

Capital Goods



Diesel Gensets – Firing up

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Capital Goods



Diesel Gensets – Firing up

Period of volume decline over; expect 10% CAGR over FY17-20

Diesel Generator (DG) industry to grow at 10% CAGR over FY17-20: After a subdued FY13-17, when industry volumes declined at a compounded annual rate of 5% (primarily due to a sharp fall in sales for telecom towers), we expect the industry to grow at a CAGR of 10% over FY17-20. (Over FY04-08, the industry had grown at a CAGR of 10%). Growth would be driven by higher volumes in the mid/high horse power (HP) segment; demand for low HP products is likely to remain subdued. Key end markets that are seeing a revival are Infrastructure (Roads, Metro Rail, Railways), Commercial (IT/ITES, Data Centers, Hotels, Hospitals, Educational Institutions), and Manufacturing (Pharmaceuticals, Automotive). We highlight that less than 15% of the demand for DG sets is for prime power and 85-90% of the DG market is for backup power – this implies that despite low power deficits, the need for DG sets would continue.

Brand, distribution, service network, product portfolio, and reliability key

differentiators: In our view, pricing alone would not lead to market share gains for any player in the DG industry. Given that DG sets are primarily used for backup and typically last for 10 years or longer, the decisive factors go beyond price. Brand positioning, dealer network/distribution, service centers, product portfolio, and reliability are some of the key decisive factors. This is all the more important in case of the MHP (375-750kva) and HHP (>750kva) ranges, where timely availability of backup power is crucial.

Competitive pressures intensifying – MNCs dominate in HHP (>750kva) category:

MNCs such as Perkins (started local manufacturing recently for >750kva engines), MTU, Volvo and Indian players like KOEL, Greaves Cotton are striving to increase presence in the MHP/HHP segments, while Cummins India is trying to take share in the LHP (<160kva) segment. Cummins is the market leader in the MHP/HHP segment while Mahindra, KOEL and Ashok Leyland lead in the LHP segment. Implementation of GST (from July 1, 2017) would reduce the share of unorganized players, especially in the LHP segment, and would be beneficial to incumbent organized players.

Valuation and view: Our preferred play on the Indian DG industry is Cummins India, the market leader, with the largest pan India distribution/dealer network, wide service network, access to parent's technology, wide product portfolio, and a reputation of reliability. A recovery in exports would strengthen the earnings revival estimated over the next few years. We upgrade the stock to **Buy**, with a target price of INR1,110 (30x FY19E EPS of INR37; in line with 5-year average). Other beneficiaries of a revival in domestic DG demand include Kirloskar Oil Engines (KOEL; Not Rated) and Greaves Cotton.

Valuation snapshot

	FY18		FY19	
	KKC	KOEL	KKC	KOEL
P/E(x)	32.0	28.2	25.9	21.6
P/B	6.4	3.4	5.8	3.1
EV/EBITDA	28.4	14.2	22.4	11.6

Capital Goods Diesel Gensets



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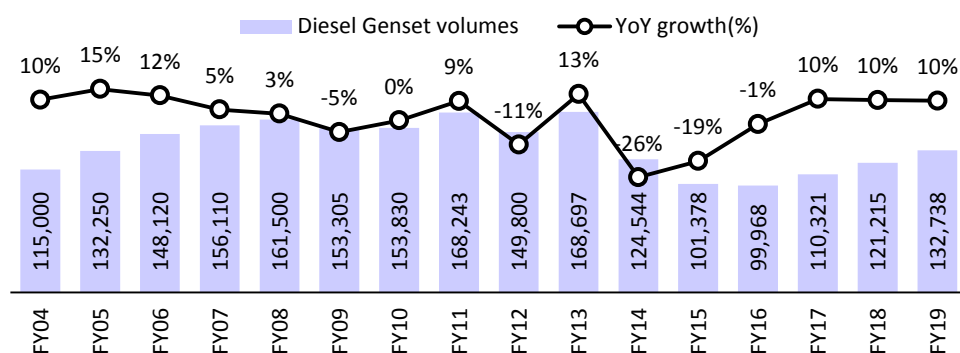
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On the road to recovery

Key end markets witnessing a recovery

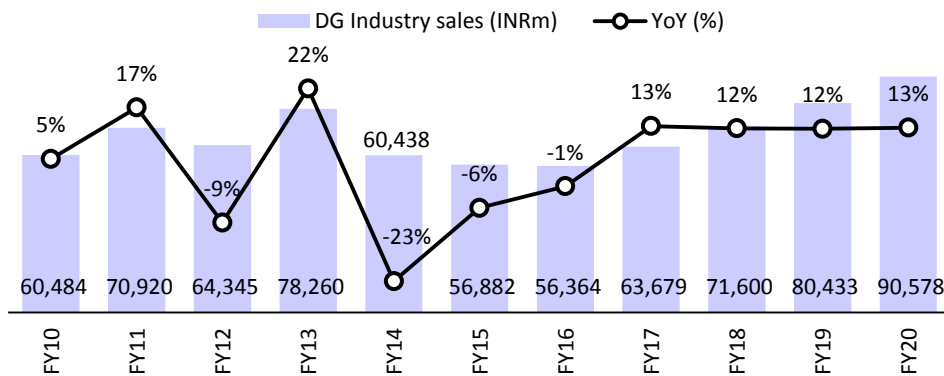
- For the last five years, DG industry volumes have been subdued. During FY13-17, volumes declined at 5% CAGR, driven by (a) lower power deficits, as demand for power declined with macroeconomic slowdown, (b) weak demand from key end markets – Industrial/Manufacturing, Real Estate and Infrastructure, and (c) collapse in demand from telecom towers from a peak of 100,000 DG sets in FY11 to 30,000 units in FY17.

Exhibit 1: DG industry volumes and growth (%)



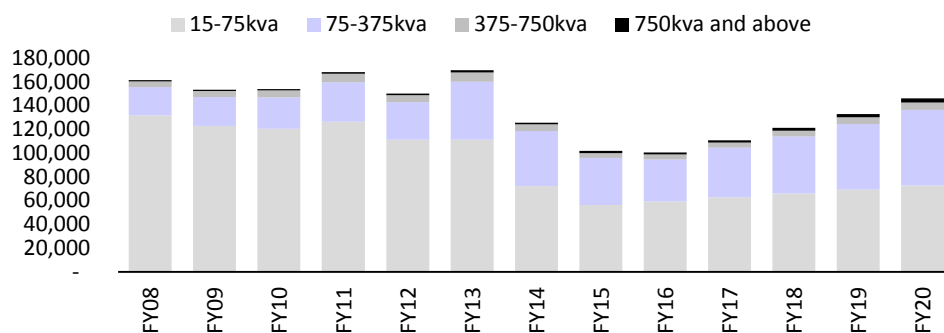
Source: MOSL, Industry

Exhibit 2: DG industry sales and growth (%)

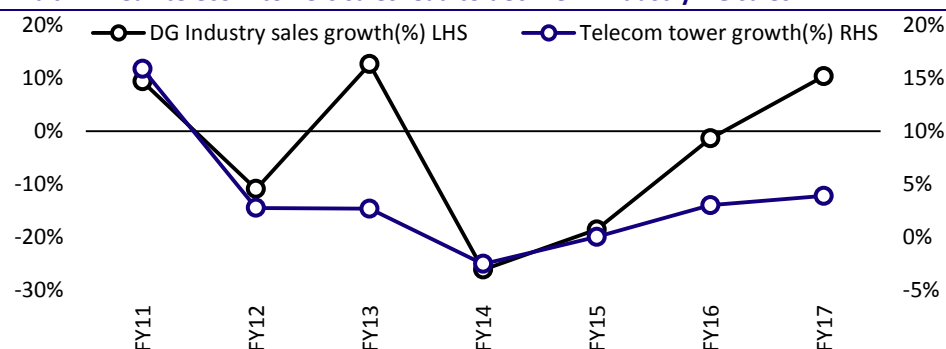


Source: MOSL, Industry

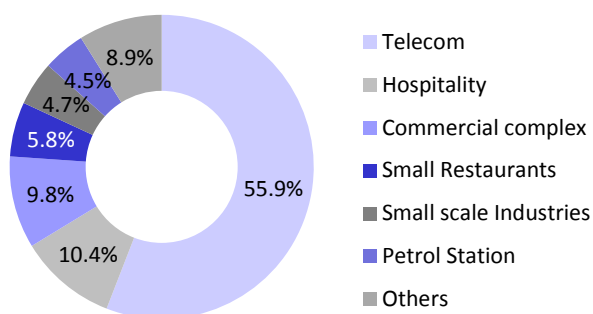
- One of the key reasons for the decline in DG industry volumes has been the sharp fall in demand from the Telecom sector. From a peak of 100,000 DG sets in FY11, demand from the telecom sector declined to 30,000 in FY17. Mahindra, which has 60% share in telecom industry DG sets, was the worst affected. 15-75kva DG sets are primarily used in telecom towers and constitute 55-60% of Telecom sector demand. The share of 15-75kva DG sets, which was 78% of overall DG set sales in FY10, fell to 56% in FY17.

Exhibit 3: Industry DG volumes – fall during FY13-17 driven by weak demand from telecom towers

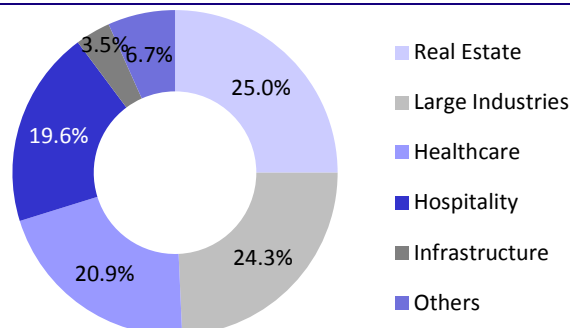
Source: MOSL, Industry

Exhibit 4: Weak telecom towers sales lead to decline in industry DG sales

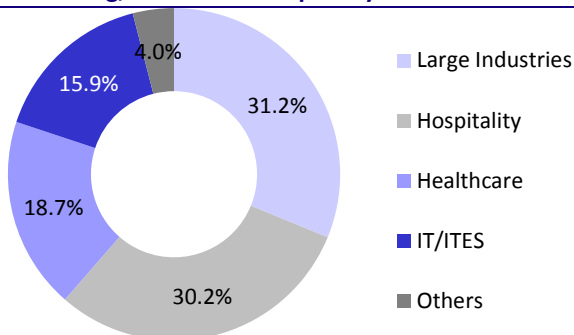
Source: MOSL, Industry

Exhibit 5: Key end markets for 15-75kva DG sets – Telecom accounts for 55-60% of sales

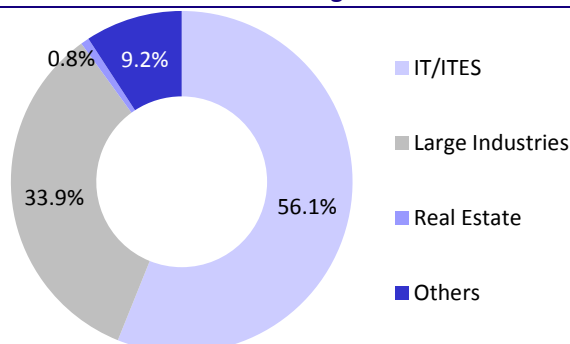
Source: MOSL, Industry

Exhibit 6: Key end markets for 75-375kva DG sets

Source: MOSL, Industry

Exhibit 7: Key end markets for 375-750kva DG sets – Manufacturing, Hotels and Hospitality at ~80% of sales

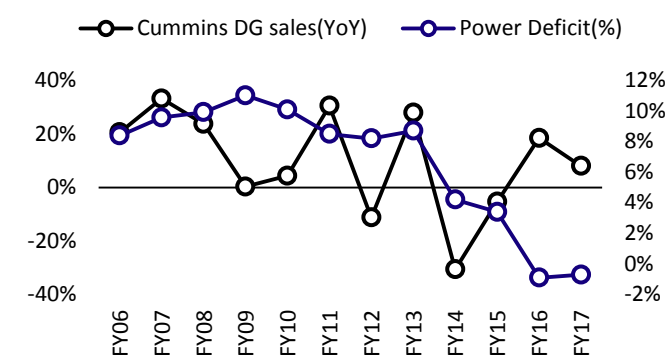
Source: MOSL, Industry

Exhibit 8: Key end markets for >750kva DG sets – 50% of Cummins India's sales from this segment

Source: MOSL, Industry

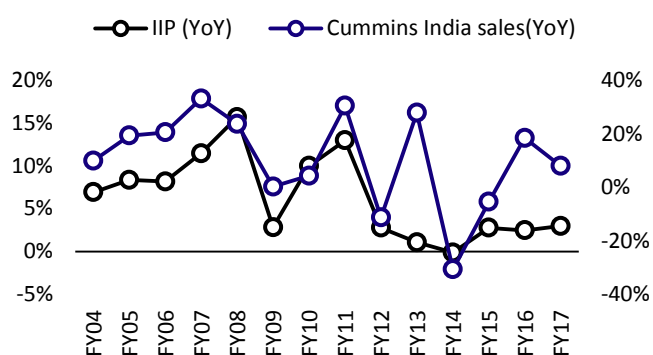
- We expect the industry volume growth to revert to 10% CAGR over FY17-20; growth would be driven by rising demand in the key end markets of Infrastructure (Roads, Metro Rail, Railways), Commercial (IT/ITES, Data Centers, Hotels, Malls, Hospitals, Educational Institutions), and Manufacturing (Pharmaceuticals, Automotive).
- Growth in the DG industry is linked to base power deficit and IIP growth – both of these are a reflection of the demand for industrial and residential power, and have been declining over the past five years (see Exhibit 8 and 9). A revival in economic growth would drive up both manufacturing/IIP growth and power deficit, in turn resulting in higher demand for DG sets.

Exhibit 9: Cummins India DG sales growth (LHS) versus base power deficit (RHS)



Source: Industry, MOSL

Exhibit 10: Cummins India DG sales growth correlated to IIP / manufacturing growth



Source: Industry, MOSL

- That usage of DG sets to generate power is expensive, is often presented as an argument against them. While the cost of power produced by renewable sources has declined to ~INR3/unit and the cost of power produced by using coal is ~INR4/unit, the cost of power produced by using DG sets is INR15-17/unit. However, demand for DG sets would continue, given that (a) DG sets are used primarily for backup power and not prime power, and (b) the power distribution network is still patchy in India.

