

Phillips Carbon Black

BUY
Product mix and efficiencies to drive profitability

Summary

- **Phillips Carbon Black (PCB) is the largest manufacturer of carbon black in India (46% market share by capacity) and seventh largest in the world.**
- **Rising tyre demand in India alongside production curbs in China (lower supplies) provide strong visibility on volume growth/margins for PCB.**
- **We expect PCB's sales/EBITDA/net profit to grow at a CAGR of 14.5%/30.5%/93.4% over FY17-19E. Its net debt to EBITDA to improve from 2.6x in FY17 to 1.3x by FY19; return on equity is likely to improve from 6.5% in FY17 to 18.5% in FY19. Given these factors, PCB's stock is currently trading at an inexpensive valuation of 10.5x/8.9x FY18/FY19 EPS.**
- **We initiate coverage on the stock with a BUY, Target price - Rs911.**

Key Highlights and Investment Rationale

- **Brownfield expansion with modest capex**
PCB is expanding carbon black capacity by 66k tonnes via brownfield expansion (current capacity - 472k tonnes) with a modest capex of Rs1,700 mn by Q2FY19. Further, PCB is doubling its high-margin specialty grade carbon to 24k tonnes with a capex of Rs700 mn by Q3FY18. We expect volumes to grow at a CAGR of 4.5% over FY17-FY19E.
- **EBITDA/tonne to expand on better product mix, efficiencies and volumes**
We expect PCB's EBITDA margin to expand on the back of improving operating efficiencies, higher volumes and better product mix in favour of non-rubber products. We expect EBITDA/tonne to increase from Rs7,438 in FY17 to Rs11,056 in FY19E.
- **Initiate coverage with BUY; TP of Rs911**
We believe PCB is in a sweet spot currently given rising tyre demand in India, competitive position in the international markets and improving product mix in favour of non-rubber products. The company's credit profile is also likely to strengthen with higher free cash flows and falling net debt. The stock is currently trading at an inexpensive valuation of 10.5x/8.9x FY18/FY19 EPS. **We assign a PE multiple of 12.0x to our FY19E EPS and derive a target price of Rs911.**

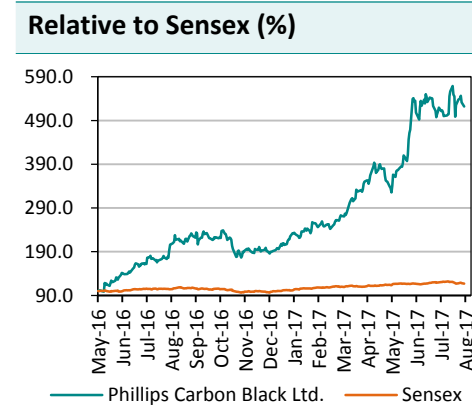
TP	Rs911
CMP	Rs676
Potential upside / downside	+35%
Previous Rating	---

V/s Consensus		
EPS (Rs)	FY18E	FY19E
IDBI Capital	64.3	75.9
Consensus	65.8	72.8
% difference	(2.3)	4.3

Shareholding Pattern (%)	
Promoters	53.6
FII	11.6
DII	1.8
Public	33.0

Price Performance (%)			
	-1m	-3m	-12m
Absolute	16.0	55.3	175.9
Rel to Sensex	18.1	53.7	164.3

Key Stock Data	
Bloomberg / Reuters	PHCB IN / PHIL.BO
Sector	Chemical & Fertilizers
Shares o/s (mn)	34
Market cap. (Rs mn)	23,286
Market cap. (US\$ mn)	362
3-m daily average value (Rs mn)	457
52-week high / low	Rs684 / 201
Nifty / Sensex	9,884 / 31,646



Financial snapshot

Year	FY2015	FY2016	FY2017	FY2018E	FY2019E
Revenue	24,702	19,108	19,459	25,894	27,892
EBITDA	1,523	1,826	2,776	4,240	4,730
EBITDA (%)	6.2	9.6	14.3	16.4	17.0
Adj. PAT	126	173	700	2,216	2,617
EPS (Rs)	3.7	5.0	20.3	64.3	75.9
EPS Growth (%)	(161.3)	37.3	304.1	216.7	18.1
PE (x)	184.6	134.5	33.3	10.5	8.9
Dividend Yield (%)	0.2	0.4	1.1	1.6	2.1
EV/EBITDA (x)	23.2	17.5	11.0	7.2	6.2
RoE (%)	2.5	2.2	6.5	18.2	18.5
RoCE (%)	5.6	6.2	10.4	16.5	17.3

Source: Company; IDBI Capital Research

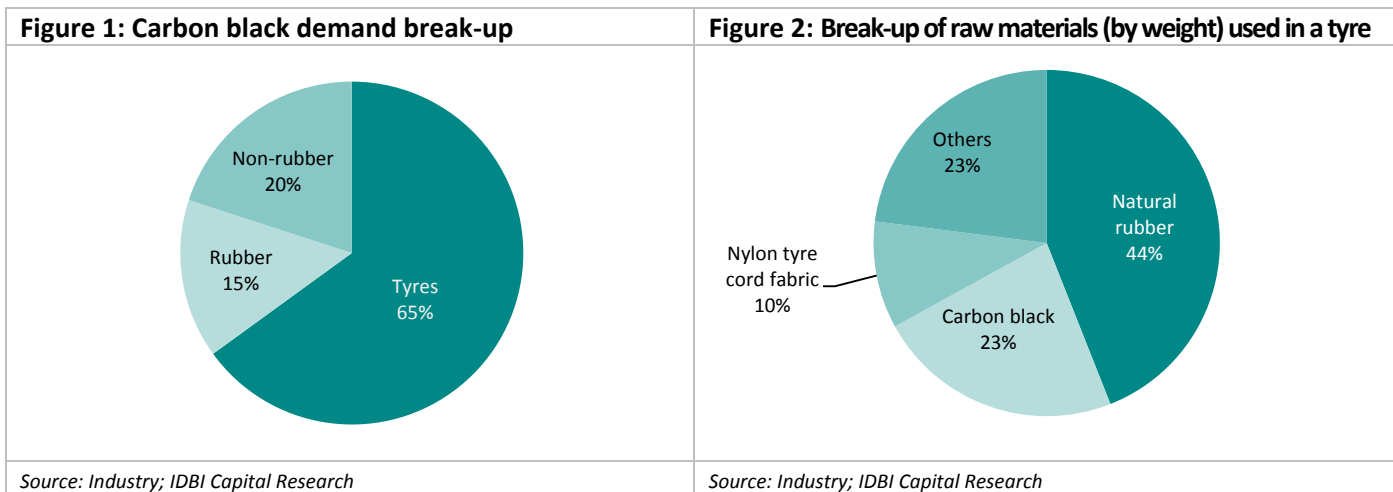
Industry Overview

65% of carbon black demand is linked to the tyre industry

Carbon black – a critical raw material for tyre industry

Carbon black is produced by the thermal decomposition of hydrocarbons (liquid and gaseous hydrocarbons) under controlled conditions, most commonly through incomplete combustion of the feedstock. The most common source of feedstock for the production of carbon black is a heavy stream of hydrocarbon derived from coal or crude oil processing, which is referred to as carbon black oil (CBO). Based on its properties, carbon black can be divided into three broad categories: rubber black, high performance rubber black and non-rubber black, including Specialty black.

