# **INDEX OF INDUSTRIAL PRODUCTION October 2013**

Industrial production contracts by 1.8% in October 2013, along expected lines, reflecting adverse base effect and sector-specific issues related to core industries, sugar and gems & jewellery

**DECEMBER 2013** 



## **OVERVIEW**

The Index of Industrial Production (IIP) contracted by 1.8% in October 2013 (refer *Chart 1* and *Table 1*) in year-on-year (y-o-y) terms, as compared to the healthy 8.4% expansion in October 2012, in line with our expectations (-1.7%). Industrial performance in October 2013 was dampened by a contraction of consumer durables (-12.0% in Oct 2013; +16.7% in Oct 2012) and basic goods (-1.6% in Oct 2013; +4.3% in Oct 2012). Moreover, capital goods (+2.3% in Oct 2013; +7.0% in Oct 2012), intermediate goods (+1.8% in Oct 2013; +9.6% in Oct 2012) and consumer non-durables (+1.8% in Oct 2013; +11.2% in Oct 2012) displayed a muted rise in October 2013.

Industrial growth worsened in October 2013 as compared to the 2.0% growth in September 2013, partly reflecting the adverse base effect (+8.4% in Oct 2012; -0.7% in Sept 2012). Moreover, the deterioration in core sector growth (-0.6% in Oct 2013; 8.0% in Sept 2013) and sector-specific issues for sugar and gems & jewellery nullified the uptick in domestic demand for some items related to the *kharif* harvest and festive season (output of tractors, motorcycles and scooters & mopeds rose by more than 20%) as well as the 13.5% growth of merchandise exports in USD terms in October 2013. In contrast to the weakening growth momentum of the other use-based industries, capital goods expanded by 2.3% in October 2013 following the 6.7% de-growth in September 2013. Nevertheless, the outlook for capital goods remains muted with the sharp contraction in commercial vehicles, earth moving machinery, boilers etc. highlighting the sluggish investment impulses in the economy.

In terms of the sectoral classification, industrial performance in October 2013 was dampened by the contraction of manufacturing and mining & quarrying. Manufacturing output contracted by 2.0% in October 2013 in y-o-y terms, with an adverse base effect arising from the 9.9% expansion in October 2012 (refer *Chart 2* and 3). Excluding the contribution of electrical machinery & apparatus (with a weight of ~2% in the IIP Index), the rest of the manufacturing sector recorded a 3.6% de-growth in October 2013. Notably, 10 of the 22 sub-sectors of manufacturing recorded a y-o-y decline in output in that month. The positive growth of the mining & quarrying sector in September 2013 proved to be short-lived, with the sector contracting by 3.5% in October 2013 as compared to 0.2% in October 2012. Growth of electricity generation eased to 1.3% in October 2013 from 5.5% in October 2012, led by the weak performance of thermal electricity generation (-3.9% in Oct 2013; 11.7% in Oct 2012) according to data released by the Central Electricity Authority (CEA). However, hydroelectricity generation displayed a sharp rise of 31.6% in October 2013 as compared to the contraction of 22.4% in October 2012.

IIP growth for September 2013 was unchanged at 2.0%, with an upward revision in consumer non-durables (to 11.6% from 11.3%) and intermediate goods (to 4.2% from 4.1%) offset by a downward revision in basic goods (to 5.3% from 5.4%). Overall, industrial production has stagnated in y-o-y terms in April-October 2013 as compared to the 1.2% growth in April-October 2012. Additionally, IIP growth has fallen short of the growth of the Index of Core Industries (refer *Chart 4*) in each month of this fiscal year.

## **OUTLOOK:**

Normalisation of coal production is expected to boost both mining & quarrying and electricity generation in November 2013. While production of some items such as tractors and two-wheelers continued to benefit from agricultural surpluses and rural demand in November 2013, it remains unclear whether demand would sustain at the same pace post the festive season. Persistence of issues related to

#### **Contacts:**

Aditi Nayar +91 124 4545 385 aditin@icraindia.com sugarcane crushing and availability of gold would continue to impose a drag on industrial growth in November 2013. Additionally, the decline in growth of merchandise exports in USD terms from 13.5% in October 2013 to 5.9% in November 2013 would dampen industrial growth. Growth of capital goods output is likely to remain subdued in line with the sluggish investment activity, as suggested by the continuing double-digit contraction of commercial vehicles in November 2013.

