Research

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New WPI, IIP series

CRISIL First Cut

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In a big-bang release, the government on May 12 unveiled a new data series for the Index of Industrial Production (IIP) and Wholesale Price Index (WPI), which have been computed taking fiscal 2012 as the revised base year from fiscal 2005. The revision now aligns these indicators with the GDP – which was brought to 2011-12 base earlier - allowing for meaningful comparisons. This rejigs the underlying items list and weights to better reflect contemporary structure of the economy. The consumer price index (CPI) is already calculated on the fiscal 2012 base.

- The revised WPI series pulls down inflation by 1 percentage point for the five fiscals ended March 31, 2017. Revised commodity and weight structure, and more importantly, eliminating central excise duties from prices, is the reason behind the lower WPI figures. But lower inflation could lead to an upward revision of past real GDP growth rates, provided other factors influencing GDP remain unchanged.
- The revised IIP series, in contrast, pulls up the output growth rates for the past years. On the supply slide of GDP, a higher IIP growth rate could lead to upward revision of real gross value added (GVA) growth rates in recent years (since unorganised sector growth is still based on IIP) provided other factors affecting GDP remain unchanged.
- Meanwhile, CPI data for April 2017 was also released and saw inflation fall below 3%. Much of the fall was led by sharp decline in food inflation (led by higher production in fiscal 2017), moderation in fuel inflation (as the increase in global oil prices moderated) and softer core inflation (suggesting tempering of demand side pressures).

New WPI series

The Ministry of Commerce and Industry unveiled the revised WPI on May 12, 2017, on a revised base year. As per this release, WPI inflation for April is at 3.9%, which is 144 basis points (bps) lower than in March, mainly due to a 500 bps fall in fuel inflation rate and over 200 bps decline in primary articles inflation rate. The new series records WPI inflation in fiscal 2017 at 1.7%, which is 200 bps lower than the old (2005) series.

The revised series has two key features:

- **Excludes central excise duty:** The series removes excise duty from prices, bringing the measure closer to a Producer Price Index, and, at the same time, making it less responsive to changes in tax rates. The CPI will continue reflecting the impact of tax changes (including the impact of goods and services tax or the Goods and Services Tax [GST] implementation on prices). In that sense, therefore, the gap between CPI and WPI can be a crude gauge of the impact of GST on prices.

- **Is more relevant:** With a more recent base year, the WPI is now aligned with the gross domestic product (GDP) and index of industrial production (IIP). This allows for a more meaningful comparison of the parameter, including the GDP deflator measure. This base year revision also allows items (such as natural gas, petroleum coke) to be included, whose production share has increased over time. This makes the index more relevant to the current structure of the economy. On the same line, weightages have undergone a change.

Change in weight and composition

	Weights		**Number of items**	
	FY05	FY12	FY05	FY12
All commodities	100.00	100.00	676	697
Primary commodities	20.12	22.62	102	117
Fuel and power	14.91	13.15	19	16
Manufactured commodities	64.97	64.23	555	564

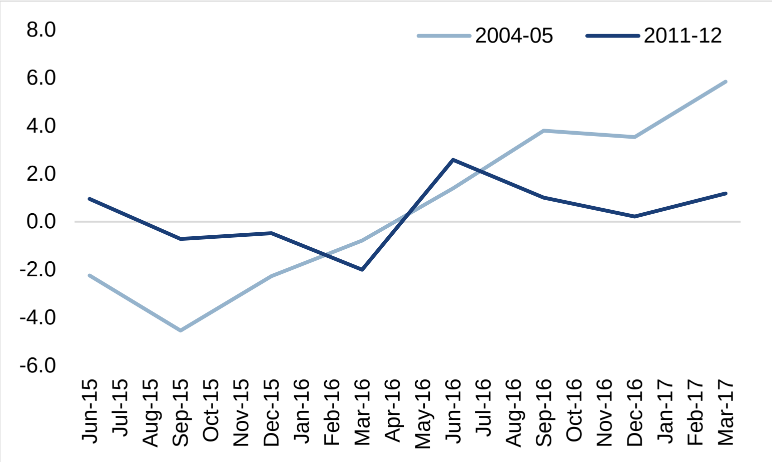
Source: Ministry of Industry and Commerce, CRISIL Research

So what do the new series suggest?

Lower WPI inflation could lead to upward revision in past real GDP growth rate: The real GDP estimates (measured from the expenditure side) are computed by deflating the nominal GDP data. A lower WPI inflation rate could, therefore, pull up past real GDP growth rates for fiscal 2017, provided other factors influencing GDP remain unchanged in the revised data. Headline WPI inflation is lower by nearly 2 percentage points in fiscal 2017, and nearly 1 percentage points for preceding fiscals.

The revised series show slightly sharper price-negative impact of demonetisation: Comparing quarterly data for WPI under the two series shows a sharper fall in WPI during the third quarter of fiscal 2017 as per the new series. WPI inflation fell to 0.2% in the third quarter from 1% in the previous quarter. In comparison, the old series saw WPI inflation fall 30 bps to 3.5%. The divergence mainly arises from the primary articles and manufacturing sub-groups.