Carbon black is a key raw material used in manufacturing automotive tyres. Nearly 65% of the demand for carbon black comes from the tyres segment, 15% from rubber-based applications and nearly 20% demand is linked to printing inks, coatings, cables, belts & hoses, plastics, other specialty chemicals, etc. It is used as a reinforcing agent in rubber products such as tyres, tubes, conveyer belts, cables and other mechanical rubber goods. Carbon black constitutes 10% of the raw material cost of tyre companies and forms ~23% of volume of the tyre.



Global carbon black industry consolidated

Global carbon black capacity stands at ~16.0mn tonnes with China as the largest player with a capacity of 7mn tonnes. Carbon black industry is consolidated with top nine players accounting for 50% of the capacity. China

has the largest carbon black capacity (7 mn tonnes) while its domestic demand is ~4mn tonnes. Due to excess capacity, exports from China have a major impact in the global carbon black market. China exports nearly 0.7mn tonnes of carbon black annually.

Cabot Corp, Birla Carbon and Orion Engineered Carbons (Orion) are three largest carbon black manufacturers in the world. Other prominent players include SID Richardson, Tokai Carbon, PCBL and Jiangxi Black Cat Carbon Black.

Domestic companies enjoy duty protection as there is anti-dumping duty on imports of carbon black from China

■ **Even domestic carbon black industry remains consolidated; enjoys duty protection**

India's carbon black capacity is ~1.0mn tonnes with consumption of ~0.8mn tonnes in FY17. Domestic carbon black industry is also consolidated with only five producers. PCB enjoys highest market share of 35% (FY17) in domestic market according to our estimate. PCB also has 84% market share (FY17) in carbon black exports out of India.

In the domestic market, carbon black players enjoy protection as there is an anti-dumping duty on imports of carbon black used in rubber applications from China of atleast \$397/tonne till November 2020.

Table 1: Indian carbon black industry capacities

Companies	Capacity (ktpa)
PCB	472
SKI Carbon Black India	315
Himadri Speciality Chemical	120
CCIL	85
RalsonCarbon	36

Source: Company; IDBI Capital Research

■ **Lower crude prices makes Indian carbon black players competitive internationally**

Carbon black can be manufactured using Carbon black feed stock (CBFS) or CBO. Indian companies used CBFS as feedstock while Chinese companies use CBO as a feedstock due to abundant availability of coal tar in China.

Until CY14, Chinese companies enjoyed some inherent advantages as their plants were located adjacent to cheaper raw material source. Also, they had better yields due to use of coal tar. This made them far more competitive against the Indian players.

However, the scenario reversed since the beginning of CY15 when crude oil prices started falling. CBFS prices fell with fall in crude oil prices. This led to lower prices for key raw material (CBFS) for Indian companies. While CBFS prices were

falling, stringent environmental norms in China led to a fall in carbon black production from small and marginal players. As per our sources, the Chinese production continues to face restriction on account of pollution concerns, thus curbing additional supplies in the global market.

Meanwhile, Indian companies became competitive in the international markets and they stepped up exports over FY15-17 which helped their utilization levels and hence, margins.

Since the fall in crude oil prices, Indian companies have become competitive in the global carbon black market

Figure 3: Changing dynamics of carbon black demand-supply

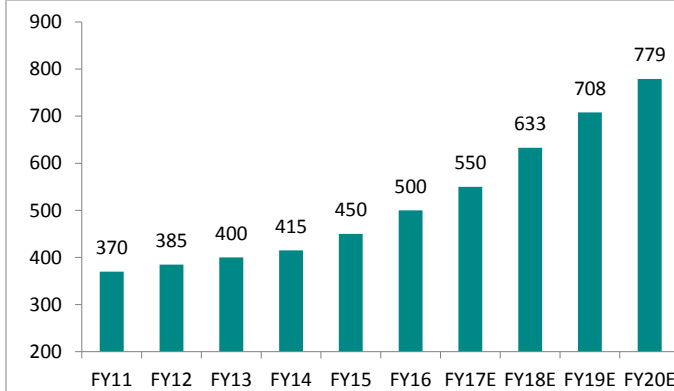
FY13-15	FY16 onwards
Weak domestic demand, over-capacity leading to under-utilization for Indian companies	Improving domestic demand from tyre manufacturers
High crude price leading to high raw material prices for domestic carbon black manufacturers	Fall in crude prices leading to lower raw material costs
Dumping from China, Russia and other countries into India	Fall in Chinese crude steel production and stringent pollution norms for making carbon black leading to lower Chinese supplies
Anti-dumping duty imposed in November 2015	Indian companies competitive in export market leading to higher sales in the overseas markets

Source: Industry; IDBI Capital Research

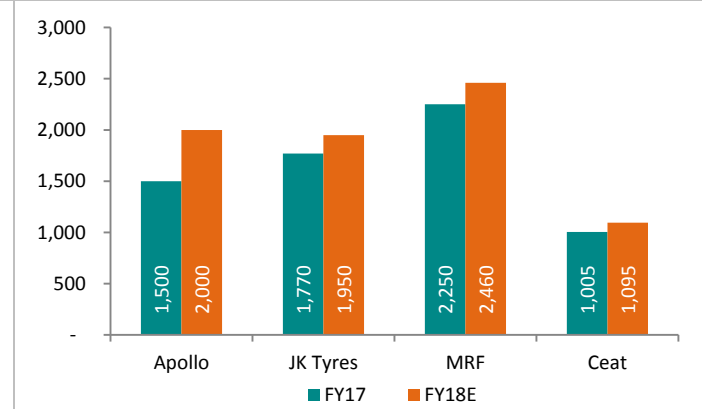
■ **Expanding tyre manufacturers provide visibility on domestic volumes**

Domestic carbon black manufacturers volumes have improved after the anti-dumping duty was imposed (November 2015) and also due to increase in exports (as Chinese manufacturers lost competitiveness) since the beginning of FY16.

Looking ahead, domestic tyre companies are expanding their capacities which provide strong visibility on volume offtake for domestic carbon black manufacturers.

Figure 4: Indian tyre market –(Rs bn)


Source: Company; IDBI Capital Research

Figure 5: Expanding tyre capacities in India –(Tpd)


Source: Company; IDBI Capital Research

Global specialty carbon black market is dominated by top four producers

■ **Specialty carbon black industry dominated by top few players**

Specialty carbon black is a processed carbon black powder with high carbon content and pigmentation characteristics. Also known as pigment black, it is used to impart distinctive characteristics in specialized end user applications. Specialty carbon black finds majority applications in plastics, printing inks and paints & coatings industry for pigmentation and imparting desired properties such as UV protection and conductivity. Specialty carbon black has higher margins per metric ton compared to margins in rubber carbon black. Hence, top carbon black manufacturers focus on raising product sales in favour of specialty blacks.

Globally, top four carbon black players dominate the specialty black market. There are several barriers to entry such as technological know-how, customer approvals, availability of skilled personnel, etc to enter the specialty market.