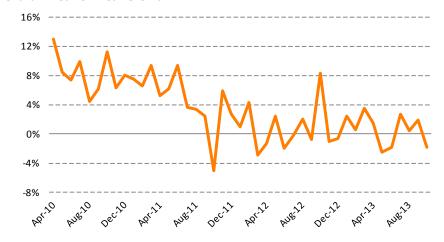
Industrial output is likely to display a muted growth in November 2013, benefiting from the benign base effect related to the 1.0% contraction in November 2012. Overall, industrial growth is expected to record a mild uptick in the remainder of 2013-14 as compared to the 0.0% y-o-y growth in April-October 2013.

**Table 1: Trend in IIP Growth** 

		Sectoral			Use-Based Classification				
	IIP	Mining	Manufacturing	Electricity	Basic	Capital	Intermediate	Durables	Non-Durables
Weight	100.00%	14.16%	75.53%	10.32%	45.68%	8.83%	15.69%	8.46%	21.35%
Month									
Sep-12	-0.7%	2.2%	-1.6%	3.9%	2.7%	-13.3%	1.7%	-1.5%	1.4%
Oct-12	8.4%	-0.2%	9.9%	5.5%	4.3%	7.0%	9.6%	16.7%	11.2%
Sep-13	2.0%	3.3%	0.6%	12.9%	5.3%	-6.7%	4.2%	-10.8%	11.6%
Oct-13	-1.8%	-3.5%	-2.0%	1.3%	-1.6%	2.3%	1.8%	-12.0%	1.8%
Apr-Oct FY13	1.2%	-1.0%	1.1%	4.7%	2.9%	-11.6%	2.3%	5.7%	2.8%
Apr-Oct FY14	0.0%	-2.7%	-0.3%	5.3%	0.7%	-0.2%	2.5%	-11.2%	6.7%

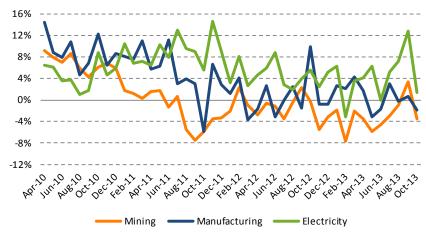
Source: Central Statistics Office (CSO), ICRA Analysis

Chart 1: Year-on-Year Growth in IIP



Source: CSO; ICRA Analysis

Chart 2: Year-on-Year Growth in Sectoral Indices



Source: CSO; ICRA Analysis

**Manufacturing:** Manufacturing output contracted by 2.0% in y-o-y terms in October 2013 as compared to the 0.6% growth in September 2013. The deterioration in sequential months partly reflects an adverse base effect (degrowth of 1.6% in Sept 2012; growth of 9.9% in Oct 2012). Moreover, sector-specific issues for sugar and gems & jewellery offset the uptick, albeit uneven, in domestic demand related to the *kharif* harvest and festive season and the 13.5% growth of merchandise exports in October 2013. Manufacturing output contracted by 0.3% in the first seven months of this fiscal, as compared to the 1.1% growth in the same months of 2012-13.

The number of sub-sectors of manufacturing displaying contraction increased to 10 in October 2013 from 8 in August 2013 and 9 in September 2013 (refer *Tables 2* and *3*). Additionally, the combined weight of the sub-sectors witnessing contraction increased to 39.8% in October 2013 from 29.1% in September 2013. Moreover, the pace of de-growth of these sub-sectors worsened to 9.3% in October 2013 from 8.9% in September 2013.