Exhibit 11: Cost of power generation from various sources in India (FY17)

Description	(INR/unit)
Solar	2.44
Coal	3-4
Hydro	3-4
DG set	15-17
Wind	3.33

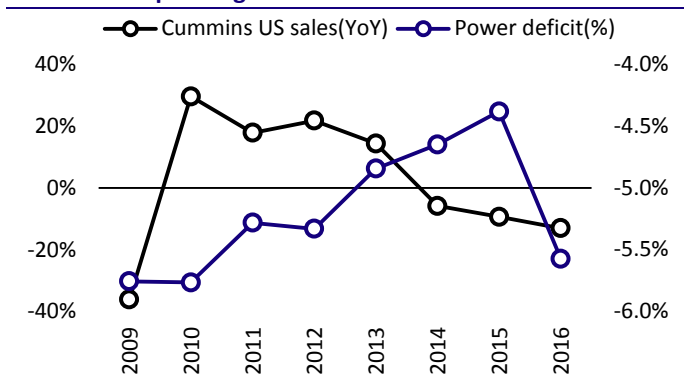
Source: Industry, MOSL

Do lower power deficits imply lower DG demand?

Industrial production and capacity building key drivers, in our view

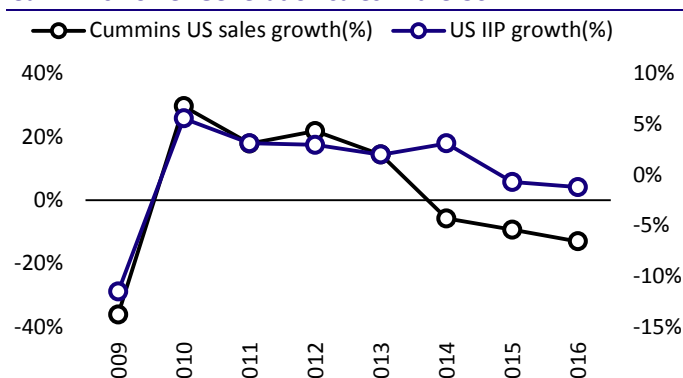
- One of the key push backs we have always received from investors is that with a fall in power deficits, there would also be a fall in the requirement of diesel gensets.
- In our view, genset demand is driven by higher capacity building/capex in the economy which in turn triggers a demand for backup power. As in developed economies, India too is witnessing a shift of genset demand to back up power than standby - ~85-90% of genset usage is currently for back- up power.
- To illustrate our point, we cite the example of the diesel genset markets in US and China (the largest markets for gensets globally). As seen in the chart below, despite a power surplus situation in both the countries, genset demand continue to grow and has a high correlation to IIP – higher industrial capex ideally should lead to higher demand for backup power.

Exhibit 12: Low correlation between US power deficits and Cummins US power generation sales



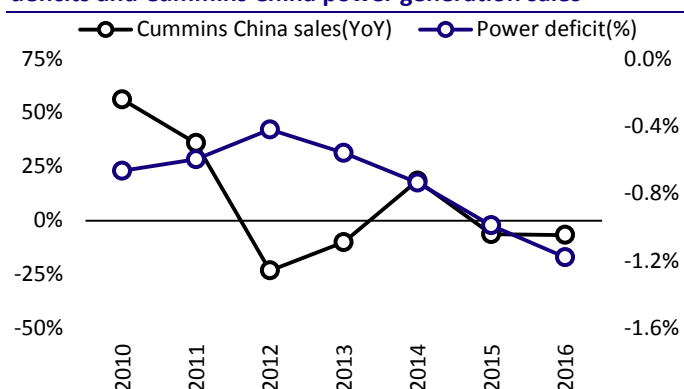
Source: MOSL, Industry

Exhibit 13: High correlation between IIP growth and Cummins Power Generation sales in the US



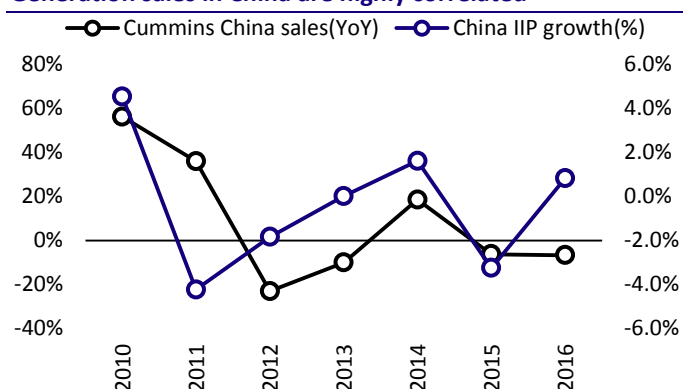
Source: MOSL, Industry

Exhibit 14: No significant correlation between China power deficits and Cummins China power generation sales



Source: MOSL, Industry

Exhibit 15: China IIP growth and Cummins Power Generation sales in China are highly correlated



Source: MOSL, Industry

- While reported power deficits in India may have come down, the reliability of power is still a concern – in turn, gensets are installed as an 'insurance' against power cuts.

So what drives the revival in DG demand over FY18-20?

- We believe there are multiple drivers for a pick-up in demand for DG sets, going forward. With >85% of DG sets being used for backup power, low power deficits do not directly translate into lower demand for DG sets. In our view, the bigger demand driver for DG sets is industrial, infrastructure and real estate capex. A revival in these three end markets is critical for a recovery in DG demand.

Infrastructure spending – Roads, Metro Rail, Railways

- The current government is focusing on pump priming the economy through increased infrastructure spending, especially on roads, metro rail and railways.
- **Roads:** The government intends to order 25,000km of roads in FY18, and also take road construction to 41km/day from 22km/day in FY17. In FY17, there was a 40% jump in road construction. During road construction, the need for DG sets is felt in remote locations, where availability of power is an issue.

Exhibit 16: India road construction orders

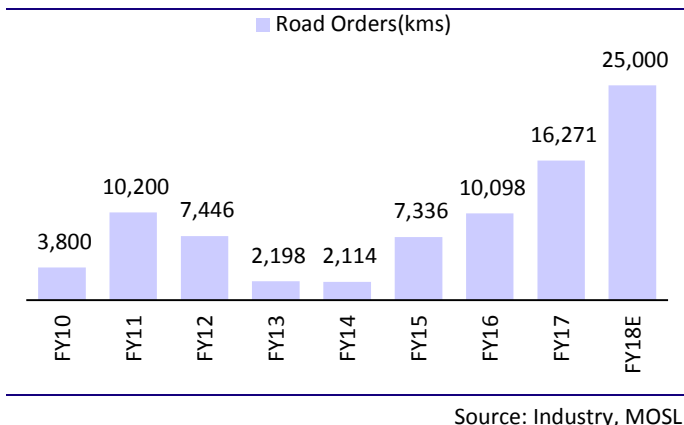
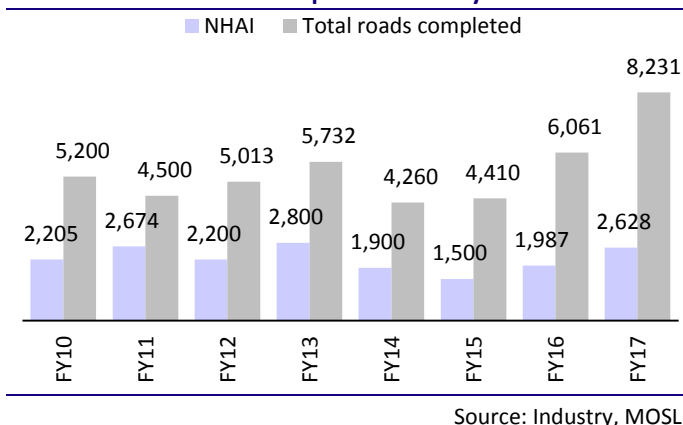


Exhibit 17: India roads completed annually



- **Railways:** The Indian Railways is looking at installing/replacing the diesel generators used to power air conditioners in trains. Each generator car has two DG sets and the annual industry volumes are 500 units, implying a market size of INR2b-2.5b. Key participants are Cummins, KOEL, Volvo and Greaves Cotton.
- **Metro Rail:** Another big opportunity for DG sets over the next few years is in metro rail projects, with a new metro rail policy on the anvil and every large city (>1m population; 360 cities) in India looking to construct a metro rail network. Each metro station would need to have DG sets as backup in case of power failure. The typical ratings used in a metro station vary from 500kva to 1,000kva. With 855km of metro rail projects coming up in India over the next few years at an overall capex of INR3t (see following table), the opportunity in this segment is immense.

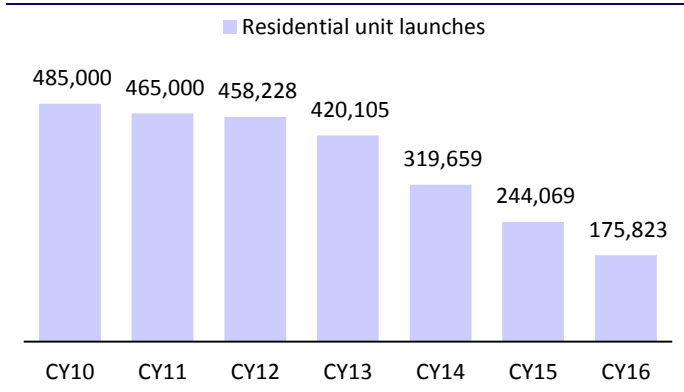
Exhibit 18: Upcoming and planned metro rail projects in India

Planned Metro projects	Phase	Planned length (km)	Cost (INR b)
Chennai Metro	Phase II	63.0	360.0
Bengaluru Metro	Phase II	72.1	264.0
Jaipur Metro	Phase II	23.1	65.8
Pune Metro	Phase I	31.5	101.8
Kochi Metro	Phase II	-	15.0
Ludhiana Metro	-	28.8	103.0
Chandigarh Metro	-	37.6	109.0
Lucknow Metro	-	22.9	70.0
Nagpur Metro	-	42.0	80.0
Bhopal Metro	-	28.0	60.0
Indore Metro	-	32.2	75.0
Ahmedabad Metro (East –West)		37.7	107
Delhi Phase IV		104.0	550.0
Vishakapatnam Metro		43.0	130.0
Vijaywada Metro		26.0	68.0
Thiruvantapuram Metro		42.0	36.0
Mumbai Metro Dahisar-DN Nagar	Phase IIA	18.5	64.0
Mumbai Metro DN Nagar-BKC-Mankurd	Phase IIB	23.5	100.0
Mumbai Metro Colaba –BKC – SEEPZ	Phase III	33.5	244.0
Mumbai Metro Wadala-Ghatkopar-Thane-Kasarvadali	Phase IV	32.0	120.0
Mumbai Metro Thane – Bhiwandi – Kalyan(17 stations)	Phase V	24.0	84.1
Mumbai Metro Jogeshwari-Vikhroli Link Road (13 stations)	Phase VI	14.5	66.7
Mumbai Metro Andheri€ to Dahisar € – Elevated	Phase VII	16.5	62.1
Total		854.7	3,031.3

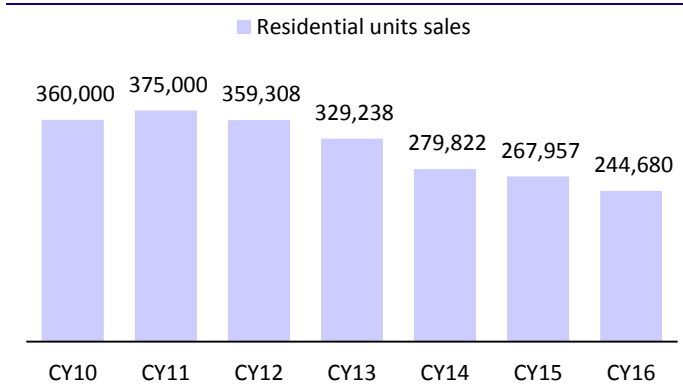
Source: Industry, MOSL

Real Estate – commercial segment recovering**Residential Real Estate**

- The residential market of the top eight cities in India started off on a positive note in CY16. Sales volume grew 7% YoY in 1HCY16; over 135,000 units were sold in 1HCY16 as compared to 126,620 units in 1HCY15. However, following demonetization in November 2017, transactions came to a complete standstill. Developers refrained from announcing any new launches and buyers turned extremely cautious.
- Sales volume dropped 44% YoY in 4QCY16. New launches declined 61% YoY during the same period. At 40,940 units, 4QCY16 sales volume was the lowest in a quarter since CY10. The average quarterly sales used to be in excess of 90,000 units in CY10. The new launches number was much worse in 4QCY16 at just 24,300 units, not even one-fifth of the peak quarterly level observed in CY10.
- All cities witnessed a crash in 4QCY16, including the usually resilient Bengaluru. As a result, CY16 replaced CY15 as the worst performing year in terms of sales volume in recent history. Sales volume in the top eight cities dropped 9% from 267,960 units in CY15 to 244,680 units in CY16.
- Strict implementation of the Real Estate (Regulation and Development) Act, 2016 within the stipulated timeframe could be a major factor in bringing back the confidence of homebuyers. Timely implementation of this Act across the country would not only make the sector more transparent but would also help attract institutional participation.
- During January-March 2017 (1QCY17), residential project launches fell 8% YoY, with the fall most severe decline being in the NCR. New launches are expected to remain muted over the next 2-3 quarters, as developers make changes to their business structure to align with the RERA norms.

Exhibit 19: Residential unit launches have fallen over the last five years across the top 8 cities in India...