Global specialty carbon black demand is estimated to be a ~1.0mn tonnes. Orion has been a consistent market leader with market share of 26%, 25% and 25% in CY2016, CY2015 and CY2014, respectively. Other large players in include Cabot Corp., Birla Carbon and Mitsubishi.

Competitive analysis

Long gestation to get approvals from tyre companies, development of new grades, scale and establishing long-term customer relationships are the key barriers to entry

Although, carbon black is a commodity chemical, however, companies compete on the basis of grades offered, quality, etc. Further, moving up the value chain towards specialty grades is likely to be a strategy for smaller companies, although it is.

Long gestation to get approvals from tyre companies, development of new grades to meet diverse needs of customers, scale and establishing long-term customer relationships are the key barriers to entry in this business.

Broadly the companies operating in the carbon black have reported improvement in margins during CY14-16. Thai Carbon (a part of Birla Carbon) enjoys highest EBIT margin compared to its peers.

Table 2: EBIT margins of some large carbon black producers

	CY14	CY15	CY16
Cabot Corp.	12%	9%	12%
Tokai Carbon	5%	3%	13%
Thai Carbon	11%	13%	21%
Phillips Carbon Black	4%	6%	12%

Source: Company; IDBI Capital Research

About the Company

PCB's carbon black manufacturing facilities are backed by co-gen power plants

Incorporated in 1960, PCB is a part of the RP-Sanjiv Goenka Group. It was set up in collaboration with a US company Phillips Petroleum in 1962 using the oil furnace technology. This technology was the most widely accepted manufacturing process of carbon black, patented by its then collaborator and world carbon black leader, Phillips Petroleum Company, USA. In the late 80s, PCB signed a technical agreement with Columbian Chemicals Company, USA, and updated its technology to gain flexibility, better product range, production capacity and energy conservation. PCB has more than 50 years' experience in the carbon black industry.

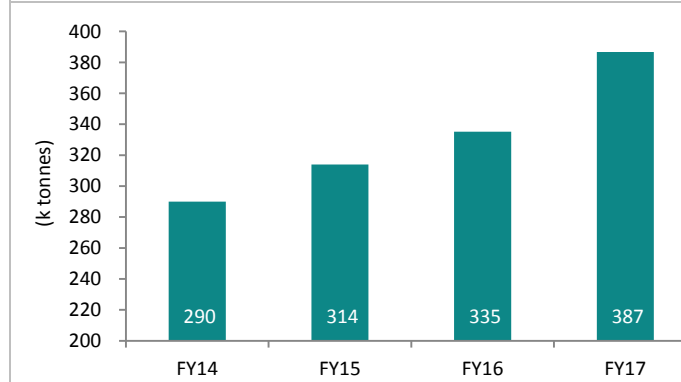
PCB is the largest carbon black producer in India (seventh largest globally) with a total capacity of 472k tonnes. It has integrated power plants at all of its plant locations. Out of the 472k tonnes capacity, the company has dedicated 12k tonnes of capacity to make high-margin specialty grade carbon black.

Table 3: Details of manufacturing capacities

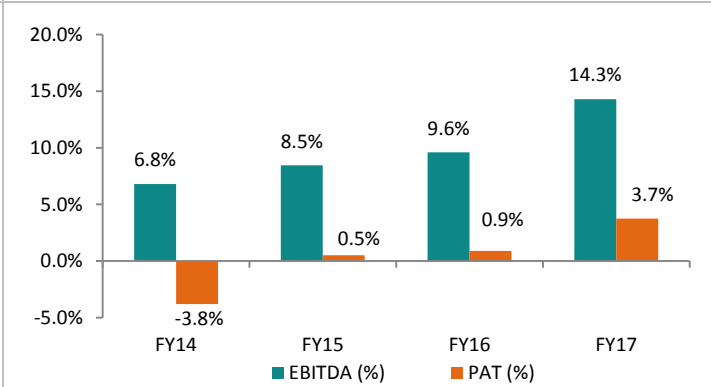
Plant	Carbon Black Capacity	Captive Power Plant Capacity	Products Manufactured
Durgapur (Kolkata)	147k tonnes	30 MW	All ASTM and MRG grades
Palej (Gujarat)	95k tonnes	12 MW	Specialty blacks for plastics, inks and MRG
Mundra (Gujarat)	140k tonnes	24 MW	All ASTM grades and few specialty black grades
Kochi (Kerala)	90k tonnes	10 MW	All hard blacks

Source: Company, IDBI Capital Research

The company has reported steady increase in volumes over FY14-17. Also, EBITDA margin improved on the back of higher volumes, internal efficiencies and improvement in product mix over FY14-17.

Figure 6: Sales volumes rose steadily over FY14-17


Source: Company; IDBI Capital Research

Figure 7: Margins improved over FY14-17


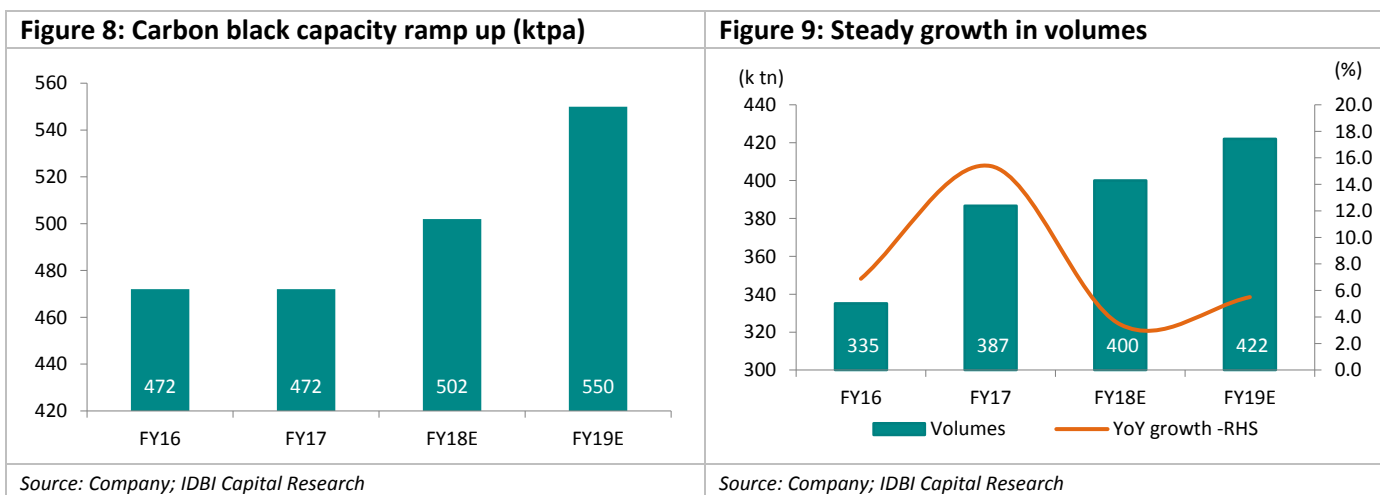
Source: Company; IDBI Capital Research

Key Investment Rationale

Sales volumes are likely to increase at CAGR of 4.5% over FY17-19E

■ Brownfield capacity expansion with modest capex

PCB is expanding carbon black capacity by 66k tonnes via brownfield expansion (current capacity - 472k tonnes) with a modest capex of Rs1,700 mn by Q2FY19. Currently, it is the only one expanding carbon black capacity in India and has the ability to produce 56 different grades of carbon black. Further, PCB is doubling its specialty grade carbon to 24k tonnes with a capex of Rs700 mn by Q3FY18. Specialty grade FY15/FY16/FY17 volumes stood at 2.5k/4.7k/8.0k tonnes, respectively. We expect PCB's total volumes to increase from 387k tonnes in FY17 to 422k tonnes in FY19.



