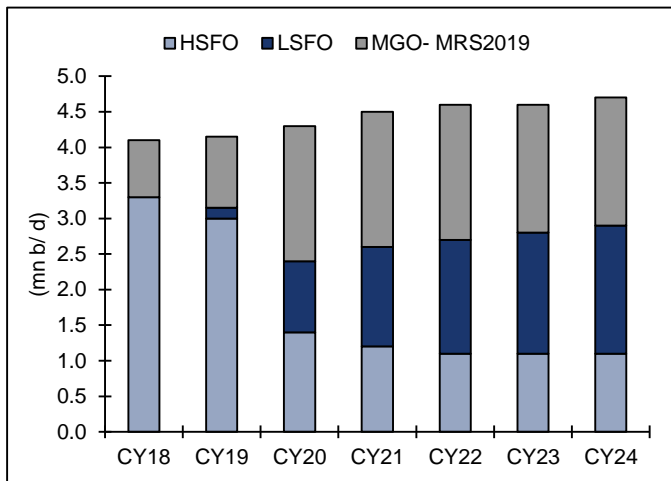
Source: Reuters, I-Sec research

**Boost to diesel demand from IMO likely to sustain GRM strength**

The GRM gains from permanent shutdown of Philadelphia refinery may wane off by early-Sep'19 when US summer driving season ends. However, the IMO-mandated change in sulphur content in marine fuel from Jan'20 is expected to boost diesel demand, cracks and GRM from H2CY19 in general and Q4CY19 in particular. IEA estimates that IMO would boost global diesel demand by:

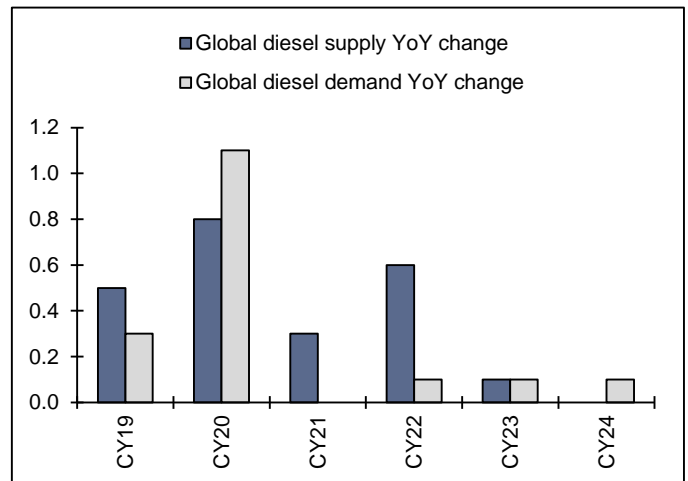
- 0.32m b/d in Q3CY19
- 0.83m b/d in Q4CY19
- 0.9m b/d in CY20

**Chart 5: IEA estimates IMO to boost diesel demand by 0.2-0.9m b/d in CY20**



Source: IEA, I-Sec research

**Chart 6: IEA estimates diesel demand boosted by IMO to exceed supply in CY20**



Source: IEA, I-Sec research

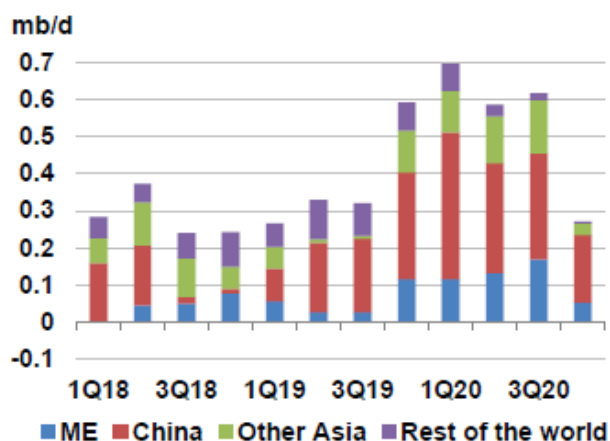
**Large refining capacity addition and weak demand are risks to GRM**

IEA estimates refining capacity addition at 3.5m b/d to exceed refined products demand growth of 1.6m b/d in CY19E-CY20E. Global demand growth being lower than estimated cannot be ruled out.