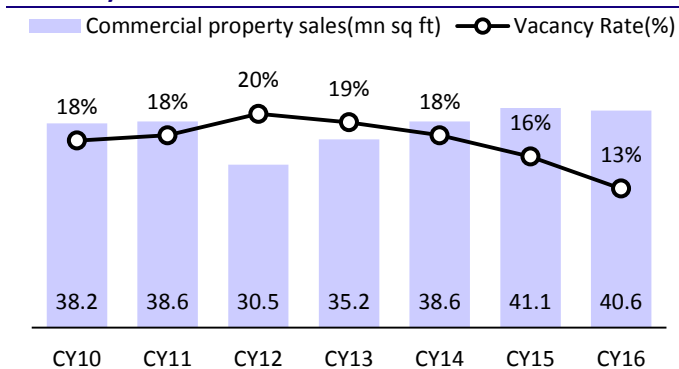
Source: MOSL, Industry

Exhibit 20: ...and so have residential unit sales

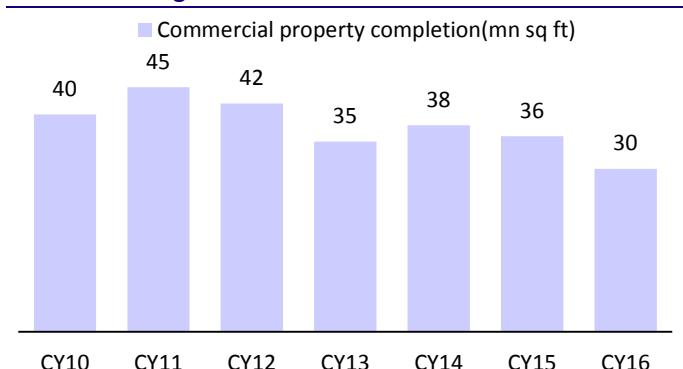
Source: MOSL, Industry

Commercial Real Estate

- CY16 closed with total transactions of 40.6msf, marginally lower than 41.1msf in CY15. The potential demand for office space was much higher in CY16, but due to shortage of good quality office space in prime locations of cities such as Bengaluru, Pune and Chennai, many occupiers had to either delay or curtail their leasable area. Additionally, the new supply that entered these six cities during the year was just 29msf, down from 35msf in CY15.
- The IT/ITeS sector continues to be the largest driver of office space in India; the sector accounted for nearly half the transactions during 2HCY16. This was followed by other services, which include sectors such as Consulting, Media, Telecom and Infrastructure, at 21%. However, in Mumbai, it was the BFSI sector that accounted for a lion's share at 31% during this period.
- Vacancy, which peaked at 20% in CY12, has been falling with each passing year and is currently at one of its lowest levels in recent history at 13%.
- **Outlook:** In the first half of CY17, transactions are expected to be largely muted and there would be pressure on prices. With consumers in a wait-and-watch mode, demand could be subdued due to the mindset that property prices could undergo reduction along with a substantial lowering of home loan interest rates.

Exhibit 21: Commercial property sales strong; vacancy rates at multi-year lows

Source: MOSL, Industry

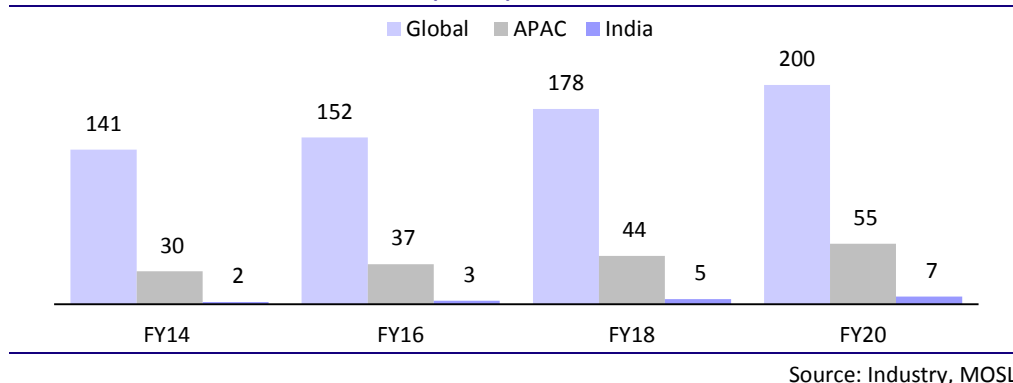
Exhibit 22: Commercial property completions slid on weak launches during CY12-14

Source: MOSL, Industry

Datacenters – a huge opportunity for DG set manufacturers

- A data center (or datacenter) is a facility composed of networked computers and storage that businesses or other organizations use to organize, process, store and disseminate large amounts of data.
- A large datacenter uses as much electricity as a small town. Every datacenter includes backup power supplies in the form of HHP DG sets. This power usually requires multiple 750kVA-and-above DG sets. Key sectors looking at putting up datacenters are BFSI, Social Media, Entertainment, Ecommerce and Telecom.

Exhibit 23: Investment in datacenters (USD b)

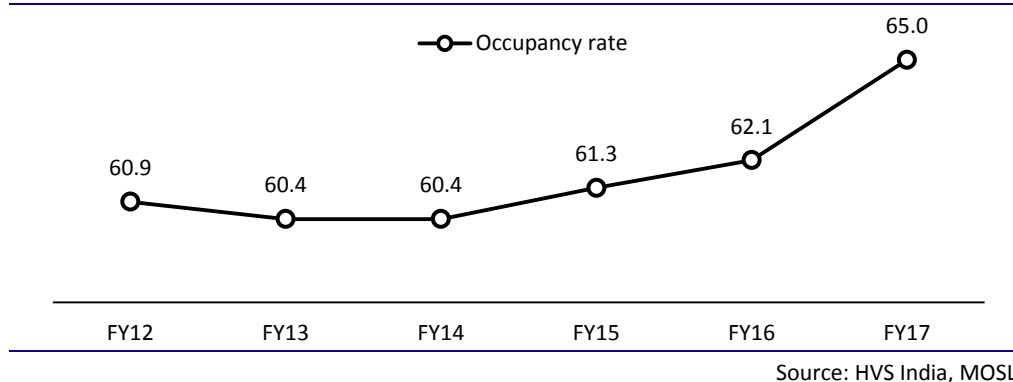


- According to a report by IMAI (2016), the Indian datacenter market shows promising growth over the next few years due to increased usage of data through smartphones, social networking platforms, e-commerce platforms, and government projects. The Indian datacenter infrastructure market was valued at USD2.2b in CY16 and is expected to touch USD4.5b by CY18. It is predicted that India would move to be the second-largest market for datacenters in the Asia Pacific by 2020, with investments reaching USD7b or 4.5% of the global investments.

Hotel occupancy at 9-year high – to drive new supply growth

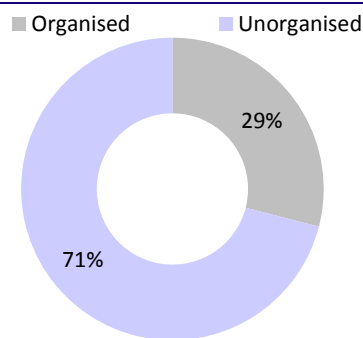
- For branded hotels in India, occupancy (in FY17) has risen to a 9-year high of 65%. The growth in occupancy and tariff is projected to continue in FY18 and FY19, driven by macroeconomic growth, which has led to pick-up in travel and accommodation needs. The last time Indian hotels saw their rooms this full was in FY08.
- Hotel room supply in India grew 7-8% in FY17 and HVS expects growth to remain in this range for the next three years. However, demand is growing at 11-14%. With demand outweighing supply and outlook for travel remaining positive, the upward trend in occupancy rate is likely to continue.

Exhibit 24: Hotel occupancy rate at 9-year high

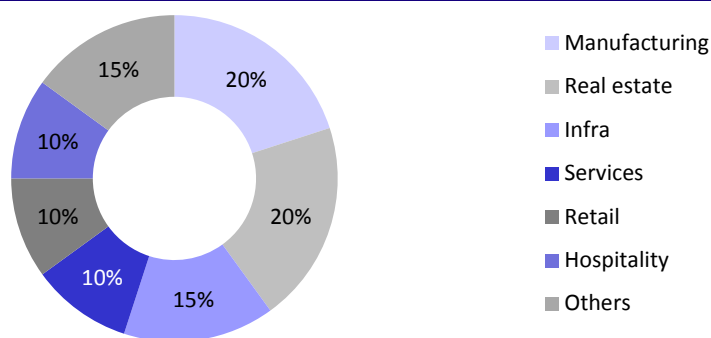


Shift from unorganized to organized segment – GST to hasten transition

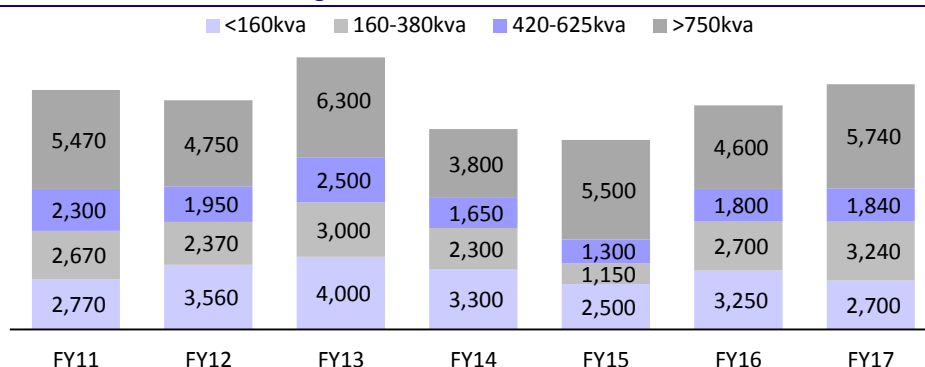
- We estimate that 30,000 DG sets are sold annually by the unorganized sector and these account for 21% of the industry's overall sales. The presence of the unorganized sector would be largely in the LHP (<160kva) segment.
- With GST expected to ensure better tax compliance and bring the unorganized segment into the tax net, we expect the price gap between the unorganized and organized players to narrow. With this, organized players should gain share.

Exhibit 25: DG industry - unorganized segment accounts for ~21% of volumes

Source: MOSL, Industry

Exhibit 26: Cummins India - DG sales by key end market

Source: Company, MOSL

Exhibit 27: Cummins India rating wise sales: >750kva accounts for ~50% of sales in FY17

Source: Company, MOSL

Brand, Distribution, Service, Product range key factors

Low pricing not enough to take market share

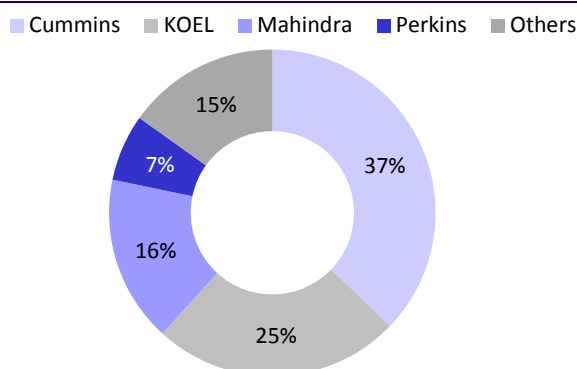
- In the Indian DG market, while pricing is an important factor influencing the final purchase decision, it is not the foremost reason. The key drivers for selecting a particular manufacturer are: (a) brand, (b) distribution reach, (c) service and spare part availability, and (d) product reliability and portfolio depth.
- Increasingly, customers are looking at the life cycle cost of owning a DG set rather than just the initial capital cost while making the purchase decision. Capital cost constitutes only ~6% of the overall cost of ownership.

Exhibit 28: Breakup of various components in the operating costs of DG sets

Description	% of total
Diesel	85-90%
Capital costs	6%
Spares	4%

Source: MOSL, Industry

Exhibit 29: Market share in the Indian DG industry (by value)



Source: MOSL, Industry

Fuel cost – no meaningful difference across brands

- We compared the fuel consumption across brands for the most common nodes in the industry, namely 15, 62.5, 200, 750 and 2,000kva-rated DG sets based on the brochures available on the company websites.
- We find no noticeable difference between the fuel consumption across Indian and MNC brands – this is true across nodes. Clearly, fuel consumption is not the differentiating factor in a customer's decision to buy a DG set.

Exhibit 30: Fuel consumption by brand and kva ranges (Litres consumed per hour @75% load)

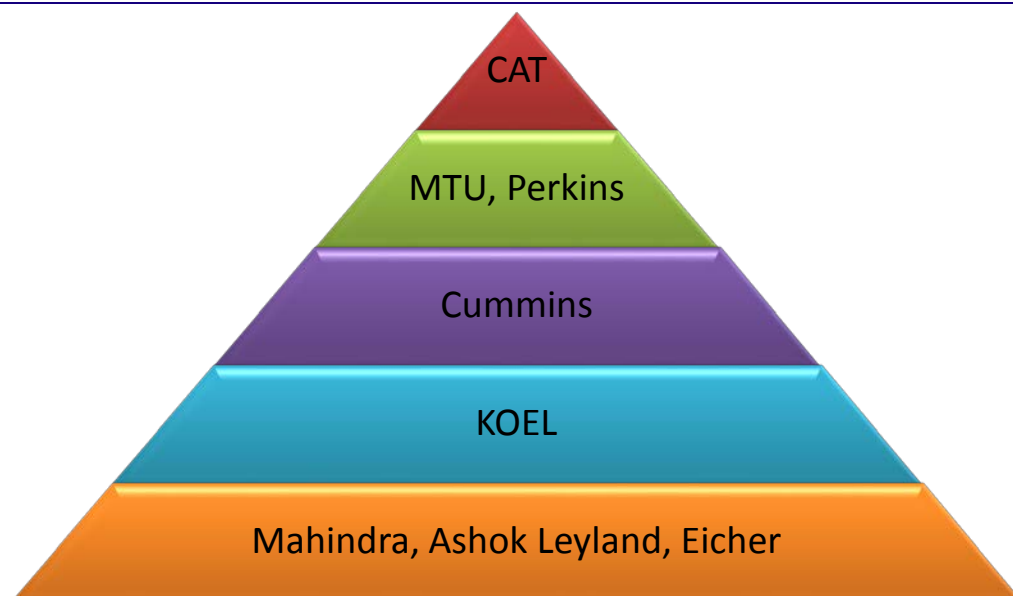
Name of Company	15kVA	62.5kVA	200kVA	750kVA	2000kVA
Mahindra Powerol	2.7	11.3	33.3	NA	NA
Greaves Cotton	2.8	11.1	35.4	NA	NA
Ashok Leyland	3.0	11.3	34.0	NA	NA
Kirloskar Oil	3.0	11.3	34.4	126	NA
Caterpillar	NA	NA	NA	NA	NA
Cummins India	3.4	11.5	34.6	132	291
MTU	NA	NA	NA	NA	NA
Perkins	NA	NA	NA	125	293

Source: Company, MOSL ** at 75% load

Brand positioning/ranking – Caterpillar best placed

- We understand that Caterpillar has the highest brand equity in the DG market – it is the customers' first choice in areas having critical usage.
- While pricing plays an important role in the LHP segment, in the MHP/HHP ranges, it is the brand perception on reliability, performance, dealers and after sales that determines the decision to purchase a particular brand.