■ Strategic initiative to move towards specialty grade carbon black to be margin accretive

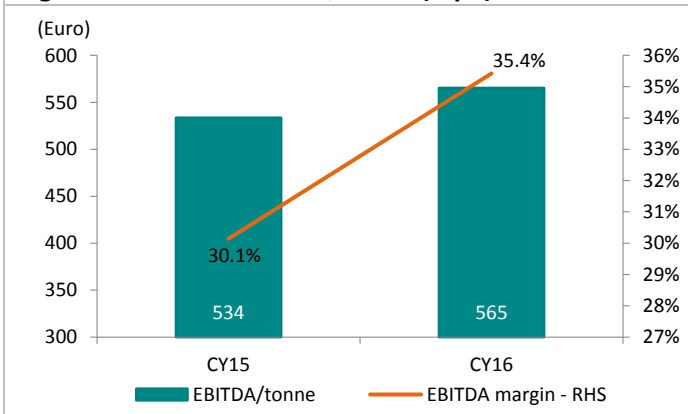
PCBL aims to improve its product mix in favour of non-rubber (including specialized carbon grades) products which find applications in inks, plastics, paints and coatings, toners, electronic components etc.

During FY17, non-rubber products formed 9% of total volumes but contributed 20% to EBITDA. The company targets non-rubber (including specialty carbon black) volumes to be 20% of total volumes and contribute 40% to EBITDA by FY20. Specialty grade carbon blacks have EBITDA/tonne which are nearly 3-5x of rubber grade. We expect PCB's EBITDA/tonne to increase from Rs7,438 in FY17 to Rs11,056 in FY19E partly driven by improvement in product mix.

The strategy to move towards specialty blacks is in-line with global giants such as Orion, Cabot and Birla Carbon. Orion derived 24% of carbon black volumes from specialty products with EBITDA/tonne of Euro565 in CY16.

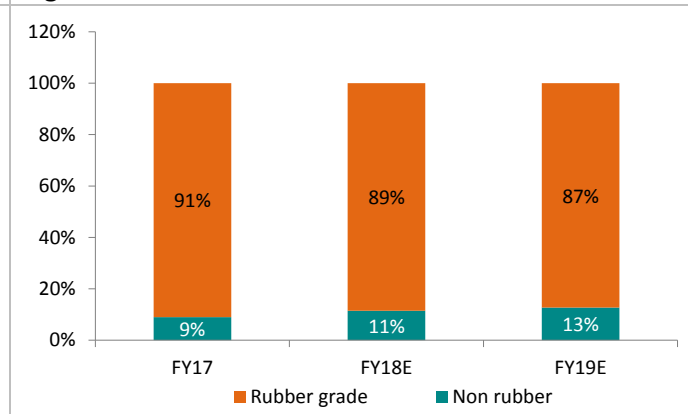
High-margin non-rubber volumes to rise over FY17-19

Figure 10: Orion's EBITDA/tonne (ktpa)



Source: Company; IDBI Capital Research

Figure 11: PCB's non-rubber volumes to rise



Source: Company; IDBI Capital Research

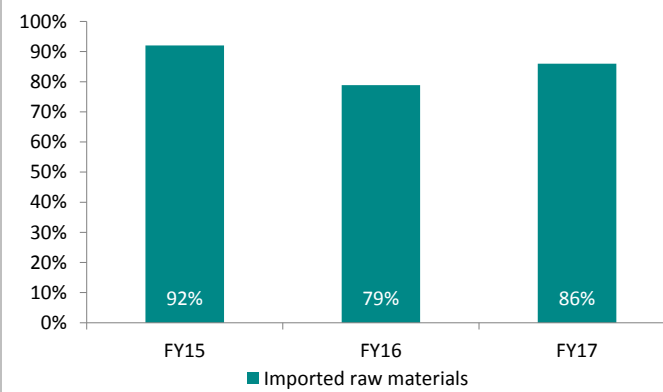
Internal measures to boost margins

PCB's management remains focused on improving operating efficiencies via various measures which include: i) developing new grades of carbon black, ii) improving product characteristics to meet more stringent customer specifications, iii) modifying reactor designs to improve yields.

Further, there have been changes in raw material sourcing strategy. Prior to 2013, there was an overdependence on the US for raw material procurement, which entailed a longer lead time and higher risk of inventory losses due to fluctuating prices. This was curtailed by developing Singapore, South Korea and India as sourcing hubs.

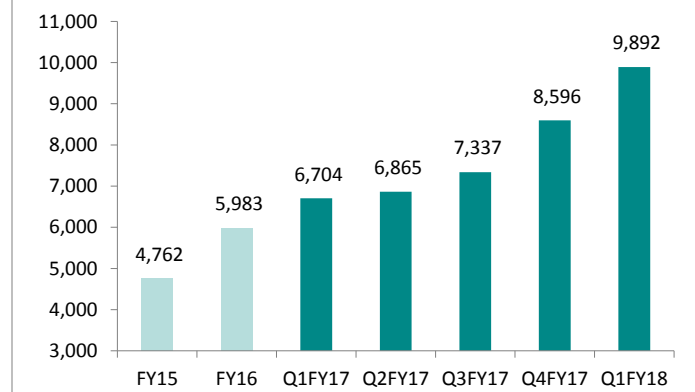
EBITDA/tonne has increased remarkably since FY15

Figure 12: Raw material dependency on imports has come off



Source: Company; IDBI Capital Research

Figure 13: EBITDA/tonne boosted by both, internal and external factors

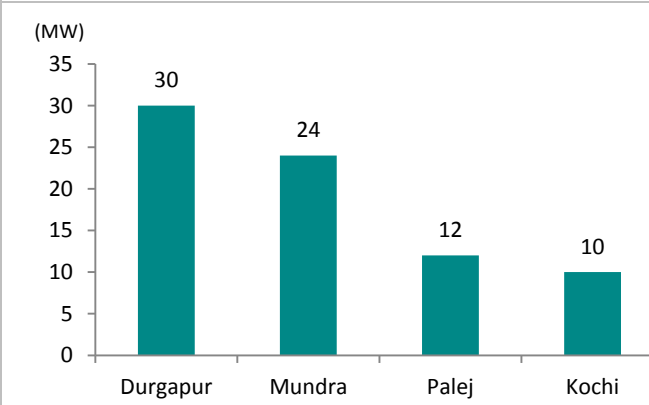


Source: Company; IDBI Capital Research

Also, the company has recruited several key personnel to drive internal efficiencies and raise specialty volumes. Mr. Kaushik Roy, MD, has worked at Apollo Tyres for nearly 20 years before joining PCB in 2013. Further, several senior members with technical and marketing expertise in developing specialty carbon black products have been added.