**IEA estimates refined products supply surplus in 3 quarters of CY20**

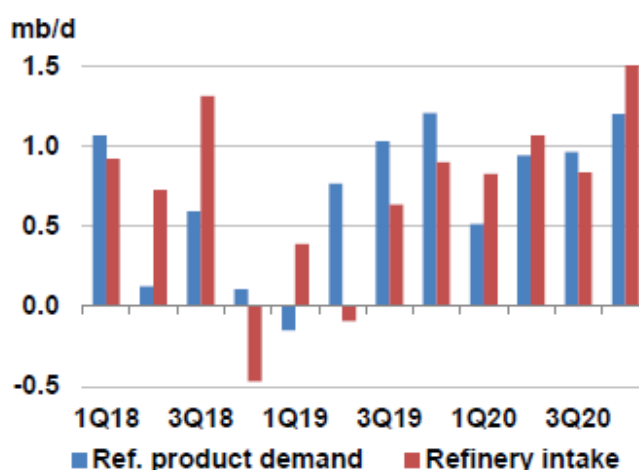
IEA estimates refined products demand growth at 1.0-1.2m b/d to exceed refined products supply growth of 0.6-0.9m in Q3-Q4CY19. It forecasts that, of the 3.5m b/d refining capacity addition in CY19-CY20, peak addition of 1.4m b/d would be in Q4CY19. IEA therefore estimates global refined products supply growth to exceed demand growth in three of the four quarters (except Q3) of CY20.

**Chart 7: Throughput from capacity additions to surge in Q4CY19-Q3CY20**



Source: IEA, I-Sec research

**Chart 8: Demand growth to exceed supply in H2CY19, but supply excess expected in CY20**



Source: IEA, I-Sec research

**IOC well placed to gain from GRM strength; BPCL best placed**

**IMO likely to boost diesel cracks, but hit fuel oil cracks**

The IMO mandated change in sulphur content in marine fuel is likely to lead to ships switching from high sulphur fuel oil (HSFO) to marine gasoil (MGO). IEA expects demand for MGO to rise by 0.32-0.83m b/d in Q3-Q4CY19 and 0.9m b/d in CY20. It forecasts demand for HSFO to decline by 0.3m b/d in CY19 and by 1.6m b/d in CY20. This switch in demand from HSFO to MGO is likely to boost diesel cracks and hit fuel oil (FO) cracks.

**IOC well placed but not as much as BPCL to gain from GRM strength**

Refiners with more diesel and less, or no, fuel oil in their product slate are likely to gain the most from the IMO-driven GRM strength. Among the OMCs, BPCL is the best placed (more diesel and less fuel oil than peers) and HPCL the worst placed (less diesel and more fuel oil than peers) to gain from GRM strength driven by IMO. IOC is well placed to gain from the IMO-driven GRM strength, but not as much as BPCL. However, it is better placed than HPCL.

**Table 1: IOC is well placed, but not as well as BPCL, to gain from IMO (strong diesel but weak fuel oil cracks) driven GRM strength**

	Share in product slate:		
	IOC	BPCL	IOC
Diesel	43%	50%	47%
FO	11%	3%	6%

Source: Company data, I-Sec research

**IOC's GRM US\$1.1-1.3/bbl lower than BPCL's in likely cracks range**

A likely scenario in FY21E is diesel cracks would be at US\$15-20/bbl and fuel oil cracks at minus US\$10-15/bbl. In this scenario, IOC's GRM at US\$4.6-7.8/bbl would be US\$1.1-1.3/bbl lower than BPCL's GRM of US\$5.9-8.9/bbl.