Exhibit 31: Brand positioning/hierarchy in the Indian DG industry



Source: Company, MOSL

Product range – a key factor

- Companies like Cummins and KOEL have a distinct advantage over their peers in terms of product range offered. Cummins, which offers 44 nodes ranging from 7kva to 3,350kva, has the most comprehensive portfolio. KOEL comes a distant second, with 27 nodes ranging from 3kva to 1,010kva (it launched its 750kva offerings in FY16 and 900/1,010kva offerings in FY17). None of the other brands in the Indian market have offerings spanning across the LHP, MHP and HHP segments.

Exhibit 32: Company wise nodes on offers for the genset range

Name of company	No of nodes
CAT	12
Cummins	44
Greaves Cotton	23
KOEL	27
MTU	18
Perkins	10
Volvo Penta	9
Mahindra	19
Ashok Leyland	19

Source: Company, MOSL

Exhibit 33: Product range of key players in the Indian DG industry

Description	Caterpillar	Cummins	Greaves Cotton	KOEL	MTU	Perkins	Volvo Penta	Mahindra Powerol	Ashok Leyland
KVA range	200-3000	7.5-3350	2.5-500kva	3-1010kva	200-3100kva	400-2250kva	250-650kva	5-200kva	5-250kva
2.5	N	N	Y	N	N	N	N	N	N
3	N	N	N	Y	N	N	N	N	N
3.5	N	N	Y	N	N	N	N	N	N
5	N	N	Y	Y	N	N	N	Y	Y
7.5	N	Y	Y	Y	N	N	N	Y	N
10	N	N	Y	Y	N	N	N	Y	Y
12.5	N	N	N	Y	N	N	N	Y	N
15	N	Y	Y	Y	N	N	N	Y	Y
20	N	Y	Y	Y	N	N	N	Y	Y
22.5	N	N	N	N	N	N	N	Y	N
25	N	Y	Y	Y	N	N	N	Y	Y
30	N	Y	Y	Y	N	N	N	Y	Y
35	N	Y	N	N	N	N	N	N	Y
40	N	Y	Y	Y	N	N	N	Y	Y
45	N	N	Y	N	N	N	N	N	Y
50	N	Y	Y	N	N	N	N	Y	Y
62.5	N	Y	Y	Y	N	N	N	Y	Y
70	N	Y	N	N	N	N	N	N	N
75	N	N	Y	N	N	N	N	Y	Y
82.5	N	Y	Y	Y	N	N	N	Y	Y
100	N	Y	Y	Y	N	N	N	Y	Y
125	N	Y	Y	Y	N	N	N	Y	Y
140	N	Y	N	N	N	N	N	N	Y
160	N	Y	Y	Y	N	N	N	Y	Y
180	N	Y	Y	Y	N	N	N	Y	N
200	Y	Y	Y	Y	N	N	N	Y	Y
225	N	Y	N	N	N	N	N	N	N
250	Y	Y	Y	Y	N	N	Y	N	Y
275	N	Y	N	N	N	N	N	N	N
300	N	Y	N	N	N	N	N	N	N
320	Y	Y	Y	Y	N	N	Y	N	N
350	N	N	N	N	N	N	Y	N	N
365	Y	Y	N	N	N	N	N	N	N
380	N	Y	N	Y	N	N	Y	N	N
400	N	Y	Y	Y	N	Y	N	N	N
415	N	N	N	N	N	N	Y	N	N
450	N	N	N	N	N	N	Y	N	N
500	Y	Y	Y	Y	N	Y	Y	N	N
520	N	Y	N	N	N	N	N	N	N
600	Y	Y	N	Y	N	Y	Y	N	N
625	N	Y	N	Y	N	N	N	N	N
650	N	Y	N	N	N	N	Y	N	N
725	Y	N	N	N	N	N	N	N	N
750	N	Y	N	Y	N	Y	N	N	N
810	N	Y	N	N	N	N	N	N	N
910	N	N	N	Y	N	N	N	N	N
1010	Y	Y	N	Y	Y	Y	N	N	N
1050	N	N	N	N	Y	N	N	N	N
1135	N	N	N	N	Y	N	N	N	N
1185	N	N	N	N	Y	N	N	N	N
1250	N	Y	N	N	N	Y	N	N	N
1500	Y	Y	N	N	N	Y	N	N	N
1650	N	N	N	N	Y	N	N	N	N
1700	N	N	N	N	Y	N	N	N	N
1750	N	Y	N	N	N	N	N	N	N
1800	N	Y	N	N	N	N	N	N	N
1815	N	N	N	N	Y	N	N	N	N
1850	N	N	N	N	N	Y	N	N	N

Description	Caterpillar	Cummins	Greaves Cotton	KOEL	MTU	Perkins	Volvo Penta	Mahindra Powerol	Ashok Leyland
1875	N	Y	N	N	Y	N	N	N	N
2000	Y	Y	N	N	N	Y	N	N	N
2050	N	N	N	N	Y	N	N	N	N
2125	N	N	N	N	Y	N	N	N	N
2250	N	Y	N	N	N	Y	N	N	N
2275	Y	N	N	N	Y	N	N	N	N
2350	N	N	N	N	Y	N	N	N	N
2500	N	Y	N	N	N	N	N	N	N
2550	N	N	N	N	Y	N	N	N	N
2625	N	N	N	N	Y	N	N	N	N
2725	Y	N	N	N	N	N	N	N	N
2750	N	Y	N	N	N	N	N	N	N
2800	N	N	N	N	Y	N	N	N	N
2900	N	N	N	N	Y	N	N	N	N
3000	Y	N	N	N	Y	N	N	N	N
3100	N	N	N	N	Y	N	N	N	N
3350	N	N	N	N	N	N	N	N	N
3500	N	Y	N	N	N	N	N	N	N
3750	N	Y	N	N	N	N	N	N	N
No. of nodes	12	44	23	27	18	10	9	19	19

Pricing not the key differentiator, especially in MHP and HHP segments

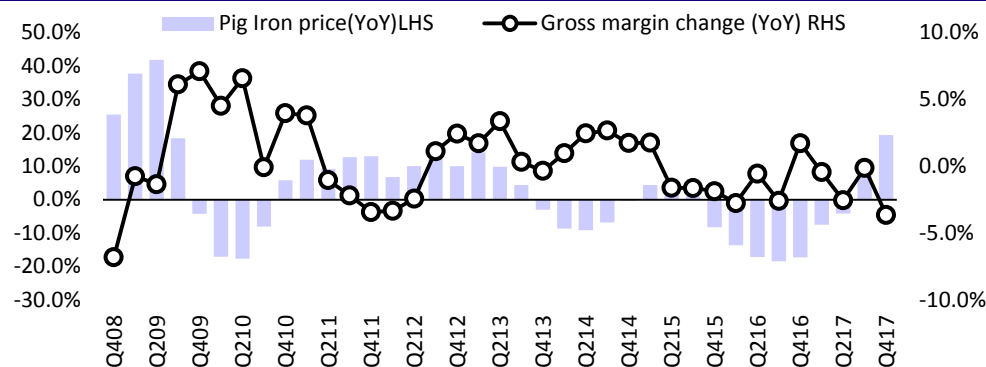
- Pricing is not the key determinant for the buying decision of a DG set. While it plays a role in the overall purchase decision, our interactions with various industry players indicate that pricing gets a low weightage.
- On comparing the price points of DG sets for manufacturers across nodes, we find that: (a) in the higher kva nodes, KOEL products are priced at 2-4% discount to Cummins and Perkins, and (b) in the low kva (<160kva) nodes, Cummins' products are 2-3% more expensive than KOEL and Mahindra.

Exhibit 34: Price points across key nodes for players in the DG set industry

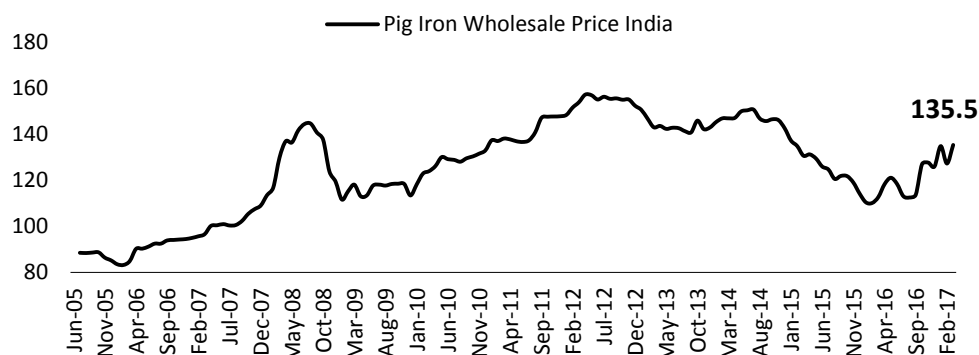
Node	Perkins	Cummins	KOEL	Mahindra
15kva	NA	200,000	200,000	195,000
62.5kva	NA	355,000	345,000	345,000
125kva	NA	560,000	560,000	560,000
160kva	NA	750,000	745,000	740,000
200kva	NA	980,000	945,000	940,000
500kva	2,250,000	2,300,000	2,200,000	NA
750kva	3,650,000	3,650,000	3,500,000	NA
1010kva	5,100,000	5,175,000	4,900,000	NA
1500kva	8,200,000	8,100,000	na	NA
2000kva	11,200,000	11,400,000	NA	NA

Source: MOSL, Industry

- Our industry feedback suggests that Cummins has readjusted prices downwards over the last few quarters – this is more so for the 750kva and above range, where KOEL has made an aggressive entry. Cummins has reduced the prices of its 750kva DG sets from INR4m-4.2m to INR3.7m, marginally above KOEL's. This is despite a sharp rise seen in pig iron prices over the last few quarters (see chart below)

Exhibit 35: Cummins gross margins inversely related to rise in pig iron prices

Source: MOSL, Company

Exhibit 36: Pig iron wholesale price index (50% of Cummins India raw material cost is pig iron)

Source: MOSL, Industry

Distribution network, service touch points key to sustained market leadership

- With most DG sets used for standby power, it is of utmost importance that they are in working condition when needed, primarily during a power cut. This is the reason why distribution/sales network and service plays the most important role in the customer's decision making process.

Exhibit 37: Distribution model for key players in the Indian DG set industry

Description	Caterpillar	Cummins	Greaves Cotton	KOEL	MTU	Perkins	Volvo Penta	Mahindra Powerol
Scale of Ops	National	National	National	National	National	National	Regional	National
Sales Model	OEM, Dealer Driven	OEM Driven, Service is Cummins	Procures engines to make gensets, Service is Greaves	OEM Driven, Service is KOEL	OEM, Dealer driven	OEM Driven for sales and service	Direct Selling	OEM, Dealer driven, Service is Mahindra
OEM's	2	3	6	11	5	2	None	13
Sales to dealers	Fully Built gensets	Engines	Fully Built Gensets	Engines	Engines	Engines	Engines	Gensets for telecom/Engines for retail
Engine Types	Electronically	Mechanical/ Electronic	Mechanical	Mechanical	Electronic	Mechanical/ Electronic	Electronic	Mechanical

Source: Industry, MOSL

- Our interactions indicate that Cummins has industry leading distribution (through its three OEMs – Powerica, Jakson Power and Sudhir Genset) and provides impeccable service through its own service team (some cities are also serviced by its OEMs).

Exhibit 38: DG set manufacturers – manufacturing, sales and service network

Description	Caterpillar	Cummins	Greaves Cotton	KOEL	MTU	Perkins	Volvo Penta	Mahindra Powerol
Presence	>15 Year	>15 Year	>10 Years	>15 Year	<10 Year	>10 Year	>15 Year	>10 year
Market Share	5%	39%	3%	26%	<5%	8%	<5%	18%
Manufacturing	Hosur – Upto 750 KVA	Pune and Phaltan	Aurangabad	Kagal Upto 1010kva	Imported	Aurangabad (>750kva), <750kva - Imported	Imported	Domestic
Product Range	200-3000kva	7-3350kva	2.5-500kva	3-1,010kva	200-3000kva	200-2500kva	200-600kva	5-200kva
Service Network	70	180	21	400+	4	100-150	NA	270
Sales Dealer	8	84	60	173	NA	100-150	NA	177
Installed engines	600+	350,000	NA	600,000	500+	2000+		500,000+

Source: MOSL, Industry

Product reliability – Technology and R&D key differentiators

R&D expenditure – benefit to MNC players of access to parent technology

- Cummins India and Perkins/Caterpillar have a distinct advantage over their Indian peers, as they have access to their parent's technology and product portfolio, which can be replicated and localized for the Indian market. This helps them to have the shortest timeline to launch new products.
- Globally, it has been seen that every time there is an emission norm change, Cummins has taken market share. This is because it is usually the first to adapt its engines to the new technology. Post the new emission norms in July 2014, Cummins India was amongst the first to get its DG sets certified. Though it lost market share in FY15, as the price hikes taken by it were ahead of peers, price rationalization in FY16 helped Cummins to win back share.

Exhibit 39: R&D/royalty expenses across DG set players – in the 1.5-2% range

Name of Company	FY12	FY13	FY14	FY15	FY16
Greaves Cotton	1.0%	1.2%	3.0%	1.7%	1.4%
KOEL	1.3%	1.1%	1.3%	1.6%	1.8%
Cummins India	1.6%	1.4%	1.6%	1.5%	1.0%

Source: Company, MOSL

- As we notice in the table above, R&D/royalty expenses are broadly in the range of 1-2% of sales, with Cummins India being the foremost in terms of royalty payments to parent. In the last five years, these have been 1.5% of sales for Cummins and 1.4% for KOEL.
- Given the nature of the product, warranty cost has to be provided at the time of sales for the duration of the warranty based on historical claims – the industry norm is 1.5-2%, which is where both KOEL and Cummins have historically been placed.

Exhibit 40: Warranty cost – at 1.5-2% of sales for KOEL and Cummins

Name of Company	FY12	FY13	FY14	FY15	FY16
Greaves Cotton	0.2%	0.5%	0.5%	0.5%	0.4%
KOEL	1.3%	1.2%	1.3%	1.3%	1.6%
Cummins India	2.0%	2.5%	2.1%	1.7%	1.9%

Source: Company, MOSL

Competitive pressure intensifies

HHP segment being targeted as it is the most profitable

- Within the Indian DG sets market, the LHP (<160kva) segment is the most competitive, with the presence of 8-10 organized (primarily Indian) players along with Chinese and local players. Price is the key criterion for decision making, and therefore, margins are also the lowest in this segment.