■ Power plant aid margins

PCB's all four carbon black facilities generate power using lean gases which are generated during the process of manufacturing carbon black. It generates 1,300 units of electricity per tonne of CB produced while per tonne of carbon black requires 336 units of power. Approximately 40% of power generated is used to manufacture carbon black while the balance is sold to the grid. Chinese carbon black manufacturers do not have co-generation power plants and hence, PCB is competitive against the Chinese players.

Figure 14: PCB has power plant at all its location


Source: Company; IDBI Capital Research

Figure 15: Power segment profitability strong

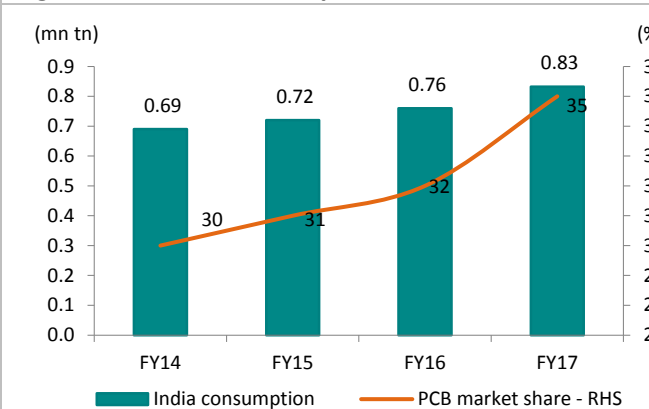
	FY14	FY15	FY16	FY17
Carbon Black prod. (k tn)	289	312	332	383
Power generation (mn units)	346	342	372	484
Power export (mn units)	204	199	225	304
Power sale (Rs mn)	650	690	770	810
Power EBITDA (Rs mn)	480	490	450	510
EBITDA margin (%)	73.8	71.0	58.4	63.0

Source: Company; IDBI Capital Research

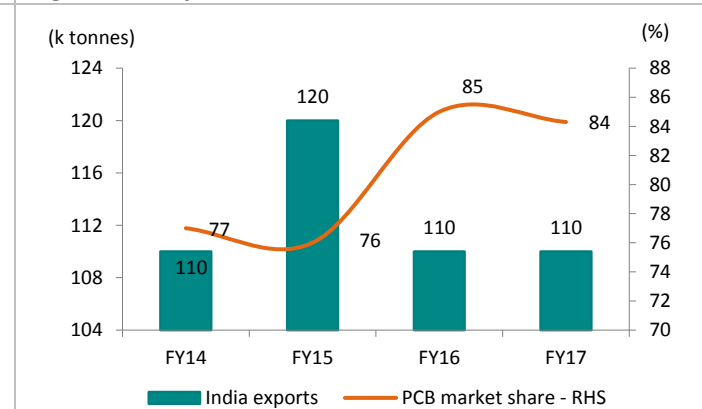
PCB held 85% market share in exports of carbon black from India during FY17 indicating its product acceptance among global tyre manufacturers

■ Approvals from marquee clients in place

PCB has approvals from majority of Indian tyre manufacturers; it is also an approved vendor for several global tyre companies. Its clientele includes MRF, CEAT, Apollo Tyres, Continental, Bridgestone, Pirelli, Goodyear, Cooper, etc. Since PCB's products find acceptance by global tyre manufacturers, it has been opportunistically exporting to some large players. PCB's market share in exports of carbon black from India has remained over 75% even though it has only 46% of India's capacity.

Figure 16: Indian consumption of carbon black


Source: Company; IDBI Capital Research

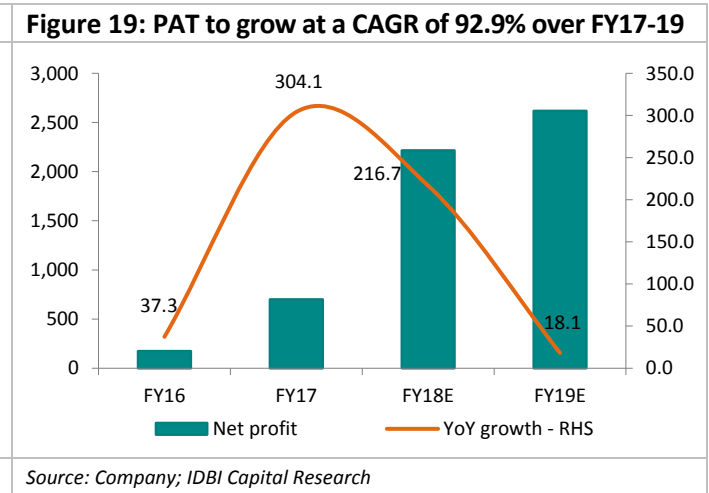
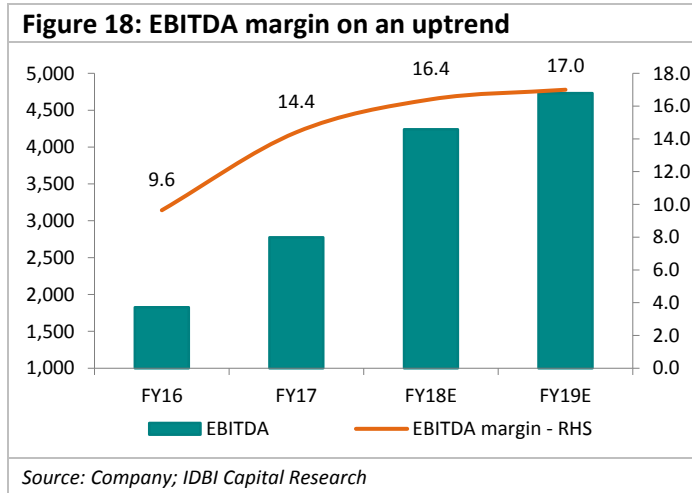
Figure 17: Exports of carbon black from India