Basic metals, the largest sub-sector of manufacturing, underwent contraction for the seventh month in a row, with the pace of contraction worsening to 3.0% in October 2013 from 2.0% in September 2013. In contrast, the pace of contraction of fabricated metal products eased to 4.5% in October 2013 from over 7% each in the previous two months. This sub-sector contracted for the fourteenth month in a row. While 'boilers' contracted by 47% in October 2013, items such as 'steel structures' and 'razor blades/safety blades' displayed a healthy expansion (refer *Annexure B*).

Motor vehicles, trailers & semi-trailers contracted by 13.7% in October 2013, similar to the 13.0% de-growth in September 2013. In particular, commercial vehicles output declined by 22.6% in y-o-y terms in October 2013.

Radio, TV & communication equipment & apparatus contracted by 23% in October 2013, in line with the 20-28% de-growth since April 2013. This partly reflects a 23-25% fall in output of 'telephone instruments including mobile phones & accessories' and 'colour T.V. sets'. The pace of contraction of office, accounting & computing machinery worsened to 27.2% in October 2013 from 7.9% in September 2013.

**Table 2: Sub-Sectors Displaying Contraction in October 2013** 

	Aug 2013	Sept 2013	Oct 2013
Number of Sub-Sectors	8	9	10
Weight in the IIP Index	31.1%	29.1%	39.8%
Combined Growth	-10.5%	-8.9%	-9.3%
Contribution to Growth	-3.8%	-4.2%	-5.4%

Source: CSO, ICRA Analysis

**Table 3: Sub-Sectors Displaying Contraction in October 2013** 

Sub-Sectors	Weight	Growth in Oct 2013	Comment
Basic Metals	11.3	-3.0%	
Motor Vehicles, Trailers & Semi-	11.0	3.075	
Trailers	4.1	-13.7%	
Fabricated Metal Products, Except			
Machinery & Equipment	3.1	-4.5%	Contracted
Furniture; Manufacturing N.E.C.	3.0	-28.9%	in Sept 2013
Rubber & Plastic Products	2.0	-7.1%	
Radio, TV & Communication			
Equipment & Apparatus	1.0	-23.0%	
Office, Accounting & Computing			
Machinery	0.3	-27.2%	
Food Products & Beverages	7.3	-3.1%	
Coke, Refined Petroleum Products &			Expanded in
Nuclear Fuel	6.7	-1.4%	Sept 2013
Paper & Paper Products	1.0	-3.0%	

Source: CSO, ICRA Analysis

The pace of de-growth of furniture manufacturing worsened to 28.9% in October 2013 from 8.4% in September 2013. This was partly led by the sharp 39% contraction in 'gems & jewellery', which accounts for ~60% of this sub-index, with constrained supply of gold during a month of seasonally high demand.

Rubber and plastic products and paper and paper products contracted by 7.1% and 3.0%, respectively, in October 2013.

Food products and beverages displayed a 3.1% contraction in October 2013 as compared to the 5.3% rise in September 2013, partly led by the 71.4% de-growth of sugar with delays in crushing of cane in several major States.

Coke, refined petroleum products & nuclear fuel contracted by 1.4% in October 2013 relative to the 14.9% expansion in September 2013, partly led by the 24.2% de-growth of 'kerosene'.

The pace of growth of the five sub-sectors making the maximum contribution to manufacturing growth (refer *Table 4*) decreased to 11.6% in October 2013 from 13.7% in September 2013. The pace of growth of electrical machinery & apparatus rose to 34.2% in October 2013 from 11.4% in September 2013. This was partly led by the improvement in growth of 'cable, rubber insulated' to 143.1% in October 2013 from 68.0% in September 2013. In contrast, the output of 'generator' alternator' and 'aluminium conductor' declined in y-o-y terms in the same month. Notably, excluding this sub-sector, the rest of the manufacturing sector recorded a 3.6% de-growth in October 2013.

The pace of growth of chemicals & chemical products eased to 6.3% in October 2013 from 11.4% in September 2013, despite the high growth displayed by items such as 'ayurvedic medicaments' and 'dyes'.

The pace of growth of other transport equipment nearly doubled to 14.7% in October 2013 as compared to 7.6% in September 2013, partly led by the growth in excess of 20% displayed by 'motor cycles' and 'scooters and mopeds'.