**Table 2: IOC's GRM US\$4.6-7.8/bbl if diesel & FO cracks are US\$15-20/bbl & minus US\$10-15/bbl**

(US\$/bbl)		Diesel cracks	
		15.0	20.0
Fuel oil cracks	-15.0	4.9	7.8
	-20.0	4.6	7.6

Source: Company data, I-Sec research

**Table 3: BPCL's GRM at US\$5.9-8.9/bbl if diesel & FO cracks at US\$15-20/bbl & minus US\$10-15/bbl**

(US\$/bbl)		Diesel cracks	
		15.0	20.0
Fuel oil cracks	-15.0	6.0	8.9
	-20.0	5.9	8.8

Source: Company data, I-Sec research

**PP at Paradip to boost GRM and petrochemical profit on ramp-up**

IOC commissioned 680ktpa polypropylene (PP) project at its Paradip refinery in Jul'19. As the PP plant stabilises and ramps up, it would boost GRM and petrochemical profit. On full ramp-up, propylene would constitute 6% of Paradip's product slate as against ~3% for most other refineries with PP capacity. Propylene cracks are higher than that for any other petroleum product and thus, on full ramp-up of PP plant, Paradip refinery's GRM would also be boosted. PP would also boost IOC's petrochemical profit. Full benefit of the distillate yield improvement project in the Haldia refinery commissioned in FY19 will come in FY20.

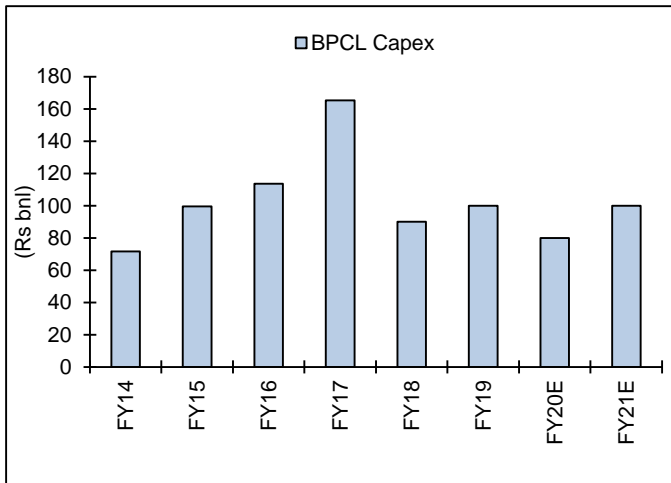
**IOC's FY20 throughput to be down 5% YoY on Euro VI shutdown**

Indian refineries would be shut in FY20 to comply with Euro VI auto fuel norms from Apr'20. IOC's refineries would be shut for 20-30 days to comply with the norms. Company has indicated that its FY20 crude throughput may be down 5% YoY due to the shutdown. HPCL is likely to be the most impacted among OMCs in FY20 as its refineries would be shut for 30-45 days while BPCL would be the least impacted as its refineries would be shut for just 15-20 days.

**IOC's capex estimated at 103%-111% of its cash profit in FY20E-FY21E**

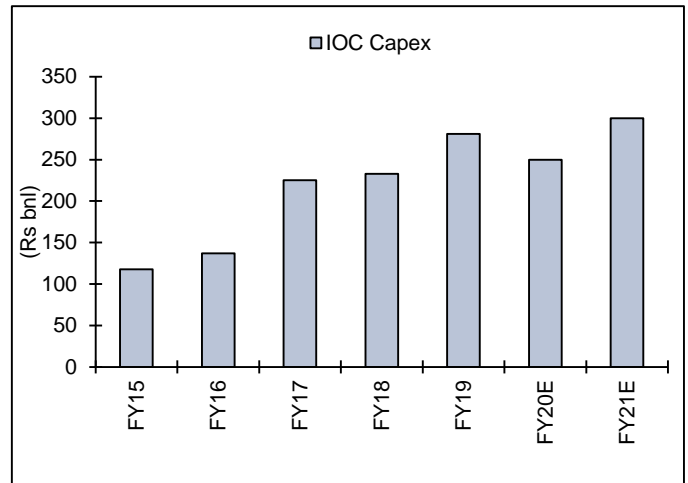
IOC's capex including investments is estimated to fall 11% YoY to Rs250bn in FY20E, but would rise by 20% YoY to Rs300bn in FY21E. Company's FY20E-FY21E capex is estimated to be 103%-111% of its cash profits, which suggests internal accruals could fund significant part of the capex. HPCL's FY20E-FY21E capex is estimated to be 180%-194% of its cash profit implying likely significant rise in its debt. On the other hand, BPCL's FY20E-FY21E capex is estimated at 73%-83% of its cash profits.