Source: Company; IDBI Capital Research

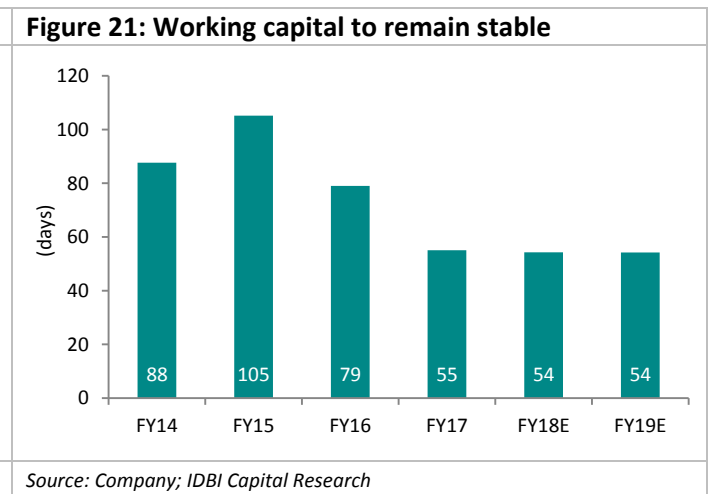
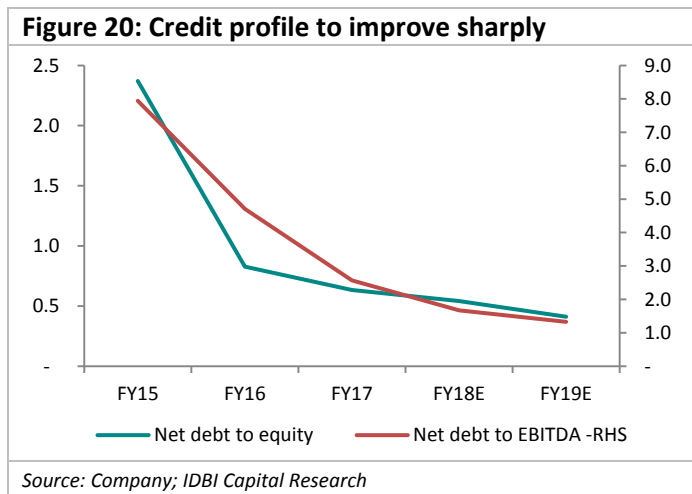
EBITDA and return ratios to improve; leverage to come off

We expect PCB's EBITDA/net profit to grow at a CAGR of 30.5%/93.4% over FY17-19 on improvement in product mix, operational efficiencies and higher volumes.

We expect net profit to grow 216.7% YoY in FY18

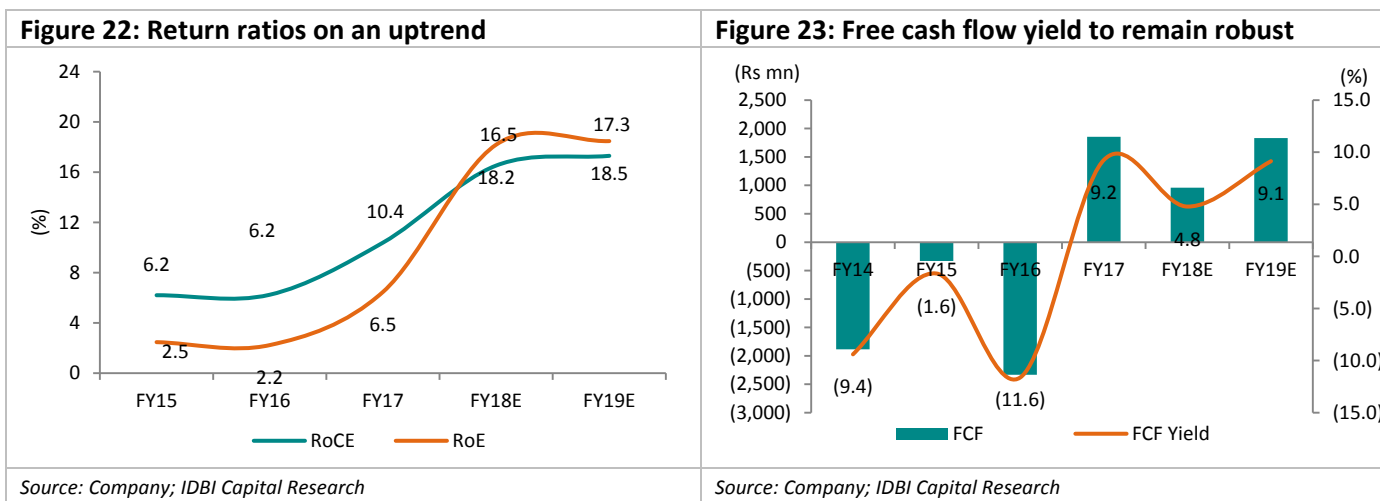


We expect PCB's net debt to fall from Rs7.1 bn in FY17 to Rs6.3 bn by FY19E despite heavy capex of ~Rs2.7 bn over FY18-19E. PCB's working capital cycle has fallen from 105 days to 55 days in FY17. Looking ahead, we anticipate working capital cycle to largely remain stable over FY17-19E.



Return on equity is expected to increase from 6.5% in FY17 to 18.5% in FY19E. Free cash flows are likely to be positive despite high capex during FY18-19E.

Free cash flows are expected to remain over Rs1 bn during FY18-19 even after heavy capex



Financial Matrix

Table 4: Key assumptions

	Unit	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18E	FY19E
Capacity	tonnes	360,000	360,000	421,000	421,000	472,000	472,000	472,000	472,000	502,000	550,000
Production	tonnes	258,374	305,950	316,508	296,555	288,676	311,823	332,038	383,316	400,000	422,000
Cap. Utilization	%	72	85	75	70	61	66	70	81	80	77
Sales volumes	tonnes	255,777	308,605	314,348	293,309	287,839	313,562	335,146	386,694	400,000	422,000
Net Sales	Rs mn	12,325	16,901	21,807	22,807	22,761	24,673	18,941	19,269	25,832	27,827
Realization	Rs/tonne	48,187	54,767	69,372	77,757	79,075	78,685	56,515	49,831	64,580	65,941

Source: Company data, IDBI Capital Research

PCB stock is currently trading at an inexpensive valuation of 10.5x/8.9x FY18/FY19 EPS

Valuation and Outlook

■ Initiate coverage with TP of Rs911, provides 35% upside potential; BUY

We believe PCB is in a sweet spot currently given rising tyre demand in India, competitive position in the international markets and improving product mix with rising sales of specialty products. The company's credit profile is also likely to strengthen with higher free cash flows and declining debt. We expect PCB's sales/EBITDA/net profit to grow at a CAGR of 14.5%/30.5%/93.4% over FY17-19E. Its net debt to EBITDA to improve from 2.6x in FY17 to 1.3x by FY19; return on equity is likely to improve from 6.5% in FY17 to 18.5% in FY19. Given these factors, we believe the stock is currently trading at an inexpensive valuation of 10.5x/8.9x FY18/FY19 EPS. We assign a PE multiple of 12.0x to our FY19E EPS and derive a target price of Rs911.

Key risks

- **Rise in crude prices:** A sharp increase in the crude oil price can impact the company's ability to compete with Chinese players in the export market and thus affect its volumes and margins.
- **Slowdown in tyre demand:** Demand for carbon black is mainly dependent on growth in the tyre industry. Any slowdown in the domestic tyre demand can have adverse impact on PCB's volumes and margins.
- **Geopolitical risks:** Sine the company procures raw material (CBFS) mainly from the overseas markets, any geopolitical concerns could affect the company's ability to source raw material at desired prices.