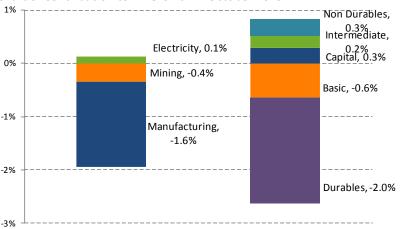
Textiles expanded by 3.3% in October 2013, similar to the 2.9% growth in September 2013. However, the pace of growth of wearing apparel, dressing & dyeing of fur, which has been boosted by exports in recent months, declined sharply from 29.1% in September 2013 to 4.9% in October 2013. Together these two sub-sectors account for around 9% of the IIP Index.

**Table 4: Contribution to the Manufacturing Sector by Sub-Sectors** 

Sub-Sectors	Weight	Growth	Contribution
		in Oct	to Manuf.
		2013	Growth
Electrical Machinery & Apparatus	2.0	34.2%	1.6%
N.E.C.			
Chemicals & Chemical Products	10.1	6.3%	0.6%
Other Transport Equipment	1.8	14.7%	0.5%
Textiles	6.2	3.3%	0.2%
Wearing Apparel; Dressing &	2.8	4.9%	0.1%
Dyeing of Fur			
Others Displaying Expansion	12.9	2.4%	0.4%
Others Displaying Contraction	39.8	-9.3%	-5.4%
Manufacturing	75.5	-2.0%	-2.0%

Source: CSO, ICRA Analysis

Chart 3: Contribution to IIP Growth in October 2013



Source: CSO; ICRA Analysis

Mining & Quarrying: This sector reverted to a contraction in October 2013 (3.5%) after the short-lived 3.3% expansion in September 2013, reflecting a deterioration in growth of coal output (-3.9% in Oct 2013; 12.5% in Sept 2013; refer *Table 5*) as indicated by the Index of Core Industries. Moreover, crude oil output contracted by 0.8% in y-o-y terms in October 2013, following the 0.6% rise in September 2013. However, the contraction recorded by natural gas eased slightly to 13.6% in October 2013 from 16.1% each in July-August 2013 and 14.1% in September 2013.

In month-on-month (m-o-m) terms, the mining & quarrying sub-index rose by 2.8% in October 2013, in contrast to the trend of a double-digit expansion recorded in the same month in the previous three years.

Mining & quarrying output displayed a sharper decline of 2.7% in April-October 2013, as compared to 1.0% contraction in the same months of 2012. The performance of the mining & quarrying sector remains inferior to the other sectors of the IIP so far in FY14.

**Electricity:** The growth of electricity generation declined sharply to 1.3% in October 2013 from 12.9% in September 2013. This reflected a 3.9% y-o-y contraction in thermal electricity generation in October 2013 following the sharp 16.5% growth in the previous month, in line with the trends in domestic coal production (Source: CEA). The impact of the same was partly offset by a considerable improvement in the growth of hydro electricity generation from 3.7% in September 2013 to 31.6% in October 2013, benefitting from heavy rainfall in that month.

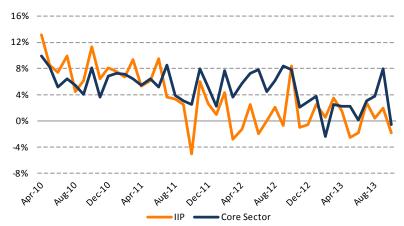
Electricity generation rose by 5.3% in April-October 2013, a small improvement relative to the 4.7% growth in April-October 2012. Electricity growth continues to outperform the growth recorded by mining & quarrying and manufacturing so far in FY14.

