

# RIL's 3Q GRM may be lower than Reuters' Singapore GRM

## Sing GRM TD in 3Q US\$9.8/bbl; RIL GRM US\$7.5-8.9/bbl

Reuters' Singapore complex refining margin (GRM) to date in 3Q FY12 at US\$9.8/bbl is at the highest level since at least 1998. Singapore GRM to date in FY12 at US\$9.0/bbl is also higher than US\$7.6/bbl at the peak of the last super-cycle in FY08. Theoretical GRM of Reliance Industries (RIL) for 3Q works out to US\$7.5-8.9/bbl. RIL's 3Q GRM is likely to be lower than Singapore GRM and also QoQ and YoY lower. However, a weaker rupee, strong petrochemical margins and higher other income may help RIL make up for GRM weakness. Retain Buy.

## 3Q Singapore GRM highest at least since 1998; up 8% QoQ

Singapore GRM in 3Q is 8% QoQ and 79% YoY higher. The QoQ rise is driven by QoQ rise in diesel (US\$0.8/bbl), jet fuel (US\$1.0/bbl) and fuel oil (US\$3.4/bbl) cracks. These products are 58% of Reuters' product slate. However, cracks of light distillates (42% of Reuters' product slate) petrol (US\$0.5/bbl), naphtha (US\$5.4/bbl) and LPG (US\$2.1/bbl) are QoQ lower. Naphtha and petrol cracks have slumped since the start of 3Q and are US\$5.6-9.0/bbl below 3Q average.

## RIL's 3Q theoretical GRM US\$7.5-8.9/bbl down 12-26% QoQ

RIL's 3Q theoretical GRM at US\$7.5-8.9/bbl is US\$1.1-2.5/bbl below Singapore GRM. It is also QoQ and YoY lower. The QoQ decline is mainly due to decline in propylene, naphtha and LPG cracks and in discount of heavier crude RIL can use to Dubai crude. Singapore GRM TD in FY12 is higher than the peak in FY08 but RIL's 1H FY12 GRM at US\$10.2/bbl is well below its FY08 peak of US\$15/bbl. RIL is hit by FY12 light-heavy crude spread, naphtha and LPG crack (US\$9-18/bbl) being lower than in FY08.

## R&M companies hit by high Bonny light-Dubai premium

HPCL and BPCL's GRM in 1H FY12 is 28-53% YoY lower at US\$1.5-2.3/bbl even as Singapore GRM is up 124% YoY. They have been hit by jump in premium of Bonny light and similar domestic crude (50-55% of crude mix) to Dubai to US\$9-10/bbl in 1H FY12 from US\$3-4/bbl in 1H FY11. BPCL and HPCL's theoretical GRM for 3Q works out to US\$2.1-2.6/bbl.

## Diesel cracks strong but petrol weakening; closures to help

Singapore GRM would fall in 2012 if weak global oil demand coincides with large capacity add. However, demand holding up and larger capacity closures than expected could salvage GRM. Diesel and jet fuel cracks TD in FY12 are US\$19-20/bbl (current US\$20-21/bbl) but petrol (US\$8/bbl) and naphtha cracks (minus US\$14) have fallen. If demand holds up middle distillate utilization would remain high at 98% in 2012-13 while petrol would be just 82%. Closure of petrol biased refineries would tighten diesel balance and boost diesel cracks.

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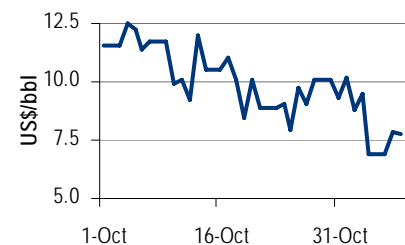
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Chart 1: Reuters' Singapore GRM declining trend in 3Q FY12 hit by slump in petrol & naphtha cracks



Source: Reuters

Table 1: RIL's 3Q FY12 GRM may be lower QoQ, YoY and also lower than Singapore GRM

	US\$/bbl
<b>RIL's GRM</b>	
3Q FY12 (theoretical)	7.5-8.9
2Q FY12	10.1
3Q FY11	9.0
Sing GRM 3Q FY12	9.8
<b>RIL's GRM</b>	
QoQ change	(1.2-2.6)
YoY change	(0.1-1.5)
Vis-à-vis Singapore GRM	(1.0-2.3)

Source: Company, Reuters, BofA Merrill Lynch Global Research

## Sing GRM highest at least since 1998

### Singapore GRM US\$9.8/bbl to date in 3Q FY12

#### Singapore GRM is up 8% QoQ and 79% YoY

Reuters' Singapore GRM to date in 3Q FY12 at US\$9.8/bbl is at the highest quarterly level at least in 52 quarter (ie since 1998). It is up 8% QoQ from US\$9.2/bbl in 2Q FY12 (17 quarter high). Singapore GRM is also up 79% YoY vis-à-vis US\$5.5/bbl in 3Q FY11.

#### Singapore GRM higher than at peak of last super-cycle

##### To date FY12 GRM US\$9.04/bbl; US\$7.65/bbl at peak in FY08

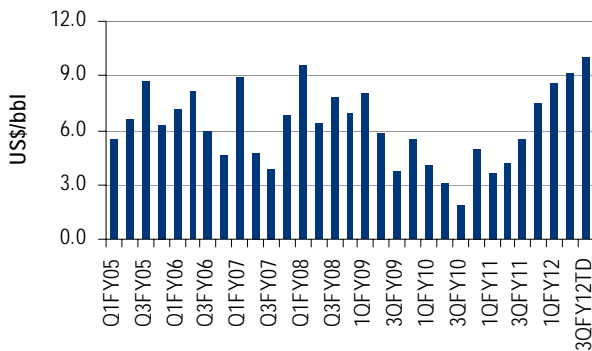
Singapore GRM to date in FY12 at US\$9.04/bbl is even higher than US\$7.65/bbl at the peak in FY08 during the FY05-FY09 refining super cycle. Singapore GRM to date in 2011 at US\$8.6/bbl is also higher than US\$7.6/bbl in 2007. Thus Singapore GRM both in the current calendar and financial year are higher than at the peak during the last refining super-cycle.