**Chart 9: BPCL’s capex peaked in FY17 at Rs165bn; guided at Rs80bn-100bn in FY20-FY21E**



Source: BPCL, I-Sec research

**Chart 10: IOC’s capex set to be 11% YoY lower in FY20, but to rise 20% YoY to Rs300bn in FY21E**

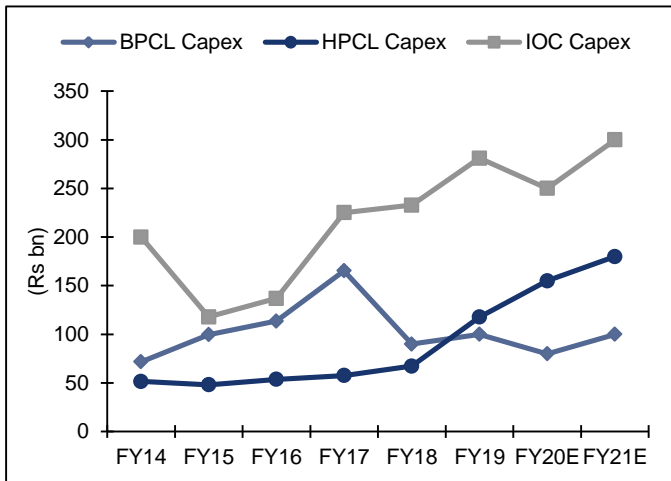


Source: IOC, I-Sec research

**Government reimbursement of subsidy is key to debt trend**

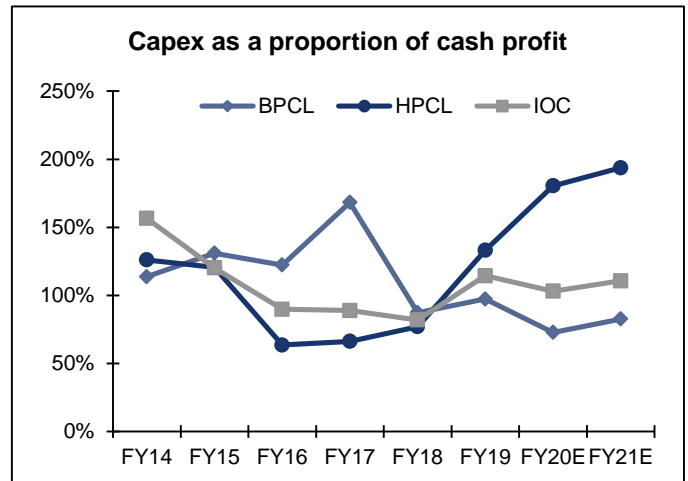
IOC’s debt declined by Rs141bn in Q1FY20 to Rs722bn in Jun’19. Subsidy yet to be reimbursed by the government declined by Rs94bn from Rs191bn in Mar’19 to Rs97bn in Jun’19. Capex in Q1FY20 was just Rs42.5bn. How quickly Gol reimburses subsidy to IOC would play a key role in determining its debt trend in FY20.