**Table 5: Growth of Coal, Crude Oil and Natural Gas** 

	Coal	Crude Oil	Natural Gas
Weight	4.379	5.216	1.708
Aug-12	11.8%	-0.6%	-13.5%
Sep-12	22.2%	-1.8%	-14.8%
Oct-12	11.6%	-0.4%	-14.9%
Aug-13	5.5%	-1.5%	-16.1%
Sep-13	12.5%	0.6%	-14.1%
Oct-13	-3.9%	-0.8%	-13.6%

Source: Index of Eight Core Industries, Ministry of Commerce and Industry, Office of the Economic Advisor; ICRA Analysis

Chart 4: Year-on-Year Growth in IIP and Core Sector



Source: CSO; ICRA Analysis

### **USE-BASED CLASSIFICATION**

**Basic Goods:** The performance of basic goods weakened in sequential months, with a 1.6% contraction in October 2013 following the revised 5.3% rise in September 2013 (refer *Chart 5* and *Annexure A*). This primarily reflects the decline in growth of key components of the core sector such as electricity generation, coal, cement and steel. Moreover, data released by the CSO indicates that kerosene output displayed a sharp 24% contraction in October 2013 (refer *Annexures B* and *C*).

Basic goods recorded a marginal growth of 0.7% in the first seven months of this fiscal, as compared to the 2.9% rise in the same months in 2012-13.

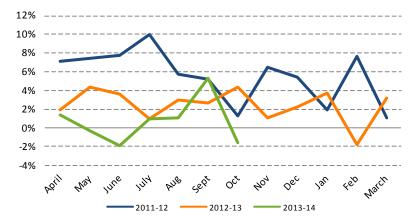
**Capital Goods:** In contrast to the trend recorded by the other use-based industries, the performance of capital goods improved in October 2013 with a growth of 2.3% subsequent to the 6.7% contraction in September 2013 (refer *Chart 6*). Nevertheless, capital goods output declined by 0.2% in April-October 2013, as compared to the 11.6% contraction in the same months in 2012.

Growth of 'cable, rubber insulated' rose to 143.1% in October 2013 from an initial 68% in September 2013 (refer *Annexure B*), contributing to the improved performance of capital goods. In addition to completion of ongoing projects, inconsistencies in data reporting may have contributed to the sharp growth in production of this item over the last several months. Moreover, output of 'transformers' displayed a 24% expansion in October 2013. Additionally, data released by the CSO indicates that output of 'tractors' rose by 22.2% in October 2013, in line with a pickup in demand after the *kharif* harvest.

In contrast, several items of capital goods such as 'commercial vehicles', 'earthmoving machinery', 'sugar machinery', 'generator/alternators', 'aluminium conductors' and 'boilers', which together account for ~34% of the capital goods sub-index, contracted by more than 22-52% in October 2013, highlighting the broad-based weakness of investment activity.

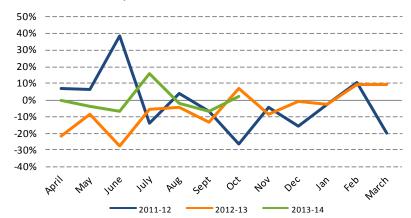
**Intermediate Goods:** The pace of growth of intermediate goods output eased to 1.8% in October 2013 from a revised 4.2% in September 2013, reflecting an adverse base effect with growth having risen sharply to 9.6% in October 2012 from 1.7% in September 2012. Nevertheless the performance of intermediate goods was supported by 'steel structures' and 'dyes', with a combined weight of 0.7% in the IIP Index, which expanded by more than 20% in October 2013. Intermediate

**Chart 5: Growth of Basic Goods** 



Source: CSO, ICRA Analysis

**Chart 6: Growth of Capital Goods** 



Source: CSO, ICRA Analysis

ICRA Limited

goods output rose by 2.5% in April-October 2013, slightly higher than 2.3% expansion in April-October 2012.

Consumer Durables: The contraction of consumer durables deepened to 12.0% in October 2013 from 10.8% in September 2013 (refer *Chart 7*). This reflects three major factors- an adverse base effect (growth of 16.7% in Oct 2012; 1.5% in Sept 2012); uneven pickup in domestic demand related to the harvest/festive season; and restrictions on imports of gold. For instance, 'gems & jewellery', which accounts for over 20% of the consumer durables sub-index, contracted by 39% in October 2013 given the limited availability of gold in the domestic market.