Table 2: Product slate used to calculate Reuters' Singapore complex GRM

Products	Weight in product slate
Gasoline	32%
Jet/Kerosene	19%
Diesel	16%
Fuel oil	23%
LPG	3%
Naphtha	7%
	100%

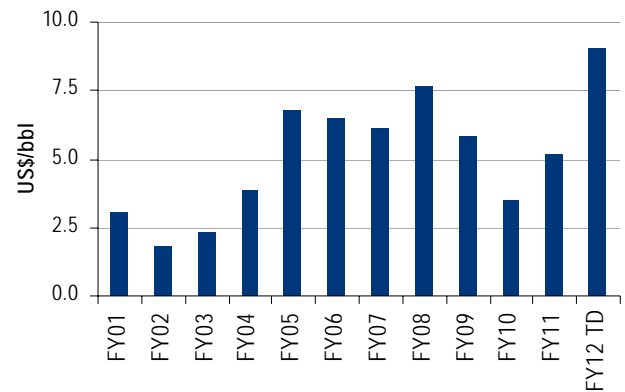
Source: RPL prospectus

Chart 2: 3Q FY12TD Reuters' Singapore refining margin higher than FY05-09 refining super cycle levels



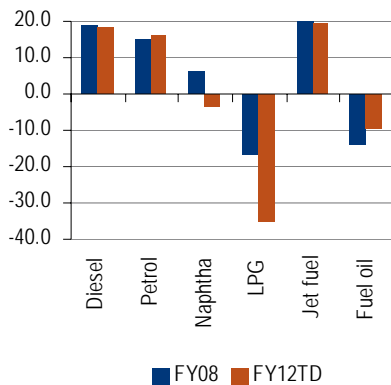
Source: Reuters, BofA Merrill Lynch Global Research

Chart 3: FY12TD Singapore GRM higher than peak in FY08 during the FY05-FY09 refining super cycle



Source: Reuters, BofA Merrill Lynch Global Research

Chart 4: Petrol and fuel cracks in FY12 higher than in FY08 while other products lower



Source: Bloomberg, BofA Merrill Lynch Global Research

#### FY12 petrol & fuel oil cracks (55% of product slate) higher than in FY08

##### Singapore GRM to date in FY12 is higher than in FY08 as

- Petrol cracks to date in FY12 is US\$1.5/bbl higher than in FY08
- Fuel oil cracks to date in FY12 is US\$4.6/bbl higher than in FY08

Petrol and fuel oil are 55% of Reuters product slate. Cracks of other products are lower in FY12 than in FY08 but these products are 45% of Reuters' product slate.

#### QoQ rise driven by fuel oil, jet fuel and diesel cracks

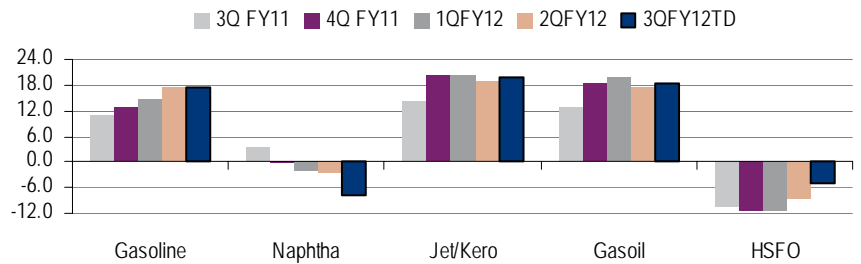
##### Fuel oil, jet fuel and diesel 58% of Reuters' product slate

Reuters' Singapore GRM in 3Q FY12 to date is up 8% QoQ. The QoQ rise is driven by

- US\$3.4/bbl QoQ rise in fuel oil cracks
- US\$1/bbl QoQ rise in jet fuel cracks
- US\$0.8/bbl QoQ rise in diesel cracks.

These products are 58% of Reuters' product slate.

**Chart 5: Diesel, jet fuel and fuel oil cracks up QoQ and YoY in 3Q FY12TD**



Source: Bloomberg, BofA Merrill Lynch Global Research

**Naphtha, LPG and petrol cracks down QoQ**

**Petrol, LPG and naphtha crack US\$0.5-5.4/bbl QoQ lower**

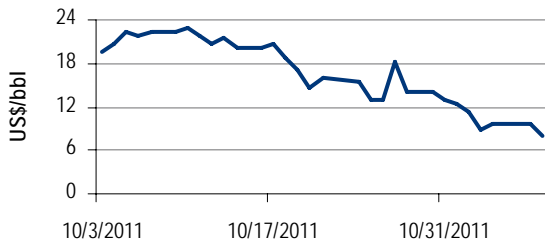
However, cracks of light distillates, which are 42% of Reuters' product slate, are QoQ lower. Petrol cracks are US\$0.5/bbl QoQ, LPG cracks US\$2.0/bbl QoQ and naphtha cracks US\$5.4/bbl QoQ lower.

**Sharp fall in naphtha and petrol cracks from start of 3Q**

**Naphtha and petrol cracks now US\$2.5-6.0/bbl lower than 3Q average**

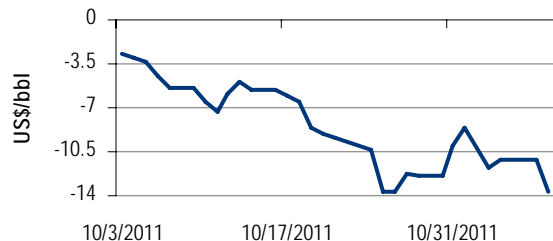
Naphtha and petrol cracks have sharply deteriorated since the start of 3Q. Petrol cracks, which were US\$22.8/bbl at the beginning of 3Q, are down to US\$8/bbl now. Petrol cracks now are US\$9.0/bbl lower than 3Q average of US\$17.0/bbl. Naphtha cracks, which were minus US\$2.7/bbl at the beginning of 3Q, are down to minus US\$13.7/bbl now. Naphtha cracks now are US\$5.6/bbl lower than 3Q average of minus US\$8.1/bbl.