Exhibit 41: End market usage by ratings of DG sets

Ratings Segment	End Use Industries
<160 kVA (Low)	Telecom(15-75kva), Retail sales, Small scale Industries Units
200-375 kVA (Mid)	Real Estate(Residential and Commercial), Hospitals
375-750 kVA (Heavy)	Large Industrial Applications, IT, ITES, Hospitals, Hotels, Healthcare
750-3,000 kVA (High)	Data Centers, Metros, Hospitals, Educational Institutions

Source: Industry, Motilal Oswal

- KOEL, Ashok Leyland and Mahindra have traditionally been very strong in the low and medium horse power DG set market. However, in a change of strategy from CY10, KOEL launched its DV Series (320-625kva) and this was followed by the launch of its 750kva DG sets in FY16. In FY17, KOEL has also launched its 910kva/1,010kva DG sets. It has taken a ~5% share in the HHP segment, with sales of ~75 units in FY17. KOEL further intends to launch its 1,250kva and 1,500kva DG sets over the next 24 months. The >750kva is dominated by Cummins India, which has historically had >50% market share in this segment.
- Perkins has recently started its plant to manufacture engines for the 4,000 series (>750kva) at Aurangabad. This would help to reduce the cost of manufacturing the engines, which would have a greater proportion of localized components. We understand that Perkins has cut prices following increased localized content in its DG sets. In the second phase of expansion, Perkins intends to expand its range to manufacture smaller (>200kva) engines as well.

Exhibit 42: Players in the Indian DG set market

Players in the Indian DG market	Low	Mid	Heavy Duty	High horse power
kVA	15 - 75	75-375	375-750	750 - 3,000 kVA
	Mahindra	KOEL	Cummins	Cummins
	KOEL	Cummins	KOEL	CAT Perkins
	Eicher	Greaves Cotton	Greaves Cotton	MTU
	Cummins	Ashok Leyland	CAT Perkins	KOEL
	Ashok Leyland	Mahindra	Volvo Penta	
	Escorts	Cooper Corporation	MTU	
	Cooper Corporation	FG Wilson		
	JCB India	Volvo Penta		
	FG Wilson			
End Markets	Telecom, Commercial complex, Hospitality, Small restaurants	Large Industries, Real Estate, Healthcare, Hospitality, Infra	Large industries, Real Estate, Healthcare, Hospitality, IT&ITES, Roads, Metros	IT/ITES, Large industries, Real Estate, Metro, Rail, Hospitals, Malls, Data centres

Source: Industry, Motilal Oswal

Exhibit 43: Distribution model for key players in the Indian DG set industry

Description	Caterpillar	Cummins	Greaves Cotton	KOEL	MTU	Perkins	Volvo Penta	Mahindra Powerol
Scale of Ops	National	National	National	National	National	National	Regional	National
Sales Model	OEM, Dealer Driven	OEM Driven, Service is Cummins	Procures engines to make gensets, Service is Greaves	OEM Driven, Service is KOEL	OEM, Dealer driven	OEM Driven for sales and service	Direct Selling	OEM, Dealer driven
GOEM's	2	3	6	11	5	2	None	13
Sales to dealers	Fully Built gensets	Engines	Fully Built Gensets	Engines	Engines	Engines	Engines	Genset for Telcom /Engine for retail
Engine Types	Electronically	Mechanical/ Electronic	Mechanical	Mechanical	Electronic	Mechanical/ Electronic	Electronic	Mechanical

Source: Industry, MOSL

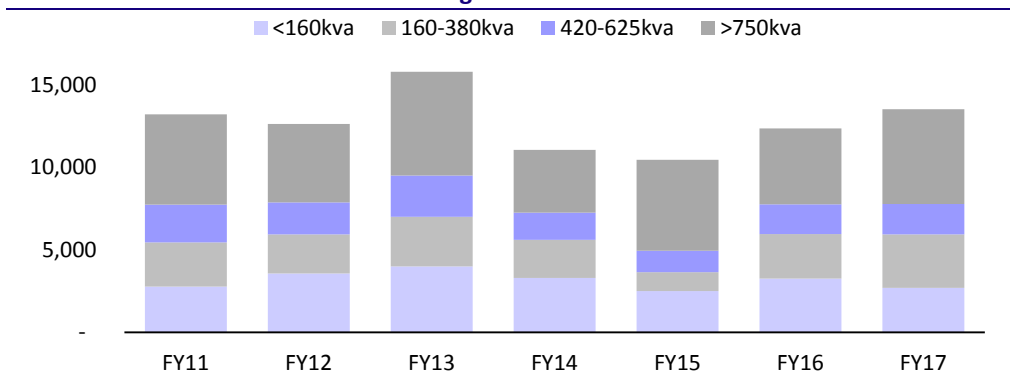
Our interactions with various industry players indicate increased competitive intensity across segments in the DG industry. We examine each segment:

- **Low HP (15-75kva):** While this segment has traditionally been dominated by Mahindra, Ashok Leyland and KOEL, new players like Cooper Industries, FG Wilson, JCB India and Cummins India are also looking to make inroads and increase their share. This segment accounts for the highest volumes in the Indian DG market, but profitability is low due to intense competition, resulting in high pricing pressure for the incumbents.
- **Midrange (75-375kva):** While KOEL and Cummins are the dominant players in this segment, competition from Mahindra, FG Wilson, Cooper Corporation and Ashok Leyland is increasing. Mahindra is currently in the <200kva segment, but is also launching the 250/320kva nodes in the next two quarters – it has bought the technology from Navistar and is planning a commercial launch in 2QFY18. This would imply higher competition in this segment for Cummins and KOEL. Perkins intends to start domestic manufacturing of its 2000 series (400-650kva) in CY18 at its Hosur plant – currently, it is importing this range and is not competitive versus peers. With the start of production in Hosur, it intends to increase presence in the MHP range over the next two years.
- **High HP (>750kva):** This is the most attractive segment in terms of profitability and per unit value is the highest in this segment. Traditionally, Cummins has been the dominant player in this segment, with >55-60% market share, followed by Perkins and Caterpillar. New entrants in this range include KOEL (launched its 750kva node in FY16) and MTU India.

Exhibit 44: Comparison of key features at the 750kva node across manufacturers

























Description		KOEL	Cummins	Perkins
Price		35,00,000	36,50,000	36,50,000
Frequency (Hz)		50	50	50
Fuel Consumption	100% (Ltrs/hr)	154	166.42	169.83
	75% (Ltrs/hr)	126.4	132.4	124.96
Fuel Tank Capacity (Ltrs)		990	990	990
Overall Dimensions (mm)	Length	6800	8000	7200
	Width	2300	2600	2300
	Height	2713	3000	3296
Lube oil system Capacity (Ltrs)		NA	155	115
Lube oil consumption		NA	0.24	0.1% of SFC
Engine Capacity (Ltrs) / displacement		24	38	23
No. of Cylinders		12	12	6
Noise (dBA)		< 75	75	NA
Wet Weight (kg)		8,700	11,900	8,897





Source: Company, MOSL

Exhibit 45: Cummins India: >750kva rating contributed 50% of sales in FY17

Source: Company, MOSL

Market positioning (presence in each range) and change in positioning targeted

Name of company	15-75kva	75-375kva	375-750kva	750kva and above	Brand
Cummins India					Cummins
KOEL					Kirloskar Green
Mahindra			-	-	Mahindra Powerol
Ashok Leyland			-	-	Leypower
Eicher			-	-	Multi brand
Greaves Cotton				-	Greaves Power
Caterpillar	-				CAT
Perkins	-	-			Perkins
MTU	-	-			MTU

 LOW
  HIGH
  LEADER
  MEDIUM - N.A.

- Our analysis of Cummins' pricing by segment reflects a significant fall only in the low kva (<160kva) segment; in all other segments, pricing has remained flat or higher (YoY). The improvement in the >750kva node could be due to (a) higher share of 1,010/1,500kva nodes in FY17, which has led to an improvement in pricing in this segment – our channel checks suggest that Cummins has taken a 10% cut in prices for the 750kva node, and (b) price cuts taken only in 2HFY17 – would start reflecting FY18 onwards.

Exhibit 46: Cummins India – realization largely stable across nodes ex low kva range (INR m/unit)

Category	FY16	FY17	Change (%)
Low kva (< 160kva)	0.23	0.19	-18%
Mid kva (160-380kva)	0.75	0.82	10%
Heavy Duty (420-640kva)	1.51	1.46	-3%
High Kva (>750kva)	4.08	4.54	11%

Source: MOSL, Industry

Diesel Genset industry back on growth track

Infrastructure spending is the key driver

We highlight feedback from our extensive meetings across key genset manufacturers, Genset OEM's and dealers over the past one month:

Cummins India

- Cummins expects to grow at a CAGR of 10-12% over the next few years. The key end markets driving growth for Cummins are Manufacturing, Infrastructure, Datacenters, SEZs, Hotels, and Hospitals.
- It has taken market share across product ranges and growth should pick up with revival in Manufacturing and Infrastructure.
- Real Estate demand has been weak for the last few years and RERA would not have a material impact on Cummins' sales to the segment.
- Cummins is focused on market share; it is willing to accept lower margins to sustain and enhance market share.
- The company has >60% share in the >750kva segment and has realigned prices with competition in this segment.
- Cummins expects a smooth transition to the GST regime. Demonetization had also not had a major impact on the company.

Cummins India GOEM

- The OEM expects the market to grow 10-15% in FY18. Key end markets driving growth are Roads, Metros, Retail, MMSE, and Real Estate (affordable housing).
- Cummins gained share in FY17 despite KOEL entering the HHP (>750kva) range. Cummins' DG sets offer unmatched reliability and service. The company has always had competition in prices – earlier, it was Perkins, and now it is KOEL.
- KOEL's HHP range likely to take share in government jobs (lowest bidder) and small real estate developers. Reputed developers are likely to prefer Cummins, especially since the price differential with KOEL has reduced.
- Sales could weaken in the last week of June, given the impending GST implementation.
- Unlike KOEL and Mahindra that took 2-5% price hikes recently, Cummins has not planned any price increases.

Mahindra Powerol

- In FY18, Mahindra expects 3-4% growth in the low kva segment and 10-12% growth in the higher kva segment.
- Mahindra is present primarily in the lower kva (15-200kva) segment. It intends to launch its 250kva and 320kva products in July. It also imports and sells Scania/Perkins DG sets in the 200-400kva range.
- The key segments that Mahindra targets are Real Estate, Education, Telecom, Shops, and Offices.
- Its competitive advantages in the 250/320kva segment are: (a) service, (b) distribution, and (c) technology – has taken technology from Navistar.

- Currently, it sells 18,000 units per year to Telecom and 18,000 units per year to Retail and Infrastructure. It derives INR7.5b sales annually from DG sets (primarily to the telecom sector) and engines.
- The company is planning tie-ups to get into the 625/750kva range as well.
- Sale of DG sets to the Telecom industry declined from 100,000 units in FY09 to 15,000 units in FY14/15. Mahindra being the leader in this segment was impacted the most. In FY17, the Telecom industry bought 30,000 DG sets – of these, Mahindra accounted for 18,000 units and Eicher for 5,500 units.
- Cummins' margins would be hit, as it has reduced prices after KOEL's entry in the >750kva range. Cummins sells its 750kva product at INR3.7m (down from INR4.1m earlier) v/s KOEL's INR3.6m.
- Perkins sells 600-700 units annually in India. It also exports to China from Aurangabad, enabling it to gain economies of scale. The resultant reduction in its cost/unit could make it a threat to Cummins.

Kirloskar Oil Engines GOEM

- KOEL sells its 3-5kva range under the KOEL *Chotta Chilli* brand, and its 15-1,010kva range under the KOEL Green brand.
- KOEL sold 30,000 units in FY16 and 36,000-38,000 units in FY17. It introduced 750kva and 1,010kva products in FY17.
- In FY18, growth is likely to be 5-10%. RERA will imply that existing projects get completed on time, but new project launches will be delayed. FY19 could be weak.
- KOEL is winning share in the 750kva range, given its brand and product reliability.
- Within the 750kva node, prices have dropped 5-7%. Earlier, Cummins had a monopoly in the 750kva and higher ratings. Now, the customer has a choice between KOEL and Cummins.
- Perkins has not done as well due to fewer GOEMs and service points, and also a limited product range.
- Cummins has a good product range, reliable products, competitive pricing, and good GOEMs.

Perkins India

- After three years of subdued demand (CY13-15), the HHP (>750kva) segment saw a revival from CY16, with 3-4% growth. Perkins India expects a high single-digit growth in CY17.
- Key end markets driving growth are Datacenters, Metros, Commercial Real Estate, Roads, and Manufacturing. Demand from Datacenters is likely to grow at a CAGR of 15% over the next 3-4 years. Demand from Metro Rail projects is seen at 200-300 units per year for the next few years.
- Entry of a new competitor (KOEL) in the HHP segment has led to price cuts by Cummins, which does not want to let go market share. Perkins has maintained prices. KOEL has a credible product but larger developers (like Brigade and Prestige) are likely to stay with Cummins/Perkins.
- Perkins will start manufacturing the 2000 series (400, 500, 625kva) at the Hosur plant in CY18. It will initially cater only to the power generation segment. Currently, it is not catering to the industrial engines market (60,000-70,000

engines annually) as it does not manufacture the 2000 series (entirely imported). After start of production in Hosur and pick-up in volumes, it will begin producing industrial engines (2000 series) too. Industrial engines are doing well for Cummins and KOEL (Roads, Mining, Railways, Defense).

- The Aurangabad plant is working at 60-70% capacity. Of the ~2,100 units it produces, 30% are for domestic (500-600 units) and 70% for overseas markets.