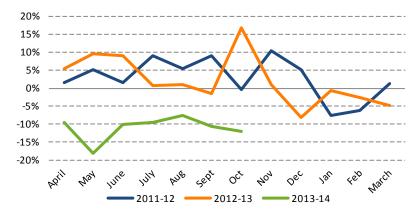
'Telephone instruments' and 'colour TV sets' contracted by 23.5% and 25.2%, respectively, in October 2013, broadly similar to the trend in the previous month. In contrast, motor cycles and scooters & mopeds expanded by more than 20% in October 2013. This highlights an uneven pickup in demand in line with the festive season and higher agricultural incomes post a healthy *kharif* harvest. Moreover, it is unclear whether the demand uptick will sustain beyond the festive season.

As compared to the 5.7% rise in the first seven months of 2012-13, output of consumer durables contracted by a sharp 11.2% in April-October 2013, the worst performance amongst the use-based categories.

**Consumer Non-Durables:** The pace of growth of consumer non-durables declined sharply to 1.8% in October 2013 from a revised 11.6% in September 2013 (refer *Chart 8*). This deterioration was led by a sharper 71.4% contraction in October 2013 (34% in Sept 2013) in output of sugar including sugar cubes, which accounts for over 7% of the consumer non-durables sub-index. However, items such as 'ayurvedic medicaments' and 'razor blades' displayed a growth of 20-48% in October 2013.

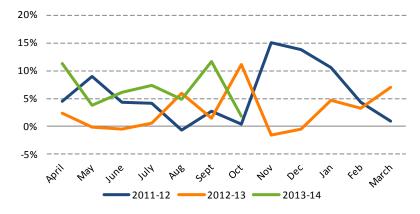
Consumer non-durables output grew by a moderate 6.7% in the first seven months of the ongoing fiscal as compared to the low 2.8% rise in April-October 2013. This stands out as the best performance amongst the use-based categories, in contrast with the performance of consumer durables.