**Chart 6: Petrol cracks have fallen to US\$8.0/bbl now vis-à-vis US\$22.8/bbl at peak and 3Q TD average of US\$17.0/bbl**



Source: Bloomberg, BofA Merrill Lynch Global Research

**Chart 7: Naphtha cracks have fallen to minus US\$13.7/bbl now vis-à-vis minus US\$2.7/bbl at peak and 3Q average of minus US\$8.1/bbl**



Source: Bloomberg, BofA Merrill Lynch Global Research

**Singapore GRM up 79% YoY; transportation fuel cracks up**

**Diesel, jet fuel, petrol & fuel oil up US\$5.5-6.2/bbl YoY**

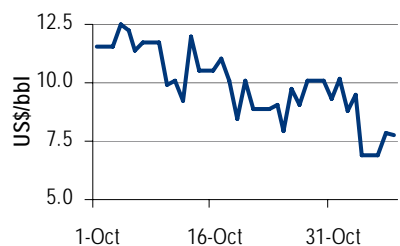
Singapore GRM in 3Q FY12 to date at US\$9.8/bbl is up 79% (US\$4.3/bbl) YoY. This rise is driven by US\$5.5-6.2/bbl YoY rise in diesel, fuel oil, jet fuel and petrol cracks. These four products are 90% of Reuters' product slate. Naphtha and LPG cracks in 3Q FY12 have fallen sharply by US\$11-27/bbl YoY. However, these products are just 10% of Reuters' product slate.

## RIL's 3Q GRM may be below Singapore GRM

RIL's theoretical GRM US\$7.5-8.9/bbl in 3Q FY12TD

RIL's theoretical GRM for 3Q FY12 to date works out to US\$7.5-8.9/bbl.

Chart 8: Reuters' Singapore GRM trend in 3Q FY12



Source: Reuters

Table 3: RIL's theoretical refining margin in 3Q FY12 TD is at US\$7.5-8.9/bbl

US\$/bbl	Assumig one crude	Assuming best crude mix
RIL's refining margin		
Old refinery	0.9	2.9
New refinery	11.4	12.0
RIL's blended refining margin	6.1	7.4
Add: savings from use of gas in refinery	1.4	1.4
<b>RIL's theoretical refining margin</b>	<b>7.5</b>	<b>8.9</b>
Reuters' Singapore margin	9.8	9.8
<b>Premium to Singapore margin</b>	<b>-2.3</b>	<b>-1.0</b>

Source: BofA Merrill Lynch Global Research

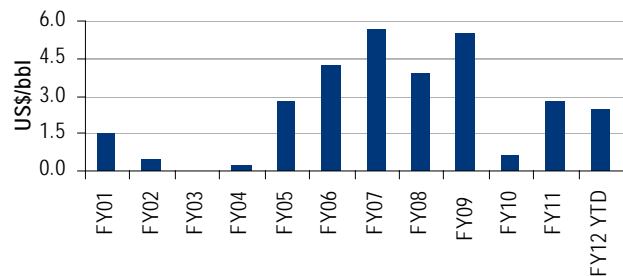
## RIL's premium to Singapore GRM declining in last 3 quarters

4Q FY11 premium lowest in 23 quarters; 2Q FY12 lowest in 27 quarters

RIL's premium to Singapore GRM had been declining in the last few quarters.

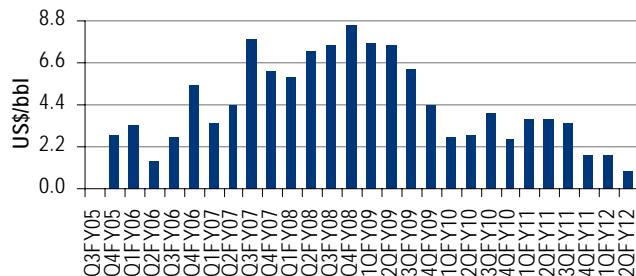
RIL's premium to Singapore GRM in 4Q FY11 at US\$1.8/bbl was the lowest premium in 23 quarters. The premium was US\$1.8/bbl in 1Q FY12 but in 2Q FY12 it declined further to US\$0.95/bbl. It is RIL's lowest premium in 27 quarters.

Chart 9: Arab heavy-Dubai spread lower than during super-cycle



Source: Bloomberg

Chart 10: RIL's premium to Singapore GRM in 2Q lowest in the last 27 quarters



Source: Company, Reuters, BofA Merrill Lynch Global Research

## RIL's 3Q TD theoretical GRM lower than Singapore GRM

3Q theoretical GRM US\$7.5-8.9/bbl vis-à-vis Sing GRM of US\$9.8/bbl

RIL's 3Q TD theoretical GRM of US\$7.5-8.9/bbl is 10-24% (US\$1.0-3.3/bb) lower than 3Q TD Singapore GRM of US\$9.84/bbl. RIL's GRM has never been below Singapore GRM at least since 1Q FY04. In 3Q FY05 RIL's GRM was at the same level as Singapore GRM.

Table 4: RIL's 3Q FY12E theoretical GRM at US\$7.5-8.9/bbl down 12-26% QoQ and 1-17% YoY

US\$/bbl	3Q FY12E theoretical GRM assuming		2Q FY12 GRM	3Q FY11 GRM
	One crude	Best crude mix		
RIL's GRM	7.5	8.9	10.1	9.0
QoQ change	-2.6	-1.2		
QoQ change (%)	-26%	-12%		
YoY change	-1.5	-0.1		
YoY change (%)	-17%	-1%		

Source: BofA Merrill Lynch Global Research

### 3Q theoretical GRM down 12-26% QoQ and 1-17% YoY

US\$7.5-8.9/bbl vis-à-vis US\$10.1/bbl in 2Q FY12 & US\$9/bbl in 3Q FY11  
RIL's 3Q theoretical GRM of US\$7.5-8.9/bbl is 12-26% QoQ lower vis-à-vis RIL's 2Q FY12 GRM of US\$10.1/bbl. It is also 1-17% YoY lower vis-à-vis RIL's 3Q FY11 GRM of US\$9/bbl.