**Chart 11: IOC and BPCL’s capex to fall in FY20 and rise in FY21, but HPCL’s capex to surge**



Source: Company, I-Sec research

**Chart 12: IOC’s capex to be 103%-111% of its FY20-FY21E cash profit**



Source: Company, I-Sec research

**Profitability and projects at IOC’s refining subsidiary CPCL**

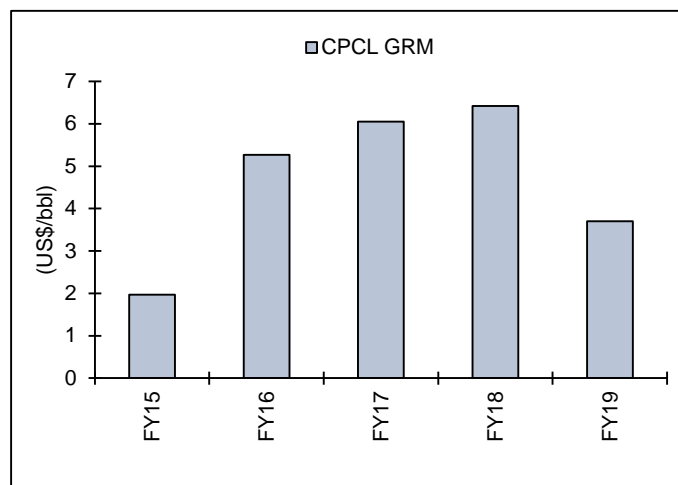
**CPCL’s GRM was weak and profit volatile in FY15-FY19**

IOC’s refining subsidiary, Chennai Petroleum Corporation Ltd. (CPCL), has two refineries with a combined capacity of 11.5mmtpa. CPCL’s:

- Refinery utilisation was 83%-94% in FY15-FY19 including 93% in FY19
- GRM has been US\$2.0-6.4/bbl in FY15-FY19 with GRM in FY19 being US\$3.7/bbl.

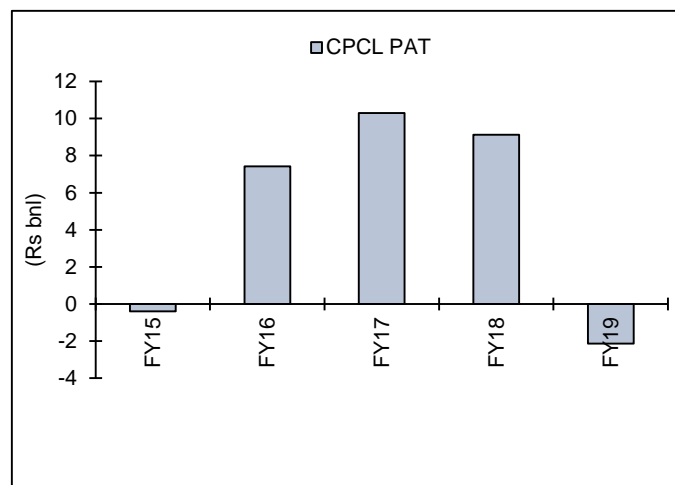
- Net profit was Rs7.4bn-10.3bn in FY16-FY18. CPCL incurred loss of Rs0.4bn in FY15 and Rs2.1bn in FY19.

**Chart 13: CPCL’s GRM was US\$2.0-6.4/bbl in FY15-FY19**



Source: IOC, I-Sec research

**Chart 14: CPCL’s net profit was Rs7.4bn-10.3bn in FY16-FY18; it incurred loss in FY15 and FY19**



Source: IOC, I-Sec research

**CPCL proposes to set up 9mmtpa refinery & PP plant in Nagapattinam**

CPCL proposes to set up 9mmtpa greenfield refinery and 500k tpa polypropylene (PP) plant at Nagapattinam. Feasibility report has been recently completed and approval for the project would now be sought. Operations at its existing 1mmtpa refinery would be progressively ceased as construction of the greenfield refinery starts

**Upside to EPS and fair value if marketing margins remain high**

**6%-13% upside to FY20E EPS if net auto fuel margin is Rs1.5-1.75/l**

We have estimated auto fuel net marketing margin of IOC and its OMC peers at Rs1.25/l, which is substantially lower than the Rs1.83/l in FY19 and Rs1.89/l in FY20-TD. Thus, net auto fuel marketing margin being much higher than our estimate cannot be ruled out. The upside to IOC’s FY20 EPS if auto fuel net marketing margin is:

- Rs1.5/l would be 6% at Rs18.8
- Rs1.75/l would be 13% Rs20.0

**Sensitivity of FY20 EPS to GRM and auto fuel net marketing margin**

IOC’s FY20 EPS would change by:

- Rs1.1/share for every Rs0.25/l change in auto fuel net marketing margin
- Rs2.5/share for every US\$1/bbl change in GRM