Perkins India dealer

- The dealer was optimistic on the HHP (>750kva) segment, with high enquiry levels and customers willing to convert enquiries into firm orders. Similar trends are also being witnessed in the MHP (250-650kva) range.
- Key end markets seeing a revival include: (a) Datacenters (>1,000kva), (b) IT/ITES, (c) Roads (200/500/600kva), (c) Metros (500/750kva), (d) Malls, (e) Hospitals, (f) Hotels, (g) Educational Institutions, and (h) Rail (500/750kva).
- The dealer expects 10-15% growth in MHP/HHP sales in FY18 for the industry while LHP (<160kva) sales would remain subdued on lower sales to Telecom.
- KOEL is a credible competitor in this range, where there were only four players earlier – Cummins, MTU, Perkins and Caterpillar. Cummins, Perkins and Caterpillar together have 75-80% share in this segment. Annual size of this market is ~2,400 units, with Cummins having 60-70% of the market.
- KOEL's 750kva and above range is primarily preferred by real estate developers and government tenders, where the lowest bidder wins. However, in case of critical applications, KOEL is unlikely to break in.
- KOEL's pricing is quite aggressive, and due to this, Cummins was also forced to reduce prices. Perkins has, however, maintained its prices.
- KOEL was also present in the MHP range, with its DV Series (325-650kva), but was not able to significantly affect Cummins's share. It could face a similar issue in the HHP (>750kva) segment, as well.
- In the HHP segment, product reliability, quality and service are paramount – Cummins, Caterpillar and Perkins are ahead of KOEL in this regard. For example, within Datacenters, customers are unlikely to go with KOEL.
- The 750kva segment involves not just supplying a product, but putting up a project – installation of exhaust systems, controls, and taking care of space requirements. KOEL might lose out on this.
- The impact of GST is likely to be higher in the LHP segment. In the HHP segment, taxes are a pass-through, and so, GST is unlikely to have a material impact.

Key players in the Indian DG set market

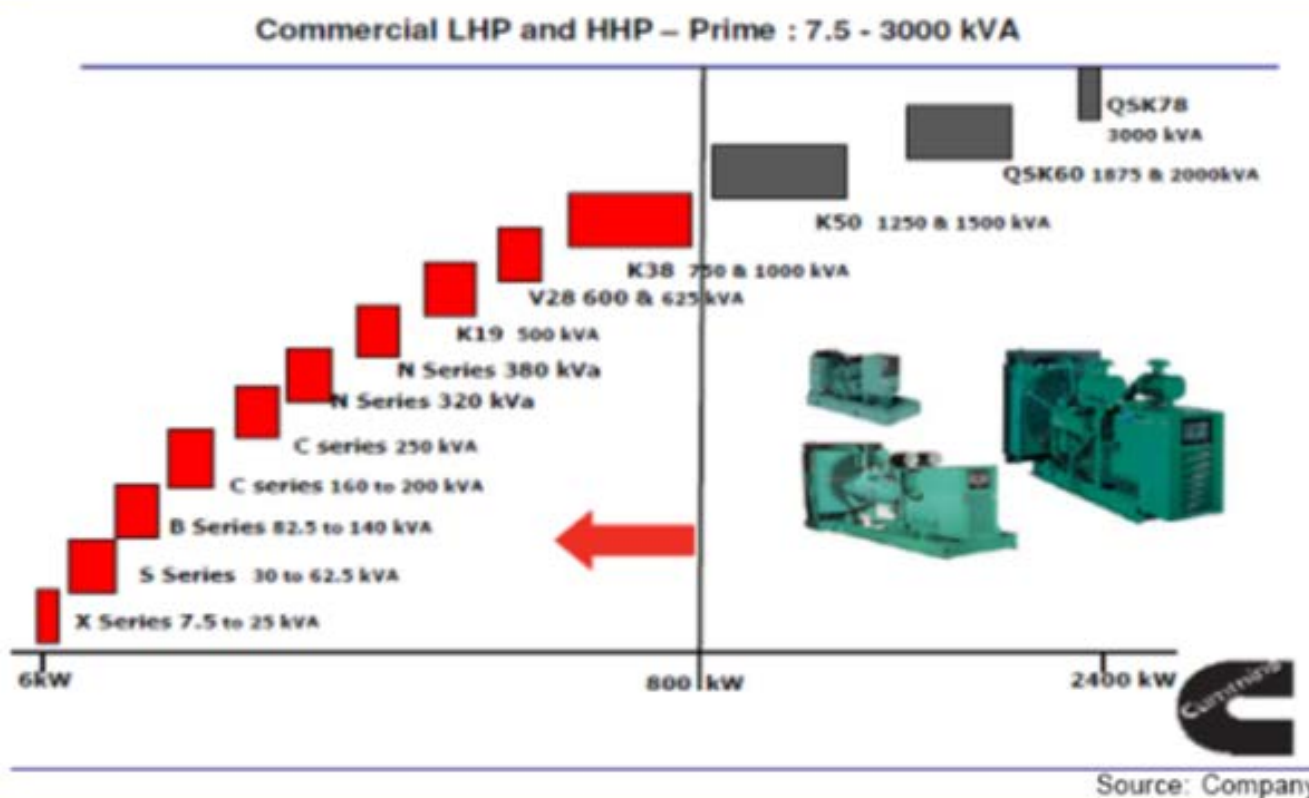
India a key focus market for MNCs

Cummins India

- Cummins has been present in India for over 55 years and has built a reputation founded on its strong dealer/distribution network, product quality, and after-sales support.
- It supplies engines to three OEMs — Powerica, Jakson Power, and Sudhir Gensets. The OEMs assemble the DG sets by adding alternators, canopies, and control panels — these are then sent to dealers across India for sale to customers.

Exhibit 47: Cummins Power Generation range

Cummins' powergen range



Source: Cummins India

Exhibit 48: Cummins India operates through three OEMs in India

Partner	Incorporation	Areas of Operation	Manufacturing
Jacksons	1947	North and North-East India	Daman
Partner P /Powerica	1984	West and South	Daman, Bangalore, Dadra and Nagar Haveli
Sudhir Gensets	1973	North and North-West India	Silvassa, Jammu, Gurgaon

Source: Industry, MOSL

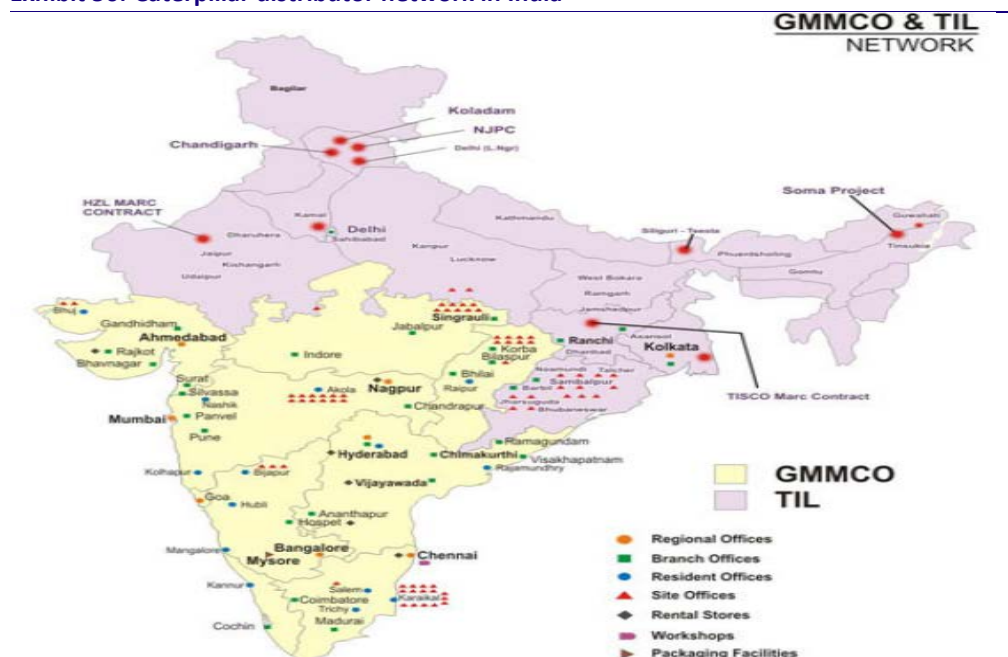
Exhibit 49: Cummins India engine range and litres

kVA	Series	Displacement (Litres)
7.5 - 25 (Low range)	X	1.3, 1.7, 2.5
30 - 62.5 (Low range)	S/B	3.8
140 - 225 (Low range)	B /QSB	5.9
250 - 320 (Mid-range)	C /L/QSL	8.3
320 - 400 (Heavy duty)	N/QSN	14
500, 520-650, 750	K/QSK	19, 38
600-625 (High horse power)	V	28
1500,1750-1800	QSK	50
1875-3350 (High horse power)	QSK	23,60,78

Source: Company, MOSL

Caterpillar India

- In India, Caterpillar sells 200-3,000kva DG sets, gas-based generator sets, and also rents out 200-2,000kva generator sets. Caterpillar has a manufacturing facility in Hosur, Tamil Nadu. The unit specializes in the design and manufacture of internal combustion engines, genset packages, and components. The product range includes diesel engines, gas-engine long blocks, and electric power generator sets. Product ratings range from 200kva to 2,000kva, covering families like 3300, 3400, C series, and 3500. The facility employs over 300 people.
- Caterpillar's Hosur facility has an extensive customer base across India, China, Indonesia, Australia, Europe, and North America. The unit assembles 200-3,000kva engines, makes DG engines of up to 750kva, and imports/assembles engines >750kva. It has a machining shop for marking components that fit into the engine. It produces ~400 engines a month, that is, ~5000 engines per annum using a single shift. It has the capacity to double production by using two shifts.

Exhibit 50: Caterpillar distributor network in India

Source: Industry, MOSL

- Caterpillar has also launched its FG Wilson brand in the 10-250kva segment to take on the likes of Cummins India, KOEL and Mahindra. It is using engines supplied by Cooper Corporation. The range is used primarily at construction

sites, by telecom networks, factories, hospitals, commercial premises, and residential properties.

Perkins India

- Perkins has recently started its manufacturing facility in Aurangabad, Shendra Industrial Area. The facility will manufacture its 4000 Series engines, with power outputs of 700-2,000kva. The estimated cost is ~INR8b; initial production capacity of 3,000 units will be extended to 5,000 units. The new plant will help meet growing demand for engines from Asian markets. The 120,000 square meter site (including a 40,000 square meter manufacturing area) will also undertake machining, assembly and testing, and paint and packaging.

Exhibit 51: Perkins factory layout



Source: Industry, MOSL

- In India, Perkins has two distribution partners – GMMCO Power and Powerparts Private Limited. GMMCO mainly concentrates on the Southern and Western states, while Powerparts takes care of the Northern and Eastern regions.
- **GMMCO Power:** Territories supported include Andaman and Nicobar Islands, Andhra Pradesh, Chhattisgarh, Dadra and Nagar Haveli, Daman and Diu, Goa, Gujarat, Karnataka, Kerala, Lakshadweep, Madhya Pradesh, Maharashtra, Pondicherry, and Tamil Nadu.
- **Powerparts:** Territories supported include Arunachal Pradesh, Assam, Bihar, Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tripura, Uttar Pradesh, Uttarakhand, and West Bengal.

Kirloskar Oil Engines

- KOEL is one of the major DG set manufacturers in India, especially in the low-to-mid-end segment; recently, it has also entered the HHP segment. It has a presence in the power generation sector and caters to the agriculture and industrial segments. It also exports engines to the Middle East and African markets. KOEL has four manufacturing facilities — one each in Nasik, Pune, Rajkot, and Kolhapur.
- KOEL had a tie up with Cummins in the 1990s; since they parted ways, KOEL has been selling gensets under its own brand. KOEL has a very strong market share in the LHP/MHP segment, and is a close number-2 to Cummins and Mahindra.
- It launched its 750kva DG sets in FY16 and managed to take 10-12% share in this segment. Its recent launch of 910/1,010kva DG sets has also been received well by customers and it intends to double its sales of >750kva DG sets in FY18. It has also started working on 1,500/2,400kva DG sets, which it intends to launch in 24 months.

Exhibit 52: KOEL DG set for power generation



Source: MOSL, KOEL

Exhibit 53: Large engine used in captive power plants



Source: MOSL, KOEL

Exhibit 54: KOEL agriculture tillers



Source: MOSL, KOEL

Exhibit 55: KOEL industrial engines



Source: MOSL, KOEL

- It sells its smaller DG sets (5-15kva) under the KOEL Chotta Chilli brand and its larger DG sets (15-1,010kva) under the KOEL Green brand.

Mahindra Powerol

- Mahindra & Mahindra operates in the DG business under the Mahindra Powerol brand. It produces 5-200kva DG sets and has a strong presence in the Telecom industry. Powerol also has a presence in banks, buildings, hospitals, hotels, and the manufacturing segments.
- It has OEMs in major cities across 15 states. Mahindra Powerol DG sets are manufactured at two factories located at Pune and Delhi, with a combined manufacturing capacity of over 30,000 sets a year.

Exhibit 56: Mahindra Powerol factory



Source: MOSL, KOEL

Exhibit 57: Mahindra Powerol DG set



Source: MOSL, KOEL

Ashok Leyland Leypower

- Ashok Leyland (AL) manufactures 5-2,250kva DG sets. It has an installed base of over 0.2m DG sets across the country. It sources engines of >400kva from Perkins.
- Its DG sets meet the latest CPCB norms in India and are made to meet international norms. AL's sets are powered by the compact 4, 6, 8, and 12-cylinder series of diesel engines. Its DG sets are silent, environment-friendly, require minimum maintenance, and are low on operating costs.
- Leypower DG sets are manufactured in plants located across six units in the country. The present range extends from 10-2,250kva, with generating sets manufactured to operate under arduous conditions. It has OEMs present across 20+ states in India.