#### Hit by QoQ decline in light distillate cracks and crude spread

The QoQ decline in RIL's 3Q theoretical GRM is due to:

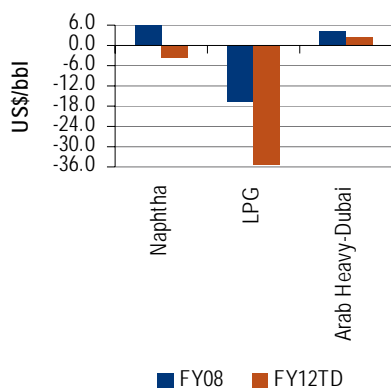
- QoQ decline in cracks of light distillates petrol (US\$0.5/bbl), naphtha (US\$5.4/bbl), propylene (US\$20.6/bbl) and LPG (US\$2.0/bbl). Light distillates form 41% of RIL's product slate. Diesel and jet fuel cracks, which are 46% of RIL's product slate, are up US\$0.8-1.0/bbl. However, hit from lower light distillate cracks is more than gain from higher diesel and jet fuel cracks
- Discount of heavier crude, RIL can use like Arab heavy and Souedie, to Dubai crude is US\$0.5-1.9/bbl QoQ lower

Table 5: RIL's weighted average product crack spread down US\$1.1/bbl QoQ

RIL's product slate		QoQ change (US\$/bbl)	
		Product crack	RIL's weighted average crack spread
Gasoline	18%	-0.1	0.0
Jet/Kerosene	7%	1.0	0.1
Diesel	39%	0.7	0.3
LPG	5%	-1.9	-0.1
Naphtha	11%	-5.1	-0.6
Propylene	3%	-18.4	-0.6
Reformate	4%	-5.1	-0.2
Petroleum coke	12%	0.1	0.0
	<b>100%</b>		<b>-1.1</b>

Source: BofA Merrill Lynch Global Research

Chart 11: RIL's 1H FY12 GRM well below its FY08 GRM due to lower Arab Heavy-Dubai spread, naphtha and LPG cracks



Source: Bloomberg, BofA Merrill Lynch Global Research

#### Hit by YoY decline in light distillate cracks and crude spread

RIL's 3Q theoretical GRM is YoY lower due to:

- Naphtha (US\$11/bbl), propylene (US\$10/bbl) and LPG (US\$27/bbl) cracks being YoY lower. These products are 23% of RIL's product slate. Diesel, jet fuel, petrol cracks, which are 65% of RIL's product slate, are up US\$5.5-6.2/bbl. Gain from higher diesel, jet fuel and petrol cracks is US\$0.5/bbl higher than the hit from lower propylene, naphtha and LPG cracks
- Discount of heavier crude, RIL can use like Arab heavy and Oriente, to Dubai crude is US\$0.5-2.5/bbl YoY lower

#### RIL 1H FY12 GRM well below FY08 peak; Sing GRM higher

##### RIL's GRM hit by lower naphtha, LPG cracks & crude spread

Singapore GRM TD in FY12 at US\$9/bbl is higher than at the peak of the super-cycle in FY08 of US\$7.65/bbl. RIL's GRM in 1H FY12 at US\$10.2/bbl is well below its FY08 peak of US\$15/bbl. This is because

- FY12 TD naphtha and LPG cracks are US\$9-18/bbl lower than FY08 cracks of these products
- Discount of crude RIL uses is also lower in FY12 than in FY08. Arab heavy-Dubai spread TD in FY12 is US\$2.3/bbl while it was US\$4/bbl in FY08

## OMCs' GRM by high premium for light crude BPCL & HPCL 1H FY12 down 28-53% YoY; Sing GRM up 124% GRM hit by high premium for Bonny Light crude

HPCL and BPCL's GRM in 1H FY12 is 28-53% YoY lower at US\$1.9-2.3/bbl even as Singapore GRM is up 124% YoY.

### GRM hit by jump in Bonny Light-Dubai spread & higher octroi

The two main factors, which have hit the 1H FY12 GRM of BPCL and HPCL, are

- Jump in premium of Bonny light and similar domestic crude (50-55% of BPCL's crude mix) to Dubai. Higher price they have to pay for the lighter crude hurts their GRM. Bonny light-Dubai spread is up to US\$8.8/bbl in 1H FY12 from US\$3.1/bbl in 1H FY11. The premium of indigenous oil (benchmarked to Bonny light), these refiners use, to Dubai is US\$10.3/bbl in 1H FY12 vis-à-vis US\$4.0/bbl in 1H FY11. The YoY hit on this account is around US\$3/bbl
- Higher octroi BPCL and HPCL have to pay at 3% on the higher crude price in 1H FY12 vis-à-vis in 1H FY11. 1H FY12 crude mix of these refiners is US\$35.6/bbl YoY higher and the extra octroi thereon at 3% is US\$1.1/bbl

### BPCL and HPCL GRM in 2Q FY12 down 28-48% YoY

BPCL GRM at US\$1.6/bbl and HPCL GRM at US\$1.9/bbl

We have estimated BPCL and HPCL's 2Q FY12 GRM by its various components. HPCL and BPCL's 2Q weighted average product crack based on Dubai crude works out to US\$7.8-8.3/bbl. However, their 2Q GRM is sharply lower due to hit from Bonny light-Dubai spread (US\$4.1-4.5/bbl), octroi (US\$1.5-2.0/bbl) and inventory loss of US\$0.3/bbl

Table 6: BPCL and HPCL GRM hit high premium of Bonny Light crude to Dubai in 2Q FY12

US\$/bbl	BPCL	HPCL
Weighted average product cracks based on Dubai	8.3	7.8
Premium of Bonny light to Dubai	-4.5	-4.1
Hit from 3% octroi on crude for Mumbai refineries	-2.0	-1.5
Inventory gain/loss	-0.3	-0.3
<b>GRM</b>	<b>1.6</b>	<b>1.9</b>

Source: BofA Merrill Lynch Global Research

### 3Q FY12TD GRM at US\$2.1-2.6/bbl

BPCL and HPCL's theoretical GRM for 3Q works out to US\$2.1-2.6/bbl. Their 3Q theoretical GRM is 29-36% QoQ higher. However, it is 49-54% YoY lower vis-à-vis their 3Q FY11 GRM of US\$4.6-5.1/bbl.