**Table 4: IOC’s FY20E EPS would change by Rs2.5 for every US\$1/bbl change in GRM and by Rs1.1 for every Rs0.25/l change in auto fuel net marketing margin**

		GRM (US\$/bbl)					
		4.0	5.0	5.5	6.0	6.5	7.0
	<b>1.00</b>	12.42	14.92	16.17	17.42	18.66	19.91
Marketing	<b>1.25</b>	13.54	16.04	17.29	18.54	19.79	21.04
margin (Rs/l)	<b>1.50</b>	14.67	17.17	18.42	19.67	20.92	22.17
	<b>1.75</b>	15.80	18.30	19.54	20.79	22.04	23.29

Source: I-Sec research

**FV sensitivity to GRM and auto fuel net margin**

IOC's fair value (FV) would change by:

- Rs11/share for every Rs0.25/l change in auto fuel net marketing margin
- Rs12/share for every US\$0.5/bbl change in its standalone GRM.

IOC's FV would be:

- Rs186 if FY20 GRM is at US\$6.5/bbl and auto fuel net margin at Rs1.5/l
- Rs128 if FY20 GRM is at US\$5/bbl and net auto fuel marketing margin at Rs1/l

**Table 5: FV to change by Rs11/share for Rs0.25/l change in auto fuel marketing margin and by Rs12/share for US\$0.5/bbl change in GRM**

		GRM (US\$/bbl)					
		4.0	5.0	5.5	6.0	6.5	7.0
Marketing margin (Rs/l)	1.00	104	128	140	152	164	177
	1.25	115	139	151	163	175	187
	1.50	126	150	162	174	186	198
	1.75	137	161	173	185	197	209

Source: I-Sec research



## Financial summary

**Table 6: Profit & Loss statement**
*(Rs mn, year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Operating Income</b>				
<b>(Sales)</b>	<b>5,155,419</b>	<b>6,160,878</b>	<b>6,525,570</b>	<b>7,051,657</b>
<b>Operating Expenses</b>	<b>4,739,487</b>	<b>5,807,537</b>	<b>6,193,326</b>	<b>6,667,224</b>
<b>EBITDA</b>	<b>415,932</b>	<b>353,342</b>	<b>332,244</b>	<b>384,433</b>
<i>% margins</i>	8.1%	5.7%	5.1%	5.5%
Depreciation & Amortisation	-76,635	-85,065	-92,395	-96,679
Gross Interest	-38,105	-48,880	-51,468	-56,872
Other Income	34,199	27,143	33,951	34,297
<b>Recurring PBT</b>	<b>335,391</b>	<b>245,818</b>	<b>222,332</b>	<b>265,178</b>
Less: Taxes	-118,239	-86,924	-68,282	-81,838
<b>Net Income (Reported)</b>	<b>226,264</b>	<b>173,767</b>	<b>166,735</b>	<b>198,843</b>
<b>Recurring Net Income</b>	<b>226,264</b>	<b>174,489</b>	<b>166,735</b>	<b>198,843</b>

Source: Company data, I-Sec research

**Table 7: Balance sheet**
*(Rs mn, year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Assets</b>				
Total Current Assets	991,401	1,209,935	1,272,489	1,318,307
<i>of which cash &amp; cash eqv.</i>	4,943	10,647	180,414	189,905
Total Current Liabilities & Provisions	1,051,384	1,115,871	1,087,515	1,154,723
<b>Net Current Assets</b>	<b>-59,983</b>	<b>94,064</b>	<b>184,974</b>	<b>163,584</b>
<b>Investments</b>	<b>528,545</b>	<b>616,621</b>	<b>511,157</b>	<b>511,157</b>
<b>Net Fixed Assets</b>	<b>1,240,520</b>	<b>1,324,927</b>	<b>1,209,426</b>	<b>1,212,749</b>
<i>Capital Work-in-Progress</i>	191,304	282,807	395,894	550,894
<b>Total Assets</b>	<b>1,905,339</b>	<b>2,329,077</b>	<b>2,481,875</b>	<b>2,628,299</b>
<b>Liabilities</b>				
<b>Borrowings</b>	<b>621,410</b>	<b>927,117</b>	<b>1,000,576</b>	<b>1,048,576</b>
Equity Share Capital	94,787	91,810	91,810	91,810
<i>Face Value per share (Rs)</i>	10	10	10	10
Reserves & Surplus*	1,043,951	1,119,535	1,211,968	1,325,895
<b>Net Worth</b>	<b>1,138,738</b>	<b>1,211,345</b>	<b>1,303,779</b>	<b>1,417,706</b>
<b>Total Liabilities</b>	<b>1,905,339</b>	<b>2,326,100</b>	<b>2,491,268</b>	<b>2,655,308</b>