Exhibit 58: Ashok Leyland DG set



Source: MOSL, Industry

Exhibit 59: MS Dhoni as the brand ambassador



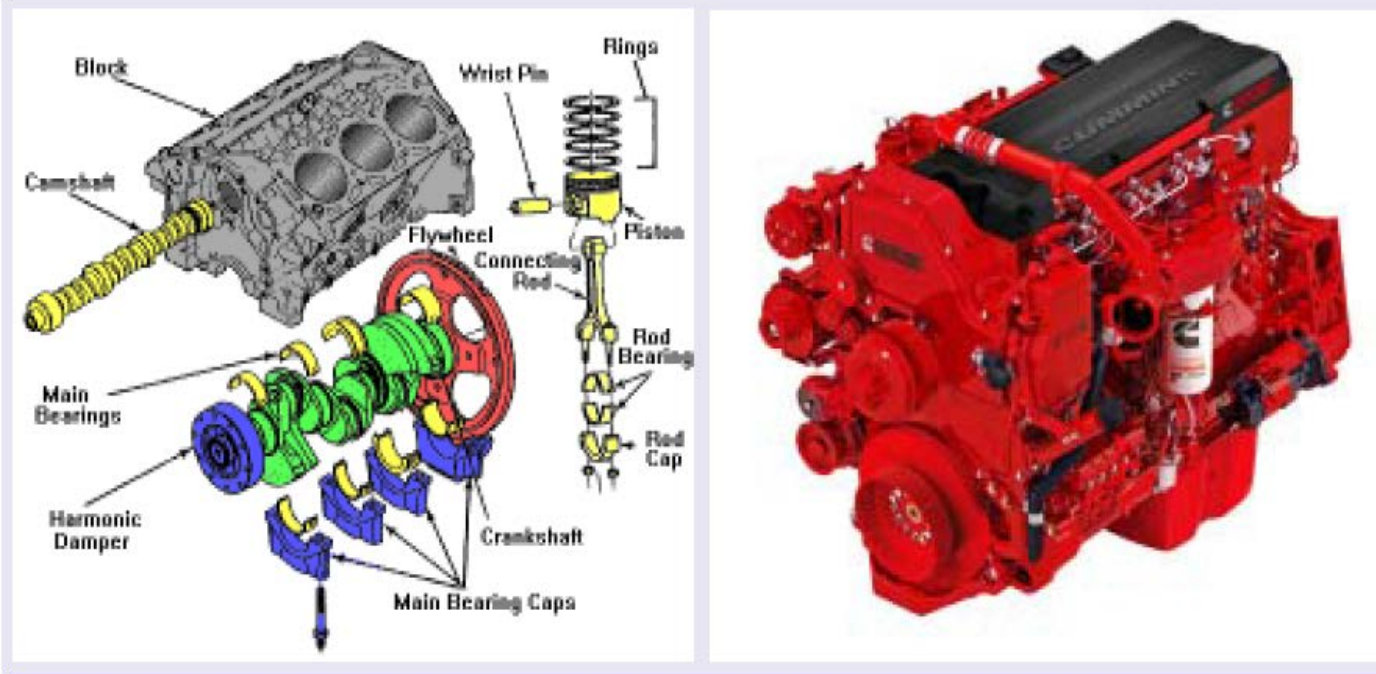
Source: MOSL, Industry

What goes into making a DG set?

The engine is the heart of the machine

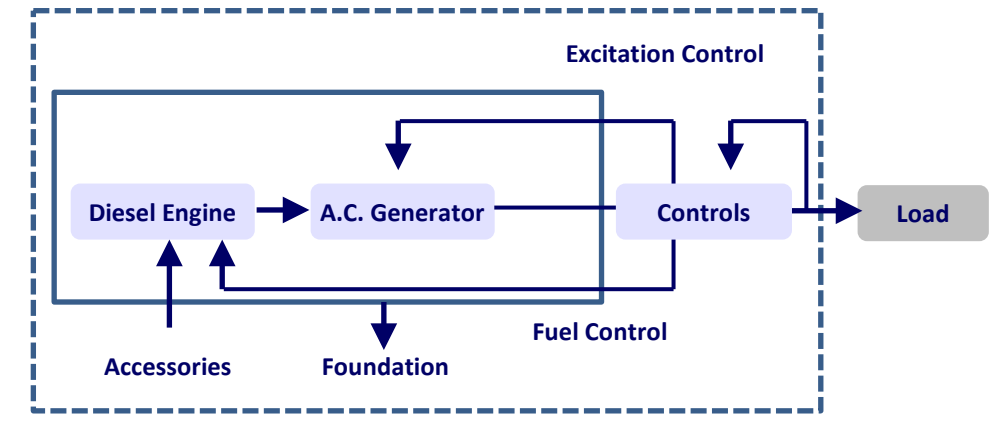
Exhibit 60: The engine is the heart of the diesel generator set

5 Cs of an Engine: Cylinder block, Cylinder head, Crank shaft, Cam shaft and Connecting rods



Source: MOSL, Industry

Exhibit 61: Typical layout of a DG set assembly plant



Source: MOSL, Industry

Cummins India

BSE SENSEX

31,711

S&P CNX

9,827



Stock Info

Bloomberg	KKC IN
Equity Shares (m)	277.2
52-Week Range (INR)	1096 / 748
1, 6, 12 Rel. Per (%)	-1/-4/-1
M.Cap. (INR b)	258.6
M.Cap. (USD b)	4.0
Avg Val, INRm	274
Free float (%)	49.0

Financials Snapshot (INR b)

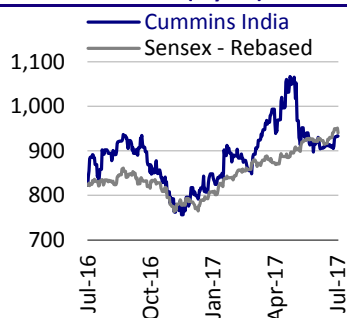
Y/E MAR	2017	2018E	2019E
Net Sales	50.8	56.6	65.5
EBITDA	8.0	9.1	11.4
Adj PAT	7.3	8.1	10.0
EPS (INR)	26.5	29.2	36.0
EPS Gr. (%)	-2.6	10.1	23.4
BV/Sh. (INR)	135.0	146.2	160.1
RoE (%)	21.2	20.7	23.5
RoCE (%)	20.0	19.8	22.5
P/E (x)	35.2	32.0	25.9
P/BV (x)	6.9	6.4	5.8

Shareholding pattern (%)

As On	Mar-17	Dec-16	Mar-16
Promoter	51.0	51.0	51.0
DII	20.9	20.3	18.3
FII	15.0	15.7	16.5
Others	13.2	13.0	14.2

FII Includes depository receipts

Stock Performance (1-year)



CMP: INR933

TP: INR1,110 (+18%)

Upgrade to Buy

Infrastructure spend to drive domestic growth

Exports to witness pickup in 2HFY18

Expects double-digit growth in domestic sales, driven by infrastructure spending

Cummins India (KKC) has witnessed a pick-up in domestic demand, driven by strong infrastructure spending by the government. Over the medium term, the company expects domestic sales to register double-digit growth, given strong infrastructure spending and a pick-up in demand for backup power.

Growth in domestic sales is expected to be driven by:

- **Industrial segment:** Industrial segments such as road construction, railways and mining provide strong opportunities, given the government's focus on infrastructure development. Over the medium term, KKC expects growth in the industrial genset segment to be better than in the power generation segment.
- **Power generation segment:** Growth in this segment is expected to be directly correlated to domestic GDP growth, driven by back-up power installations by end-consumers. Revival is seen in the key end-markets of IT/ITES, hotels, hospitals, data centers.
- **Distribution segment.**

Gains share in high horse power (HHP) segment, despite fierce competition

Competition in DG sets remains intense, as demand has been subdued during the past few years. Despite this, KKC has been able to gain share, given its focus on (1) retaining market share (taken two price cuts in the last three quarters in response to rising competition), and (2) providing an improved product offering (via better-technology engines, strong service, OEM/dealer network, and spare part availability to ensure minimum downtime). KKC has also reduced product costs through value engineering.

Strong growth in distribution business, led by higher industrial contribution

Distribution & Spares business is likely to perform well, given higher sales contribution from the industrial segment, where machine usage is intense (the consequent wear and tear augments the need for spares). Also, given the large installed base of machines, demand for spares is expected to remain robust.

Exports muted; revival expected from 2HFY18

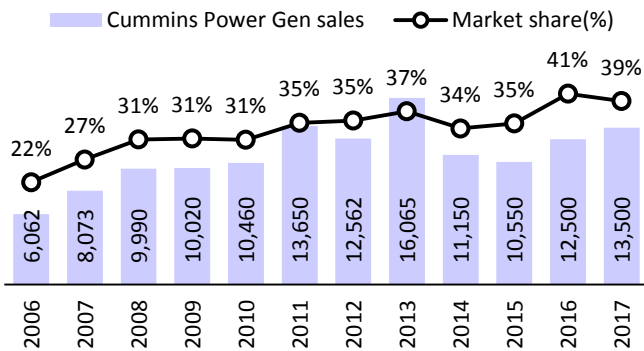
Exports have been weak, given bleak demand from end-markets like Africa, LATAM and the Middle East. However, we expect demand to revive from 2HFY18, given the increase in commodity prices. In the long run, the company has guided for low-double-digit growth in exports.

Margins to improve in 2HFY18, supported by export pick-up

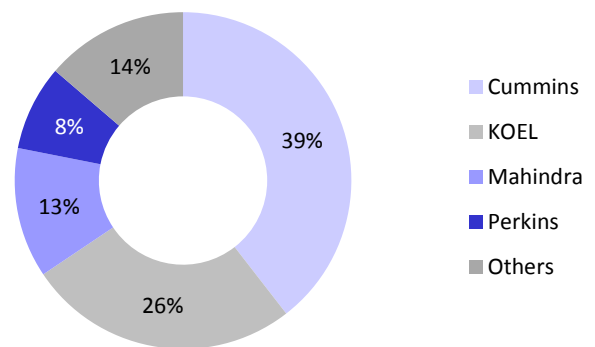
KKC's gross margin contracted 160bp to 35.5% in FY17 due to (a) declining contribution from exports (33% of sales v/s 37% in FY16), which command better margins than domestic sales, (b) higher share of industrial sales, and (c) adverse product mix. We expect margin expansion in FY18, with pick-up in exports.

Valuation and view

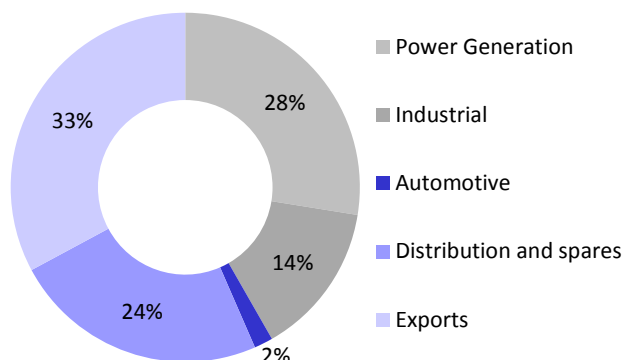
KKC has, over the years, developed (a) strong product portfolio with superior technology to meet domestic demand, (b) wide distribution network to provide superior after sales service to customers, and (c) cost-effective products to maintain leadership in a fiercely competitive market. Given strong infrastructure push, initial signs of pick-up in the power genset segment, and expected revival in the export segment from 2HFY18, we upgrade our rating to BUY. We also revise our target price to INR1,110 (30x June 2019E EPS; in line with 5-year average). The stock currently trades at 34x FY17E EPS of INR26.5, 31x FY18E EPS of INR30.9 and 25x FY19E EPS of 35.5. Key risks to our rating are: (a) weaker-than-expected revival in the domestic power generation market, and (b) persisting weakness in commodity prices, leading to a delay in pick-up of LHP exports.

Exhibit 62: KKC's market share in the power genset segment

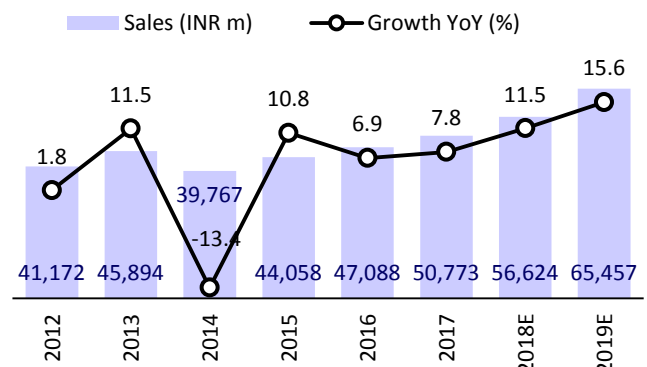
Source: MOSL, Company

Exhibit 63: Market share by players

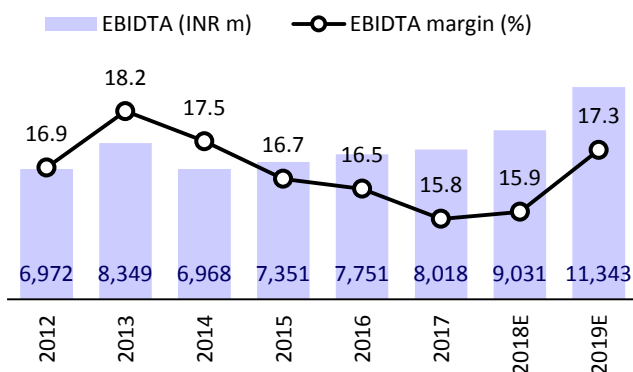
Source: MOSL, Company

Exhibit 64: Segment-wise revenue break-up (FY17)

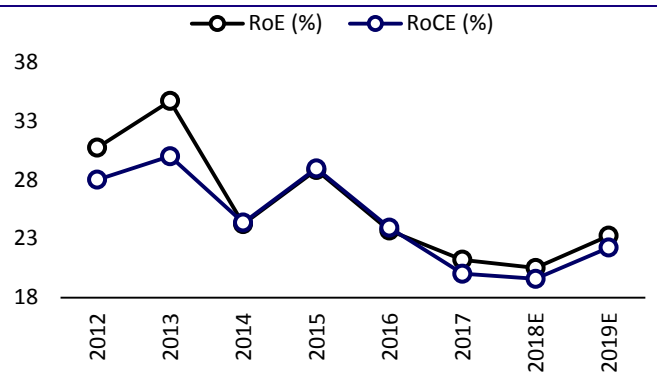
Source: MOSL, Company

Exhibit 65: Sales expected to register double-digit growth, driven by pick-up in infrastructure segment