Table 7: BPCL and HPCL 3Q FY12TD GRM at US\$2.4-2.9/bbl

US\$/bbl	BPCL	HPCL
Weighted average product cracks	8.2	8.3
Premium of crude slate to Dubai	-3.8	-3.8
Hit from 3% octroi on crude for Mumbai refineries	-1.9	-1.5
Inventory gain	-0.4	-0.4
<b>GRM</b>	<b>2.1</b>	<b>2.6</b>

Source: BofA Merrill Lynch Global Research

## Refining outlook

### Weak demand & large capacity risk to GRM

#### 2Q 2011 global oil demand growth lowest in 7 quarters

Singapore GRM TD in FY12 at US\$9/bbl is higher than even at the peak of the last super-cycle in FY08. However, GRM would fall in 2012 if weak global oil demand coincides with large refining capacity addition. Global oil demand growth in 2Q 2011 at 0.56m b/d is the lowest in seven quarters. A recession in part of the developed world could mean weak oil demand growth or perhaps even demand decline in 2012.

#### Expect 2m b/d of net refining capacity addition in 2012

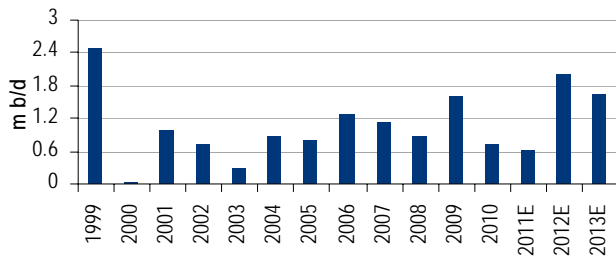
We expect global refining capacity addition of 2m b/d net of closures in 2012 (see [Global Energy Weekly, 05 October 2011](#) and [Oil Refining & Marketing, 11 October 2011](#)). This would be the highest refining capacity addition since 1999.

### Refining spare capacity may rise to 6.3m b/d in 2012

#### Spare capacity at 4.3-4.6m b/d in 2012-2013 in the base case

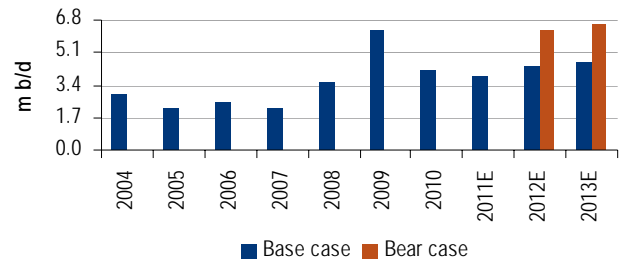
Global refining spare capacity increased to 6.3m b/d in 2009 after 2-years of demand decline and large refining capacity addition. Strong oil demand growth in 2010 and low capacity addition net of closures in 2010-2011 is set to cut down spare capacity to 3.9m b/d by end-2011. In the base case we expect global refining spare capacity to rise to 4.3m b/d in 2012 and 4.6m b/d in 2013 assuming demand growth of 1.4-1.5m b/d and net capacity addition of 1.6-2.0m b/d. In the bear case if global oil demand declines by 0.4m b/d in 2012, refining spare capacity would rise to 6.3m b/d in 2012 and 6.6m b/d in 2013.

Chart 12: Global refining capacity addition in 2012 may be the highest since 1999



Source: BP Statistical Review, BofA Merrill Lynch Global Research

Chart 13: Refining spare capacity in base case and bear case



Source: BofA Merrill Lynch Global Research

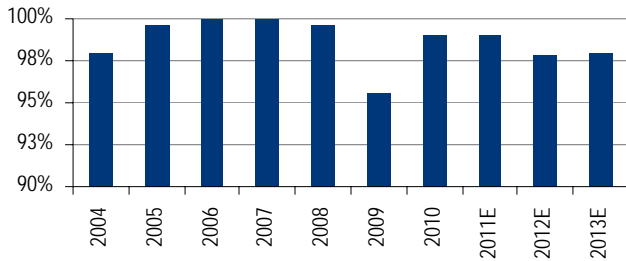
### Demand holding up & more closures may salvage GRM

Demand holding up in 2012 and larger refining capacity closures than expected could salvage GRM. We are currently assuming 1m b/d of global refining capacity closure in 2012. There is another 3m b/d of refining capacity up for sale globally, mainly in North America and Europe. Some of this capacity may close down if no buyers are found and refining outlook worsens. Thus, refining closures may exceed 1m b/d assumed by us in 2012.

### Diesel & jet fuel cracks strong but petrol weakening

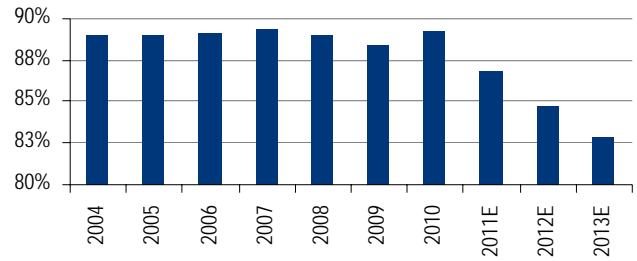
Diesel and jet fuel cracks TD in FY12 are US\$18.6-19.7/bbl while current cracks are marginally stronger at over US\$20-21/bbl. Petrol cracks have collapsed to US\$8/bbl and naphtha cracks to minus US\$13.7/bbl.