\*Excluding revaluation reserves;

Source: Company data, I-Sec research

**Table 8: Quarterly trend**
*(Rs mn, year ending March 31)*

	Sep-18	Dec-18	Mar-19	Jun-19
Net sales	1,515,666	1,601,380	1,433,173	1,495,084
<i>% growth (YoY)</i>	37%	22%	5%	0%
EBITDA	61,533	36,001	109,874	77,231
EBITDA Margin (%)	4%	2%	8%	5%
Other income	10,407	4,431	10,595	6,314
Add: Extraordinaries			(722)	4,190
<b>Net profit</b>	<b>32,469</b>	<b>7,168</b>	<b>61,715</b>	<b>31,771</b>

Source: Company data, I-Sec research

**Table 8: Cashflow statement**
*(Rs mn, year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Operating Cashflow</b>	<b>106,281</b>	<b>285,378</b>	<b>246,035</b>	<b>280,019</b>
Working Capital Changes	(199,610)	154,047	90,910	(21,390)
Capital Commitments	210,361	33,147	80,824	216,493
<b>Free Cashflow</b>	<b>241,248</b>	<b>349,051</b>	<b>(15,484)</b>	<b>255,002</b>
<b>Cashflow from Investing Activities</b>	<b>(30,887)</b>	<b>(315,904)</b>	<b>96,308</b>	<b>(38,509)</b>
Inc (Dec) in Borrowings	(33,110)	(305,707)	(73,459)	(48,000)
Dividend paid	95,530	98,184	74,301	84,916
<b>Chg. in Cash &amp; Bank balances</b>	<b>(602,046)</b>	<b>(615,220)</b>	<b>(445,452)</b>	<b>(435,961)</b>

Source: Company data, I-Sec research

**Table 9: Key ratios**
*(Year ending March 31)*

	FY18	FY19P	FY20E	FY21E
<b>Per Share Data (Rs)</b>				
EPS(Basic Recurring)	24.0	18.5	17.7	21.1
Recurring Cash flow per share	11.3	30.3	26.1	29.7
Dividend per share (DPS)	9.0	9.3	7.0	8.0
Book Value per share (BV)	121.0	128.7	138.5	150.6
<b>Growth Ratios (%)</b>				
Operating Income	14	20	6	8
EBITDA	1	-15	-6	16
Recurring Net Income	-11	-23	-4	19
Diluted Recurring EPS	-11	-23	-4	19
Diluted Recurring CEPS	-61	169	-14	14
<b>Valuation Ratios (x)</b>				
P/E	5.6	7.3	7.6	6.4
P/CFPS	4.1	8.3	7.4	3.9
P/BV	1.1	1.1	1.0	0.9
EV / EBITDA	2.2	5.4	5.4	4.8
<b>Operating Ratios</b>				
Other Income / PBT (%)	10.2	11.0	15.3	12.9
Effective Tax Rate (%)	35.3	35.4	30.7	30.9
NWC / Total Assets (%)	-3.1	4.0	7.5	6.2
D/E Ratio (%)	54.6	76.5	76.7	74.0
<b>Return/Profitability Ratios (%)</b>				
Recurring Net Income Margins	4.4	2.8	2.6	2.8
RoCE	20.1	13.8	10.8	12.1
RoNW	20.1	13.5	12.2	13.5
Dividend Payout Ratio	37.4	50.0	39.5	37.9
Dividend Yield	6.7	6.8	5.2	5.9
EBITDA Margins	8.1	5.7	5.1	5.5

Source: Company data, I-Sec research

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