**Chart 7: Growth of Consumer Durables** 



Source: CSO; ICRA Analysis

**Chart 8: Growth of Consumer Non-Durables** 

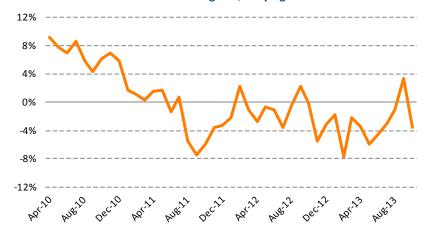


Source: CSO, ICRA Analysis

ICRA Limited

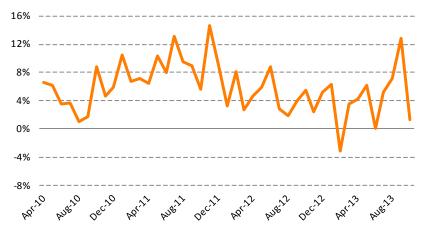
# **ANNEXURE A:**

Chart 9: Year-on-Year Growth in Mining & Quarrying



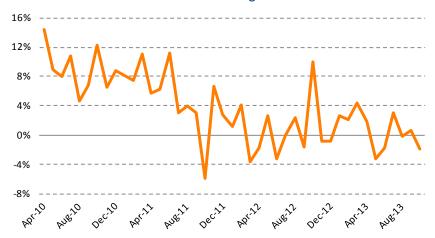
Source: CSO; ICRA Analysis

**Chart 11: Year-on-Year Growth in Electricity** 



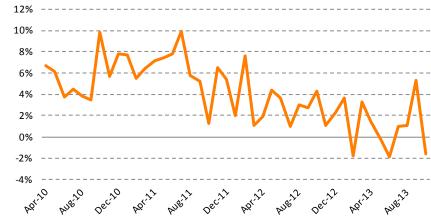
Source: CSO; ICRA Analysis

Chart 10: Year-on-Year Growth in Manufacturing



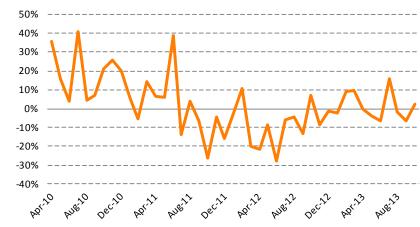
Source: CSO; ICRA Analysis

Chart 12: Year-on-Year Growth in Basic Goods



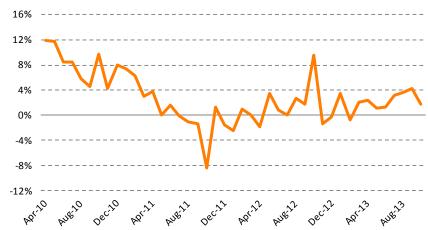
Source: CSO; ICRA Analysis

**Chart 13: Year-on-Year Growth in Capital Goods** 



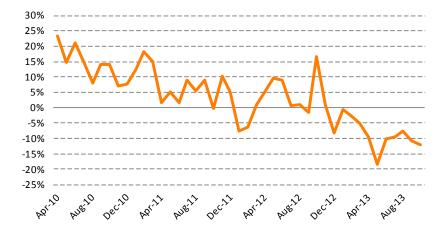
Source: CSO; ICRA Analysis

**Chart 14: Year-on-Year Growth in Intermediate Goods** 



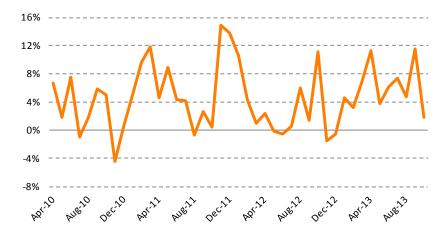
Source: CSO; ICRA Analysis

**Chart 15: Year-on-Year Growth in Consumer Durables** 



Source: CSO; ICRA Analysis

**Chart 16: Year-on-Year Growth in Consumer Non-Durables** 



Source: CSO; ICRA Analysis

# **ANNEXURE B:**

Items	Weight	Growth in	Manufacturing Sub-Sector	Use-Based Classification	
		Oct 2013			
Cable, Rubber Insulated	0.12	143.1%	Electrical Machinery & Apparatus N.E.C.	Capital Goods	
Transformers (small)	0.24	24.6%	Electrical Machinery & Apparatus N.E.C.	Capital Goods	
Tractors	0.38	22.2%	Machinery & Equipment N.E.C	Capital Goods	
Commercial Vehicles	1.93	-22.6%	Motor Vehicles, Trailers & Semi-Trailers	Capital Goods	
Generator/Alternator	0.13	-27.0%	Electrical Machinery & Apparatus N.E.C.	Capital Goods	
Sugar Machinery	0.11	-32.7%	Machinery & Equipment N.E.C.	Capital Goods	
Conductor, Aluminium	0.20	-34.6%	Electrical Machinery & Apparatus N.E.C.	Capital Goods	
Boilers	0.40	-47.2%	Fabricated Metal Products, Except Machinery & Equipment	Capital Goods	
Earth Moving Machinery	0.23	-51.2%	Machinery & Equipment N.E.C.	Capital Goods	
Kerosene	0.45	-24.2%	Coke, Refined Petroleum Products & Nuclear Fuel	Basic Goods	
Steel Structures	0.55	28.8%	Fabricated Metal Products, except Machinery & Equipment	Intermediate Goods	
Dyes	0.14	21.0%	Chemicals & Chemical Products	Intermediate Goods	
Air Conditioner (Room)	0.29	54.7%	Machinery & Equipment N.E.C.	Consumer Durables	
Motor Cycles	0.95	21.3%	Other Transport Equipment	Consumer Durables	
Scooters & Mopeds	0.21	20.9%	Other Transport Equipment	Consumer Durables	
Telephone Instruments incl. Mobile Phones &	0.22	-23.5%	Radio, TV and Communication Equipment & Apparatus	Consumer Durables	
Accessories					
Colour T.V. Sets	0.38	-25.2%	Radio, TV and Communication Equipment & Apparatus	Consumer Durables	
Gems & Jewellery	1.77	-39.3%	Furniture; Manufacturing N.E.C.	Consumer Durables	
Ayurvedic Medicaments	0.27	48.6%	Chemicals & Chemical Products	Consumer Non-Durables	
Razor Blades/Safety Blades	0.53	21.5%	Fabricated Metal Products, Except Machinery & Equipment	Consumer Non-Durables	
Pens of All Kinds	0.59	-23.3%	Furniture; Manufacturing N.E.C.	Consumer Non-Durables	
Sugar (incl. sugar cubes)	1.52	-71.4%	Food Products & Beverages	Consumer Non-Durables	