**Chart 14: Middle distillate capacity utilization to remain high at 98-99% in 2011-13E**



Source: BofA Merrill Lynch Global Research

**Chart 15: Light distillate capacity utilization to fall to 87% in 2012E and 85% in 2013E from 89% in 2010**



Source: BofA Merrill Lynch Global Research

### Diesel/jet fuel cracks outlook better than petrol

**Middle distillate utilization at 98% in 2012-13 but petrol 82% in 2013**  
Global product crack spreads may deteriorate due to excess capacity in 2012. However, middle distillate (diesel and Jet fuel) cracks will remain relatively resilient. This is because of a relatively balanced demand/supply picture and highly correlation of demand with emerging markets GDP growth. If demand holds up middle distillate utilization would remain high at 98% in 2012-2013.

Petrol and other light distillates would be impacted negatively by sluggish demand growth and c.0.9mn bbl/d of new gasoline capacity. Global petrol utilization rate may decline to 82% by 2013, the lowest level since 1991.

### Petrol biased refinery closure would tighten diesel balance

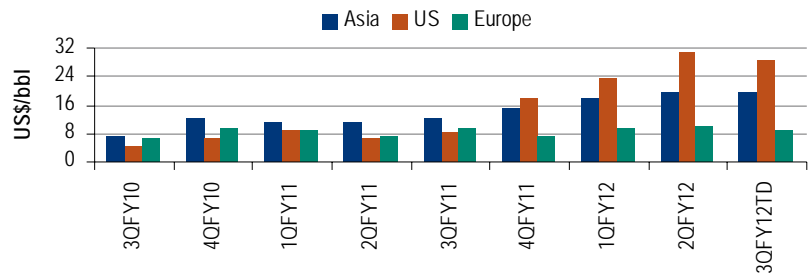
If diesel demand surprises to the upside, diesel cracks could sustain at high levels. Closure of petrol biased refineries would also tighten diesel balance and boost diesel cracks. Thus any successful attempt to rebalance the oversupplied petrol market could lead to extremely strong distillate cracks.

### Regional 3-2-1 cracks trend

#### Asian cracks QoQ flat; US and Europe down QoQ

**US cracks up YoY but down QoQ; European cracks fall YoY and QoQ**  
3-2-1 US cracks in 3Q FY12 are 8% QoQ lower and European cracks are 11% QoQ lower. Asia cracks are up 1% QoQ. Asian and US cracks are up sharply YoY but European cracks are even down 8% YoY.

**Chart 16: US 3-2-1 cracks down QoQ from its all time level in 2Q FY12**



Source: Bloomberg



## Retain Buy

**RIL's 3Q profit up 3% QoQ if GRM at higher end of BofAMLe**

**Down 7% QoQ but up 5% YoY if 3Q GRM at lower end of our estimate**

RIL's 3Q FY12E net profit would be up 3% QoQ and 16% YoY at Rs59.6bn if its GRM is at the higher end of our theoretical GRM of US\$8.9/bbl. However, if its GRM is at the lower end of our estimate at US\$7.5/bbl, its 3Q profit at Rs53bn would be 7% QoQ lower but 5% YoY higher. In 3Q FY12 RIL would benefit from

- Weaker rupee. To date in 3Q rupee has averaged Rs49.2, which means a depreciation of 8% QoQ and 10% YoY. RIL benefits from a weak rupee as it means higher rupee price for its oil, gas, refining and petrochemical margins, which are US dollar denominated or linked
- Higher other income. Other income is likely to be higher in 2H FY12 than in 1H. This is because second and third tranche of consideration from BP of US\$2.2bn and US\$3bn was received only in mid-August 2011 and in early October 2012 respectively
- Strong petrochemical margins. RIL's blended petrochemical margin to date in 3Q is at US\$533/ton, which is up 3% QoQ and 8% YoY.

We maintain our Buy on RIL (XRELF/RLNIY; B-1-7; Rs883.70/\$35.96) and HPCL (XHTPF; C-1-7; Rs332.35) and Neutral on BPCL (XBPCF; C-2-7; Rs603.45).

## Price objective basis & risk

### BPCL (XBPCF)

Our PO of Rs681/share is based on P/E of 9.5x on BPCL's FY12E consolidated EPS (excluding dividend income from IGL and PLNG) of Rs37.4/share in line with the stock's three-year average P/E. PO includes value of BPCL's share in oil reserves in Wahoo block (Brazil) and gas resources in Mozambique at Rs194/share. It also includes the market value of investments in Indraprastha Gas (IGL), Petronet LNG (PLNG), Oil India (OIL) and cost of investment in Bina oil refinery of Rs131/share.

Upside risks: (1) Government compensation/grants are higher than our expectations, (2) Government eliminates subsidies on all products, (3) Refining margins are higher than forecast by us, (4) Rise in market prices of IGL and PLNG. (5) Significant reserve accretion in BPCL's E&P exploration assets in India and abroad. Downside risks: (1) Government does not issue enough compensation, (2) government reverts to a cost-plus-based regulated pricing mechanism, (3) steep decline in regional and hence BPCL's refining margins, and (4) steep decline in the market price of IGL and PLNG.

### Hindustan Petro. (XHTPF)

Our PO of Rs430 is based on PE of 9.0x on HPCL's FY12E EPS (excluding dividend income from MRPL) of Rs35.8 in line with the stock's three-year average P/E. It also includes the market value of investments in MRPL (ONGC's subsidiary), Oil India (OIL) and cost of investment in JV refinery HPCL Mittal Energy Ltd. of Rs108. Upside risks: (1) Significant reserve accretion in HPCL's E&P exploration assets in India and abroad (2) Subsidy R&M companies have to bear is lower than assumed by us or oil sector is fully deregulated, (3) Refining margins are higher than forecast by us, (4) Rise in market prices of MRPL. Downside risks: (1) Indian oil sector continues to be regulated and HPCL is not adequately compensated for subsidies it has to bear, (2) steep decline in regional and hence HPCL's refining margins, and (3) steep decline in the market price of MRPL.