Financial Summary

Profit & Loss Account

(Rs mn)

Year-end: March	FY16	FY17	FY18E	FY19E
Net sales	19,108	19,459	25,894	27,892
<i>Growth (%)</i>	(22.6)	1.8	33.1	7.7
Operating expenses	(17,282)	(16,683)	(21,654)	(23,161)
EBITDA	1,826	2,776	4,240	4,730
<i>Growth (%)</i>	19.9	52.0	52.7	11.6
Depreciation	(622)	(606)	(667)	(734)
EBIT	1,205	2,170	3,573	3,997
Interest paid	(718)	(514)	(761)	(723)
Other income	-	-	62	68
Pre-tax profit	487	1,655	2,874	3,341
Tax	(313)	(955)	(658)	(724)
<i>Effective tax rate (%)</i>	64.4	57.7	22.9	21.7
Net profit	173	700	2,216	2,617
Adjusted net profit	173	700	2,216	2,617
<i>Growth (%)</i>	37.3	304.1	216.7	18.1
<i>Shares o/s (mn)</i>	34	34	34	34

Cash Flow Statement

(Rs mn)

Year-end: March	FY16	FY17	FY18E	FY19E
Pre-tax profit	487	1,655	2,874	3,341
Depreciation	535	693	667	734
Tax paid	888	(383)	(658)	(724)
Chg in working capital	5,027	(135)	(932)	(296)
Other operating activities	-	-	-	-
Cash flow from operations (a)	6,936	1,831	1,950	3,054
Capital expenditure	(6,486)	(415)	(1,100)	(1,600)
Chg in investments	(462)	(632)	5	-
Other investing activities	-	-	-	-
Cash flow from investing (b)	(6,948)	(1,047)	(1,095)	(1,600)
Equity raised/(repaid)	-	-	-	-
Debt raised/(repaid)	(3,094)	(1,720)	(100)	(900)
Dividend (incl. tax)	(104)	(248)	(372)	(496)
Chg in minorities	-	-	-	-
Other financing activities	-	-	-	-
Cash flow from financing (c)	(3,198)	(1,968)	(472)	(1,396)
Net chg in cash (a+b+c)	(3,209)	(1,185)	383	58

Balance Sheet (Rs mn)

Year-end: March	FY16	FY17	FY18E	FY19E
Net fixed assets	14,891	14,613	15,046	15,912
Investments	1,737	2,369	2,363	2,363
Other non-curr assets	-	-	-	-
Current assets	9,129	8,643	10,073	10,760
Inventories	2,442	2,435	3,185	3,431
Sundry Debtors	4,382	4,657	4,954	5,337
Cash and Bank	506	250	192	116
Loans and advances	6	5	5	5
Total assets	25,757	25,624	27,483	29,036
Shareholders' funds	10,384	11,259	13,103	15,224
Share capital	345	345	345	345
Reserves & surplus	10,039	10,915	12,758	14,879
Total Debt	9,103	7,383	7,283	6,383
Secured loans	7,053	5,481	5,581	5,081
Unsecured loans	2,050	1,902	1,702	1,302
Other liabilities	1,522	2,101	2,101	2,101
Curr Liab & prov	4,749	4,881	4,996	5,328
Current liabilities	4,713	4,824	4,937	5,265
Provisions	35	57	58	63
Total liabilities	15,374	14,365	14,380	13,812
Total equity & liabilities	25,757	25,624	27,483	29,036
Book Value (Rs)	301	327	380	442

Source: Company; IDBI Capital Research

Financial Ratios

Year-end: March	FY16	FY17	FY18E	FY19E
Adj. EPS (Rs)	5.0	20.3	64.3	75.9
Adj. EPS growth (%)	37.3	304.1	216.7	18.1
EBITDA margin (%)	9.6	14.3	16.4	17.0
Pre-tax margin (%)	2.5	8.5	11.1	12.0
ROE (%)	2.2	6.5	18.2	18.5
ROCE (%)	6.2	10.4	16.5	17.3
Turnover & Leverage ratios (x)				
Asset turnover (x)	0.8	0.8	1.0	1.0
Leverage factor (x)	2.9	2.4	2.2	2.0
Net margin (%)	0.9	3.6	8.6	9.4
Net Debt/Equity (x)	0.8	0.6	0.5	0.4
Working Capital & Liquidity ratio				
Inventory days	47	46	45	45
Receivable days	84	87	70	70
Payable days	57	90	72	72

Valuation

Year-end: March	FY16	FY17	FY18E	FY19E
P/E (x)	134.5	33.3	10.5	8.9
Price / Book value (x)	2.2	2.1	1.8	1.5
PCE (x)	29.3	17.8	8.1	6.9
EV / Net sales (x)	1.7	1.6	1.2	1.1
EV / EBITDA (x)	17.5	11.0	7.2	6.2
Dividend Yield (%)	0.4	1.1	1.6	2.1



Notes

Dealing (91-22) 6637 1150 dealing@idbicapital.com

Key to Ratings Stocks:

BUY: Absolute return of 15% and above; **ACCUMULATE:** 5% to 15%; **HOLD:** Upto ±5%; **REDUCE:** -5% to -15%; **SELL:** -15% and below.

IDBI Capital Markets & Securities Ltd. (Formerly known as "IDBI Capital Market Services Ltd.")

Equity Research Desk

3rd Floor, Mafatlal Centre, Nariman Point, Mumbai – 400 021. Phones: (91-22) 4322 1212; Fax: (91-22) 2285 0785; Email: info@idbicapital.com

SEBI Registration: BSE & NSE (Cash & FO) – INZ000007237, NSDL – IN-DP-NSDL-12-96, Research – INH000002459, CIN – U65990MH1993GOI075578

Compliance Officer: Christina D’souza; Email: compliance@idbicapital.com; Telephone: (91-22) 4322 1212

Disclaimer

This document has been prepared by IDBI Capital Markets & Securities Ltd (formerly known as "IDBI Capital Market Services Ltd.") ("IDBI Capital") and is meant for the recipient only for use as intended and not for circulation. This document should not be reproduced or copied or made available to others. No person associated with IDBI Capital is obligated to call or initiate contact with you for the purposes of elaborating or following up on the information contained in this document. The Report and information contained herein is strictly confidential and meant for solely for the selected recipient and may not be altered in any way, transmitted to copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without the prior written consent of IDBI Capital.

Recipients may not receive this report at the same time as other recipients. IDBI Capital will not treat recipients as customers by virtue of their receiving this report.

The information contained herein is from the public domain or sources believed to be reliable. While reasonable care has been taken to ensure that information given is at the time believed to be fair and correct and opinions based thereupon are reasonable, due to the very nature of research it cannot be warranted or represented that it is accurate or complete and it should not be relied upon as such. In so far as this report includes current or historical information, it is believed to be reliable, although its accuracy and completeness cannot be guaranteed.

Opinions expressed are current opinions as of the date appearing on this material only. While we endeavor to update on a reasonable basis, the information discussed in this material, IDBI Capital, its directors, employees are under no obligation to update or keep the information current. Further there may be regulatory, compliance, or other reasons that prevent us from doing so.

Prospective investors and others are cautioned that any forward-looking statements are not predictions and may be subject to change without notice.

IDBI Capital, its directors and employees and any person connected with it, will not in any way be responsible for the contents of this report or for any losses, costs, expenses, charges, including notional losses/lost opportunities incurred by a recipient as a result of acting or non-acting on any information/material contained in the report.

This is not an offer to sell or a solicitation to buy any securities or an attempt to influence the opinion or behaviour of investors or recipients or provide any investment/tax advice.

This report is for information only and has not been prepared based on specific investment objectives. The securities discussed in this report may not be suitable for all investors. Investors must make their own investment decision based on their own investment objectives, goals and financial position and based on their own analysis.