Source: MOSL, Company

Exhibit 66: EBITDA margin to improve, with pick-up in exports segment

Source: MOSL, Company

Exhibit 67: Robust return ratios, despite weak business scenario

Source: MOSL, Company

Operating metrics

Segmental Revenue (INR m)	FY12	FY13	FY14	FY15	FY16	FY17	FY18E	FY19E
Power	12,562	16,065	11,150	10,550	12,500	13,500	15,255	17,543
- MHP / HHP	9,002	16,065	7,850	8,050	9,250	10,088	11,672	13,781
- LHP	3,560	4,000	3,300	2,500	3,250	3,413	3,583	3,762
Industrial	5,673	5,060	5,248	5,070	5,600	6,960	8,352	10,022
Auto	2,837	1,659	1,162	1,100	700	850	510	510
Distribution	7,699	9,080	9,090	9,050	10,000	11,610	13,352	15,354
- Spare Parts	7,699	9,080	9,090	8,800	9,600	10,810	12,551	14,552
- Recon		nm	nm	250	400	800	801	802
Domestic	28,770	31,864	26,650	25,770	28,800	32,920	37,469	43,430
Exports	11,720	12,690	12,040	17,253	16,670	16,110	17,680	20,487
- HH / HHP	9,520	8,810	8,240	9,003	7,770	8,306	8,160	9,287
- MHP / LHP	2,200	3,880	3,800	8,250	8,900	7,804	9,520	11,200
Net Sales	41,172	45,894	39,767	44,058	47,088	50,773	56,558	65,493
Growth (%)	2%	11%	-13%	11%	7%	7%	11%	16%
RM Costs (%)	64.3%	62.9%	61.0%	61.8%	62.9%	64.5%	63.8%	63.3%
Gross Margins (%)	35.7%	37.1%	39.0%	38.2%	37.1%	35.5%	36.2%	36.7%
EBITDA margin (%)	16.9%	18.2%	17.5%	16.7%	16.5%	15.8%	16.1%	17.5%
Net Working Capital (Days)	63.4	65.5	81.0	82.9	97.8	85.9	85.9	85.9
Net Cash / (Debt), INR M	2,088	3,547	865	799	897	-1,217	1,135	2,458

Financials and Valuations

Income Statement						(INR Million)		
Y/E March	2013	2014	2015	2016	2017	2018E	2019E	2020E
Total Revenues	45,894	39,767	44,058	47,088	50,773	56,558	65,493	74,913
Change (%)	11.5	-13.4	10.8	6.9	7.8	11.4	15.8	14.4
Raw Materials	28,874	24,241	27,225	29,622	32,745	36,080	41,452	47,414
Staff Cost	3,386	3,396	3,936	4,156	4,334	5,183	5,806	6,751
Other Expenses	5,285	5,162	5,547	5,559	5,677	6,209	6,794	7,434
EBITDA	8,349	6,968	7,351	7,751	8,018	9,086	11,441	13,313
% of Total Revenues	18.2	17.5	16.7	16.5	15.8	16.1	17.5	17.8
Depreciation	473	528	797	810	848	981	1,043	1,106
Other Income	1,577	1,777	2,866	2,259	2,080	2,185	2,263	2,344
Interest	46	42	45	96	168	168	168	168
PBT	9,407	8,175	9,374	9,104	9,082	10,123	12,493	14,384
Tax	2,774	2,175	1,515	1,561	1,736	2,036	2,513	2,893
Rate (%)	29.5	26.6	16.2	17.1	19.1	20.1	20.1	20.1
Adjusted PAT	6,633	6,000	7,859	7,543	7,346	8,087	9,980	11,490
Extra-ordinary Income (net)	1,008	0	0	0	0	0	0	0
Reported PAT	7,641	6,000	7,859	7,543	7,346	8,087	9,980	11,490
Change (%)	29.2	-21.5	31.0	-4.0	-2.6	10.1	23.4	15.1

Balance Sheet						(INR Million)		
Y/E March	2013	2014	2015	2016	2017	2018E	2019E	2020E
Share Capital	554	554	554	554	554	554	554	554
Reserves	23,313	25,097	28,311	34,259	36,867	39,982	43,827	48,253
Net Worth	23,867	25,652	28,865	34,813	37,422	40,537	44,381	48,807
Loans	0	0	0	0	2,508	2,508	2,508	2,508
Deferred Tax Liability	328	465	631	128	24	24	24	24
Capital Employed	24,195	26,117	29,496	34,941	39,953	43,068	46,913	51,339
Gross Fixed Assets	10,415	15,120	18,830	19,917	22,705	24,205	25,705	27,205
Less: Depreciation	5,480	5,928	6,491	7,023	8,444	8,657	9,701	10,807
Net Fixed Assets	4,934	9,192	12,340	13,172	14,261	15,547	16,004	16,397
Capital WIP	1,208	958	1,706	5,192	4,631	4,631	4,631	4,631
Investments	6,276	4,954	4,650	3,336	7,074	7,074	7,074	7,074
Curr. Assets	24,278	22,625	24,521	23,483	23,702	27,985	33,179	39,137
Inventory	5,304	5,513	6,823	6,003	5,621	6,105	7,076	8,111
Debtors	8,550	7,820	9,355	9,381	9,557	10,380	12,030	13,790
Cash & Bank Balance	3,547	865	799	897	1,291	3,643	4,966	6,796
Loans & Advances	6,788	8,405	7,472	1,287	1,287	1,397	1,620	1,857
Other Assets	90	22	73	5,915	5,948	6,460	7,487	8,583
Current Liab. & Prov.	12,501	11,611	13,721	9,964	10,455	11,356	13,162	15,088
Current Liabilities	7,719	6,910	8,520	8,843	9,036	9,815	11,376	13,040
Provisions	4,782	4,701	5,202	1,121	1,419	1,541	1,786	2,048
Net Current Assets	11,777	11,014	10,800	13,519	13,247	16,629	20,017	24,049
Application of Funds	24,195	26,117	29,496	35,219	39,213	43,881	47,726	52,152

E: MOSL Estimates

Financials and Valuations

Ratios

Y/E March	2013	2014	2015	2016	2017	2018E	2019E	2020E
Basic (INR)								
Adj EPS	23.9	21.6	28.3	27.2	26.5	29.2	36.0	41.5
Cash EPS	25.6	23.5	31.2	30.1	29.6	32.7	39.8	45.4
Book Value	86.1	92.5	104.1	125.6	135.0	146.2	160.1	176.1
DPS	13.0	13.0	14.0	14.0	14.0	15.4	19.0	21.9
Payout (incl. Div. Tax.)	47.2	60.1	49.4	51.5	52.8	52.8	52.8	52.8
Valuation (x)								
P/E		43.1	32.9	34.3	35.2	32.0	25.9	22.5
Cash P/E		39.6	29.9	31.0	31.6	28.5	23.5	20.5
EV/EBITDA		37.0	35.1	33.3	32.4	28.3	22.4	19.1
EV/Sales		6.6	6.0	5.6	5.2	4.7	4.0	3.5
Price/Book Value		10.1	9.0	7.4	6.9	6.4	5.8	5.3
Dividend Yield (%)		1.4	1.5	1.5	1.5	1.7	2.0	2.3
Profitability Ratios (%)								
RoE	34.7	24.2	28.8	23.7	21.2	20.7	23.5	24.7
RoCE	30.0	24.4	29.0	23.9	20.0	19.8	22.5	23.7
RoIC	44.4	29.1	26.4	24.0	22.1	23.7	28.7	30.9
Turnover Ratios								
Debtors (Days)	68	72	78	73	69	69	69	69
Inventory (Days)	42	51	57	47	40	40	40	40
Creditors. (Days)	46	45	51	43	44	44	44	44
Asset Turnover (x)	1.9	1.5	1.5	1.3	1.3	1.3	1.4	1.4
Leverage Ratio								
Debt/Equity (x)	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1

Cash Flow Statement

(INR Million)

Y/E March	2013	2014	2015	2016	2017E	2017E	2017E	2017E
PBT before EO Items	9,407	8,175	9,374	9,104	9,082	10,123	12,493	14,384
Depreciation	473	528	797	810	848	981	1,043	1,106
Interest	46	-432	-172	96	168	168	168	168
Direct Taxes Paid	-2,377	-2,308	-1,853	-1,561	-1,736	-2,036	-2,513	-2,893
(Inc)/Dec in WC	(1,562)	(1,607)	(815)	(2,716)	498	(1,198)	(2,233)	(2,370)
CF from Operations	5,987	4,356	7,331	5,732	8,860	8,037	8,958	10,395
EO Income	0	-746	-1,993	0	0	0	0	0
CF from Oper. Incl. EO Items	5,987	3,611	5,338	5,732	8,860	8,037	8,958	10,395
(Inc)/Dec in FA	(1,469)	(4,678)	(3,304)	(5,500)	(2,446)	(1,500)	(1,500)	(1,500)
Free Cash Flow	4,518	-1,068	2,035	232	6,414	6,537	7,458	8,895
Investment & Others	138	5,528	2,458	2,151	(3,738)	45	0	0
CF from Investments	-1,331	850	-846	-3,349	-6,185	-1,455	-1,500	-1,500
(Inc)/Dec in Networth	998	0	0	2,922	(221)	0	(0)	0
(Inc)/Dec in Debt	0	0	0	0	0	0	0	0
Interest Paid	0	-42	-45	0	0	0	0	0
Dividend Paid	-4,195	-4,216	-4,216	-4,518	-4,516	-4,972	-6,135	-7,064
Others	-147	0		0	2,508	0	0	0
CF from Fin. Activity	(3,344)	(4,258)	(4,261)	(1,595)	(2,230)	(4,972)	(6,135)	(7,064)
Inc/Dec of Cash	1,312	203	231	788	446	1,611	1,323	1,830
Add: Beginning Balance	2,235	662	568	799	1,587	2,032	3,643	4,966
Closing Balance	3,547	865	799	1,587	2,032	3,643	4,966	6,796

E: MOSL Estimates

Kirloskar Oil Engines

BSE SENSEX

31,711

S&P CNX

9,827

CMP: INR395

Not Rated



Enriching Lives

Stock Info

Bloomberg	KOEL IN
Equity Shares (m)	145
52-Week Range (INR)	418 / 254
1,6,12 Rel Perf. (%)	2 / 20/ 73
M.Cap. (INR b)	56.2
M.Cap. (USD b)	0.9

New product launches to drive growth

Providing credible competition in recently-entered HHP segment

Focus on new product launches to expand addressable market: KOEL has launched multiple products over the last three years with the intent to expand its product range and fill up existing gaps in the product portfolio. It now offers an entire range of high-performance DG sets (2.1kva to 1,010kva). It has launched high kVA DG sets (750kva and above), power tillers, portable gensets, fire-fighting pumps, and compact gensets for defense, which are expected to generate 15% additional sales by FY19. KOEL has laid out its FY18 product launch plan, where it plans to launch power tillers (5/8/12HP range), railway engines (INR2.3b market) and electric pumps in the agriculture segment.

Despite being a new entrant, providing credible competition in the HHP segment:

KOEL has recently entered the HHP segment (750kva and above) and initial response to its products seems encouraging. KOEL's 750kva and above range is primarily preferred by real estate developers and in government tenders, where the lowest bidder gets to win the order. To penetrate the market, KOEL has priced its products very aggressively.

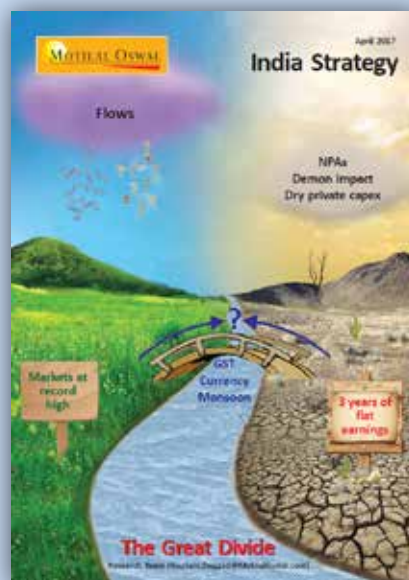
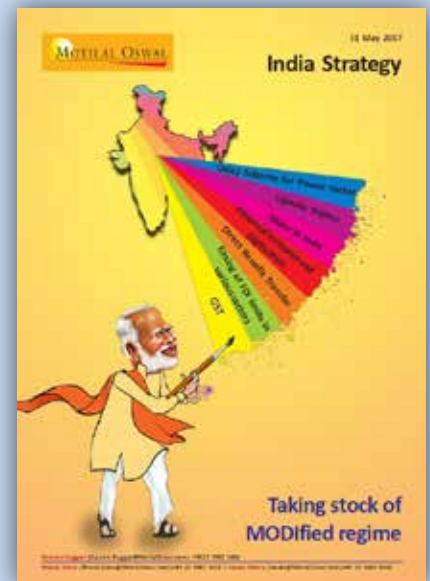
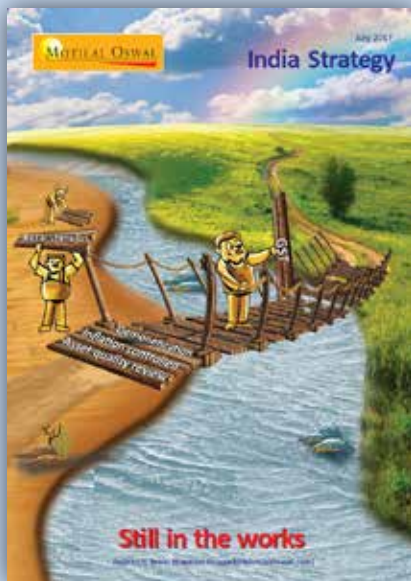
LGM acquisition to increase foothold in electric pump market: KOEL has signed a definitive agreement to acquire 76% stake in La-Gajjar Machineries (LGM) at an EV of 7.9x FY18 EBITDA, with the intent to acquire the balance stake over the next five years. LGM is engaged in the manufacture and sale of electric pumps in both domestic and export markets. It is the market leader in UP and Odisha, and is among the top-5 in 12 states in India, through its brands 'Varuna' and 'Raindrop'.

Strong balance sheet: Despite registering a muted 5% PAT growth in FY17, KOEL reported 22% increase in cash and investments to INR10b. Net working capital increased marginally from 29 days in FY16 to 35 days. KOEL continues to be a net cash company, with RoCE of 11.5% in FY17.

Valuation and view

Over the last three years, KOEL has focused on new product development and launches to expand its addressable market and fill the prevailing product gaps. The company has completed its product portfolio expansion in the power genset segment (2.1kva to 1,010kva). KOEL has also acquired a company to expand its offerings in the electric pump segment. With the above mentioned initiatives, KOEL is expected to register revenue CAGR of 12% and PAT CAGR of 23% over FY17-19 (Bloomberg consensus). The stock trades at 28/22x its Bloomberg consensus EPS of INR14/18 for FY18/19. We do not have any rating on the stock.

THEMATIC/STRATEGY RESEARCH GALLERY



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