### Reliance Inds (XRELF / RLNIY)

Our PO of Rs950 (GDR US\$40.14) is a sum-of-the-parts valuation. It includes EV of RIL's 3 businesses of Rs945/share and net cash of Rs4/share. The EV of the refining, petrochemical and E&P business is calculated on a DCF basis, using a WACC of 11.8pct. Refining and marketing (Rs433) is 46pct of the EV, E&P valuation (Rs195) 21pct, and petrochemicals (Rs317) 34pct. Downside risks are (1) Refining and petrochemical margins being lower than expected due to global economic slowdown (2) 7-year income tax holiday being disallowed on gas production, which would mean lower cash flow, profit and fair value, (3) Lower-than-expected oil price, and (4) Large acquisitions that are value dilutive. Upside risks are (1) Refining and petrochemical margins being better than expected, (2) Higher-than-expected oil price, (3) Significant reserve accretion in the next 12 months and (4) Large acquisitions that increase fair value significantly.

## Link to Definitions

### Basic Materials

Click [here](#) for definitions of commonly used terms.

### Energy

Click [here](#) for definitions of commonly used terms.

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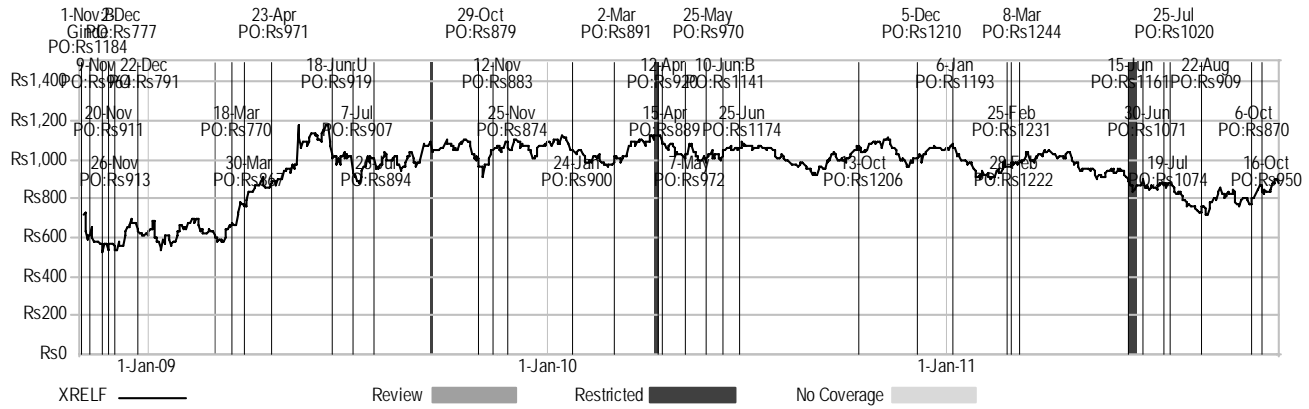
Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
BUY	Citic Resources	CTJHF	1205 HK	Vitus Leung
	Formosa Plastics	FSAPF	1301 TT	Joon-Ho Lee
	Hindustan Petro.	XHTPF	HPCL IN	Vidyadhar Ginde
	Honam Petrochemical	HBBHF	011170 KS	Kenneth Whee
	Kunlun Energy	CNPXF	135 HK	Vitus Leung
	LG Chem	LGCLF	051910 KS	Kenneth Whee
	Nan Ya Plastics	NNYPF	1303 TT	Joon-Ho Lee
	Oil India Ltd	XLCRF	OINL IN	Vidyadhar Ginde
	Oriental Union Chemical	OLUNF	1710 TT	Joon-Ho Lee
	PetroChina	PCCYF	857 HK	Thomas Wong
	PetroChina - A	PTR	PTR US	Thomas Wong
	PTT Global Chemical PLC	XPGOF	PTTGC TB	Komsun Suksumrun
	Reliance Inds	XRELF	RIL IN	Vidyadhar Ginde
	Reliance Inds -G	RLNIY	RIGD LI	Vidyadhar Ginde
	Sinopec	SNPMF	386 HK	Thomas Wong
	Sinopec - A	SNP	SNP US	Thomas Wong
	Sinopec Shanghai Petrochemical	SPTJF	338 HK	Joon-Ho Lee
	SK Innovation	XVERF	096770 KS	Kenneth Whee
	S-Oil	SOOCF	010950 KS	Kenneth Whee

**APR - Energy Coverage Cluster**

Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
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	CNOOC	CEO	CEO US	Thomas Wong
	CNOOC	CEOHF	883 HK	Thomas Wong
	COSL	CHOLF	2883 HK	Vitus Leung
	Formosa Chemicals & Fibre	XFUMF	1326 TT	Joon-Ho Lee
	Formosa Petrochemical	FPTCF	6505 TT	Kenneth Whee
	MIE Holdings	XMEEF	1555 HK	Vitus Leung
	Sinopec Yizheng Chemical Fibre	YZCF	1033 HK	Joon-Ho Lee
<b>UNDERPERFORM</b>				
	GS Holdings	GSHDF	078930 KS	Kenneth Whee
	Kolon Industries	XKLN	120110 KS	Joon-Ho Lee
	KP Chemical	KPCHF	064420 KS	Joon-Ho Lee
	Petronet LNG Ltd	POLNF	PLNG IN	Vidyadhar Ginde
<b>RSTR</b>				
	Cairn India	XCANF	CAIR IN	Vidyadhar Ginde
	IOC	IOCOF	IOCL IN	Vidyadhar Ginde
	ONGC	ONGCF	ONGC IN	Vidyadhar Ginde