Trading in stocks, stock derivatives, and other securities is inherently risky and the recipient agrees to assume complete and full responsibility for the outcomes of all trading decisions that the recipient makes, including but not limited to loss of capital.

Opinions, projections and estimates in this report solely constitute the current judgment of the author of this report as of the date of this report and do not in any way reflect the views of IDBI Capital, its directors, officers, or employees.

This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject IDBI Capital and associates to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction.

E-mail is not a secure method of communication. IDBI Capital Markets & Securities Ltd (formerly known as "IDBI Capital Market Services Ltd.") cannot accept responsibility for the accuracy or completeness of any e-mail message or any attachment(s).

This transmission could contain viruses, be corrupted, destroyed, incomplete, intercepted, lost or arrive late. IDBI Capital, its directors or employees or associates accept no liability for any damage caused, directly or indirectly, by this email.

Analyst Disclosures

I, Bhavesh Chauhan, hereby certify that the views expressed in this report accurately reflect my personal views about the subject companies and / or securities. I also certify that no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

Other Disclosures

IDBI Capital Markets & Securities Ltd (**formerly known as "IDBI Capital Market Services Ltd."**) "IDBI Capital" was incorporated in the year 1993 under Companies Act, 1956 and is a wholly owned subsidiary of IDBI Bank Limited. IDBI Capital is one of India's leading securities firm which offers a full suite of products and services to individual, institutional and corporate clients namely Stock broking (Institutional and Retail), Distribution of financial products, Merchant Banking, Corporate Advisory Services, Debt Arranging & Underwriting, Portfolio Manager Services and providing Depository Services.

IDBI Capital registered trading and clearing member of BSE Ltd. (BSE) and National Stock Exchange of India Limited (NSE). IDBI Capital is also a SEBI registered Merchant Banker, Portfolio Manager and Research Analyst.

IDBI Capital is also a SEBI registered depository participant with National Securities Depository Limited (NSDL) and is also a Mutual Fund Advisor registered with Association of Mutual Funds in India (AMFI).

IDBI Capital Markets & Securities Ltd. (**formerly known as "IDBI Capital Market Services Ltd."**) and its associates (IDBI Bank Ltd. (Holding Company), IDBI Intech Ltd. (Fellow Subsidiary), IDBI Asset Management Ltd. (Fellow Subsidiary) and IDBI Trusteeship Services Ltd. (Fellow Subsidiary).

IDBI Group are a full-serviced banking, integrated investment banking, investment management, brokerage and financing group. Details in respect of which are available on www.idbicapital.com

IDBI Capital along with its associates are leading underwriter of securities and participants in virtually all securities trading markets in India. We and our associates have investment banking and other business relationships with a significant percentage of the companies covered by our Research Department. Investors should assume that IDBI Capital and/or its associates are seeking or will seek investment banking or other business from the company or companies that are the subject of this material. IDBI Capital generally prohibits its analysts, persons reporting to analysts, and their dependent family members having a financial conflict of interest in the securities or derivatives of any companies that the analysts cover.

Additionally, IDBI Capital generally prohibits its analysts and persons reporting to analysts from serving as an officer, director, or advisory board member of any companies that the analysts cover. Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients that reflect opinions that are contrary to the opinions expressed herein, and our proprietary trading and investing businesses may make investment decisions that are inconsistent with the recommendations expressed herein. In reviewing these materials, you should be aware that any or all of the foregoing, among other things, may give rise to real or potential conflicts of interest. Additionally, other important information regarding our relationships with the company or companies that are the subject of this material is provided herein.

This material should not be construed as an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. We are not soliciting any action based on this material. It is for the general information of clients of IDBI Capital. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients.

Before acting on any advice or recommendation in this material, clients should consider whether it is suitable for their particular circumstances and, if necessary, seek professional advice. The price and value of the investments referred to in this material and the income from them may go down as well as up, and investors may realize losses on any investments. Past performance is not a guide for future performance, future returns are not guaranteed and a loss of original capital may occur.

We and our associates, officers, directors, and employees, including persons involved in the preparation or issuance of this material, may from time to time have "long" or "short" positions in, and buy or sell the securities or derivatives thereof of companies mentioned herein. For the purpose of calculating whether IDBI Capital Markets & Securities Ltd (**formerly known as "IDBI Capital Market Services Ltd."**) and its associates holds beneficially owns or controls, including the right to vote for directors, 1% of more of the equity shares of the subject issuer of a research report, the holdings does not include accounts managed by IDBI Asset Management Company/ IDBI Mutual Fund.

IDBI Capital hereby declare that our activities were neither suspended nor we have materially defaulted with any Stock Exchange authority with whom we are registered in last five years. However SEBI, Exchanges and Depositories have conducted the routine inspection and based on their observations have issued advise letters or levied minor penalty on IDBI Capital for certain operational deviations. We have not been debarred from doing business by any Stock Exchange / SEBI or any other authorities; nor has our certificate of registration been cancelled by SEBI at any point of time.

IDBI Capital, its directors or employees or associates, may from time to time, have positions in, or options on, and buy and sell securities referred to herein. IDBI Capital or its associates, during the normal course of business, from time to time, may solicit from or perform investment banking or other services for any company mentioned in this document or their connected persons or be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or their affiliate companies or act as advisor or lender / borrower to such company(ies)/associates companies or have other potential conflict of interest.

This report may provide hyperlinks to other websites. Except to the extent to which the report refers to the website of IDBI Capital, IDBI Capital states that it has not reviewed the linked site and takes no responsibility for the content contained in such other websites. Accessing such websites shall be at recipient's own risk.

IDBI Capital encourages the practice of giving independent opinion in research report preparation by the analyst and thus strives to minimize the conflict in preparation of research report. Accordingly, neither IDBI Capital nor Research Analysts have any material conflict of interest at the time of publication of this report.

We offer our research services to primarily institutional investors and their employees, directors, fund managers, advisors who are registered with us. The Research Analyst has not served as an officer, director or employee of Subject Company.

We or our associates may have received compensation from the subject company in the past 12 months. We or our associates may have managed or co-managed public offering of securities for the subject company in the past 12 months. We or our associates may have received compensation for investment banking or merchant banking or brokerage services from the subject company in the past 12 months. We or our associates may have received any compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company in the past 12 months. We or our associates may have received any compensation or other benefits from the Subject Company or third party in connection with the research report.

Research Analyst or his/her relative's may have financial interest in the subject company. IDBI Capital Markets & Securities Ltd (**formerly known as "IDBI Capital Market Services Ltd."**) or its associates may have financial interest in the subject company. Research Analyst or his/her relatives does not have actual/beneficial ownership of 1% or more securities of the subject company at the end of the month immediately preceding the date of publication of Research Report. IDBI Capital or its associates may have actual/beneficial ownership of 1% or more securities of the subject company at the end of the month immediately preceding the date of publication of Research Report. The Subject Company may have been a client during twelve months preceding the date of distribution of the research report.

Price history of the daily closing price of the securities covered in this note is available at bseindia.com, nseindia.com and economictimes.indiatimes.com/markets/stocks/stock-quotes.