Source: CSO; ICRA Analysis

# **ANNEXURE C: Growth in Index of Core Industries**

	Index of Core	Coal	Crude Oil	Natural Gas	Refinery	Fertilizers	Steel	Cement	Electricity
	Industries				Products				
Weight	37.9%	4.38%	5.2%	1.71%	5.94%	1.25%	6.68%	2.41%	10.32%
Month									
Aug-12	6.1%	11.8%	-0.6%	-13.5%	31.8%	-2.1%	2.9%	0.4%	1.9%
Sep-12	8.3%	22.2%	-1.8%	-14.8%	34.9%	5.7%	1.3%	13.8%	3.9%
Oct-12	7.8%	11.6%	-0.4%	-14.9%	46.3%	2.0%	-4.7%	6.8%	5.6%
Aug-13	3.7%	5.5%	-1.5%	-16.1%	4.9%	1.7%	4.3%	5.5%	6.7%
"									
Sep-13	8.0%	12.5%	0.6%	-14.1%	8.0%	5.3%	6.6%	11.5%	12.6%
Oct-13	-0.6%	-3.9%	-0.8%	-13.6%	-4.8%	4.1%	3.5%	1.0%	1.3%
April-Oct 2012	6.8%	9.7%	-0.7%	-12.8%	29.7%	-4.5%	1.4%	8.8%	4.9%
April-Oct 2013	2.6%	1.3%	-1.2%	-16.1%	3.7%	2.7%	4.4%	4.0%	4.8%

Source Index of Eight Core Industries, Ministry of Commerce and Industry, Office of the Economic Advisor; ICRA Analysis



An Associate of Moody's Investors Service

## CORPORATE OFFICE

Building No. 8, 2<sup>nd</sup> Floor, Tower A; DLF Cyber City, Phase II; Gurgaon 122 002 Tel: +91 124 4545300; Fax: +91 124 4545350 Email: info@icraindia.com, Website: www.icra.in

## REGISTERED OFFICE

1105, Kailash Building, 11<sup>th</sup> Floor; 26 Kasturba Gandhi Marg; New Delhi 110001 Tel: +91 11 23357940-50; Fax: +91 11 23357014

Branches: **Mumbai**: Tel.: + (91 22) 24331046/53/62/74/86/87, Fax: + (91 22) 2433 1390 **Chennai**: Tel + (91 44) 2434 0043/9659/8080, 2433 0724/ 3293/3294, Fax + (91 44) 2434 3663 **Kolkata**: Tel + (91 33) 2287 8839 /2287 6617/ 2283 1411/ 2280 0008, Fax + (91 33) 2287 0728 **Bangalore**: Tel + (91 80) 2559 7401/4049 Fax + (91 80) 559 4065 **Ahmedabad**: Tel + (91 79) 2658 4924/5049/2008, Fax + (91 79) 2658 4924 **Hyderabad**: Tel + (91 40) 2373 5061/7251, Fax + (91 40) 2373 5152 **Pune**: Tel + (91 20) 2552 0194/95/96. Fax + (91 20) 553 9231

© Copyright, 2013 ICRA Limited. All Rights Reserved.

All information contained herein has been obtained by ICRA from sources believed by it to be accurate and reliable. Although reasonable care has been taken to ensure that the information herein is true, such information is provided 'as is' without any warranty of any kind, and ICRA in particular, makes no representation or warranty, express or implied, as to the accuracy, timeliness or completeness of any such information. All information contained herein must be construed solely as statements of opinion, and ICRA shall not be liable for any losses incurred by users from any use of this publication or its contents.

ICRA Limited