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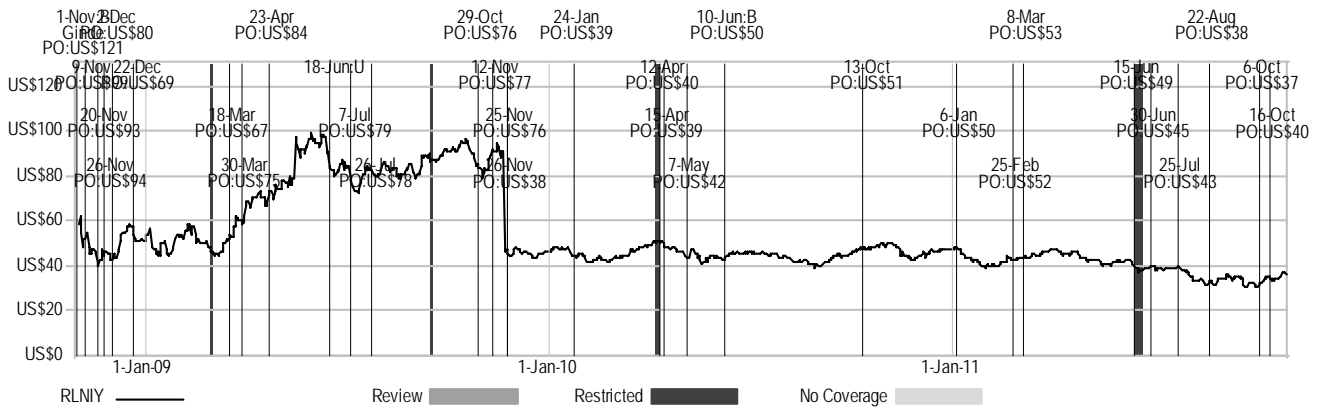
### XRELF Price Chart



B : Buy, N : Neutral, U : Underperform, PO : Price objective, NA : No longer valid, NR: No Rating

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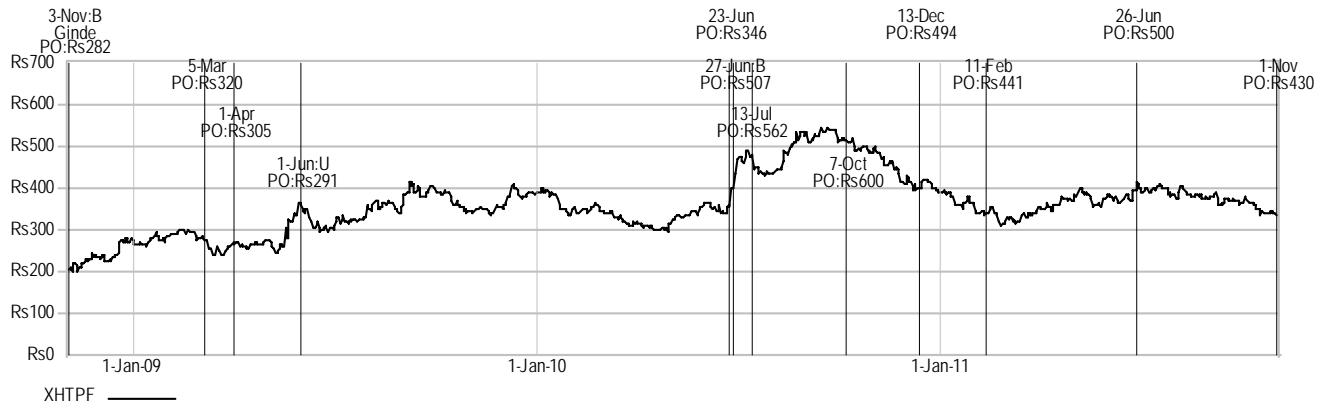
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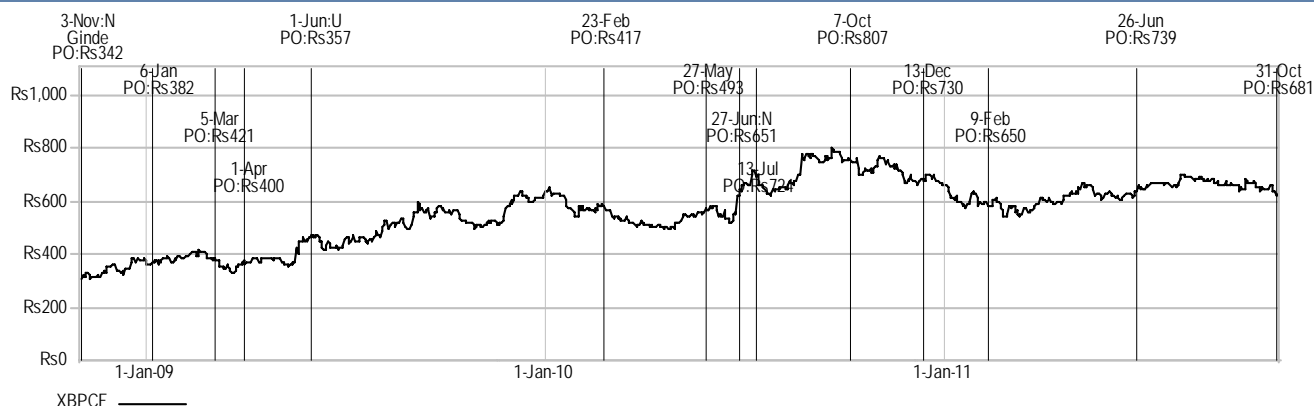
### XHTPF Price Chart



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**XBPCF Price Chart**



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**Investment Rating Distribution: Chemicals Group (as of 01 Oct 2011)**

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	54	50.94%	Buy	22	47.83%
Neutral	29	27.36%	Neutral	16	61.54%
Sell	23	21.70%	Sell	7	30.43%

**Investment Rating Distribution: Energy Group (as of 01 Oct 2011)**

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	164	57.95%	Buy	92	60.93%
Neutral	71	25.09%	Neutral	32	55.17%
Sell	48	16.96%	Sell	20	48.78%

**Investment Rating Distribution: Global Group (as of 01 Oct 2011)**

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	2073	54.13%	Buy	923	49.12%
Neutral	961	25.09%	Neutral	460	55.57%
Sell	796	20.78%	Sell	287	38.32%

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
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Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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