WPI inflation is lower than earlier



Source: Ministry of Industry and Commerce, CEIC, CRISIL Research

CPI inflation falls to 3%; food inflation slips to below 1%, core sees a sharper dip

Consumer price index (CPI)-based inflation in April slipped to 3%, the lowest for the period for which this series is available, driven by a dip in food inflation to 0.6%. A record growth in production of pulses in fiscal 2017 and a high base effect in case of vegetables was behind the deflationary trend in these commodities. Meanwhile as global oil prices showed somewhat moderated and rupee stabilised, fuel inflation (fuel and power, petrol and diesel), lowered to 7.1% in April, from 8.3% in March. Meanwhile, core inflation (CPI excluding food, fuel and light) surprisingly fell to 4.2% from 4.6% in March. Core inflation has been declining on a sustained basis since November 2016 suggesting that demand conditions have been tempering.

CPI inflation at 3% is the lowest that this current series (2011-12) has so far seen. Still, upside risks to inflation persist. As of now, monsoons are forecast to be normal as per the Indian Meteorological Department (IMD). However, international weather forecasters expect El Niño conditions to arise. These conditions can disrupts India's south-west monsoon and affect agricultural production (and hence food inflation). Also, although core inflation has been easing, it could edge up if domestic demand improves. Pent-up demand after demonetisation, lower bank lending rates, payments based on the Seventh Pay Commission recommendations, and an uptick in global oil, metals and agri-commodity prices after ~3 benign years, will slowly push inflation higher in fiscal 2018. **We estimate CPI inflation to rise to 5% average in fiscal 2018, from 4.5% in fiscal 2017. There is a downward bias to this estimate.**

- Food inflation, which has been declining on a sustained basis since July 2016, fell to 0.6% in April, from 2% in March. Falling inflation in pulses and vegetables caused the decline. Inflation in pulses fell to -15.9% led by a 37% increase in production in fiscal 2017. Vegetables inflation was mostly down (to -8.6%) due to a high base and given expectations of a normal south-west monsoon year. Similarly, cereals inflation also declined to 5.1% from 5.4% - production in this category is estimated to have increased by 7% in fiscal 2017.
- Fuel inflation slowed in April as the increase in global crude oil prices somewhat moderated and rupee was relatively appreciated. Fuel inflation, measured by adding petrol, diesel, fuel and light components, slowed to 7.1% in April from 8.3% in March. Within this category, inflation in fuel and light rose to 6.1% from 5.5%, while in petrol and diesel, it fell to 10.9% from 19.7%.
- The relief came from core inflation, which had been sticky for most of fiscal 2017. Core inflation (CPI excluding food, fuel and light) showed a sharp fall – to 4.4% from 5.1% in March – led by the decline in the 'transport and communication segment'. But the other measure of core inflation (CPI excluding food, petrol, diesel, fuel and light) also declined – 4.2$ from 4.6% - hinting at tempering demand-side pressures. Among the commodities that aided the decline was transport and communication excluding petrol and diesel (inflation down 20 bps compared to the March inflation rate) and recreation and amusement and personal care and effects (each down 30 bps).

The new series gives IIP a leg-up

The Central Statistics Office (CSO) had, on May 12, 2017, come out with the revised series of Index of Industrial Production (IIP) with fiscal 2012 as the base year compared with 2005 earlier. The composition of the index, both in terms of items and weights, changed as a result. As earlier, the coverage of the new series of IIP is limited to the organised sector only.

Changes in the weights in the IIP series

	Base year FY12		Base year FY05	
	Weights (%)	**Item groups**	**Weights (%)**	**Item groups**
Mining	14.373	1	14.157	1
Manufacturing	77.633	405	75.527	397
Electricity	7.994	1	10.316	1
Total	100	407	100	399

Source: CSO

Highlights

- The new IIP series not only has increased coverage of the manufacturing sector, but also gives it greater weightage (t*able above*). The manufacturing sector in the new IIP series has a total of 809 items (clubbed into 405 item groups), up from 620 items (397 item groups) as per 2005 base year. There has been an increase in number of factories in panel for reporting data and closed ones have been removed. In terms of products, 149 new products have been added and 124 items from the

2005 list have been deleted. While new products such as steroids and hormonal preparations, cement clinker, medical/ surgical accessories, pre-fabricated concrete blocks, refined palm oil have found entry in the 2012 IIP base year, products such as bi-axially oriented polypropylene (BOPP) films, calculators, colour TV picture tubes, gutka have been deleted.

- Coverage in the mining sector, too, has undergone a change. On account of the MCDR Amendment Rules, 2016, the new IIP basket of the mining sector will now comprise 29 minerals against 62 earlier.
- Due to the increasing significance of the electricity generation from renewable sources, it has been decided to include the same in the electricity generation figures for compilation of IIP in the new series.
- The use-based classification of IIP has been re-framed by replacing 'basic goods' with 'primary goods' and introducing a new 'infrastructure/ construction goods' category. Other compositional (items covered and weightage) are as follows:

Use based classification of IIP goods

New series (base FY 2012)	Item groups	Weights (%)	Old series (base FY 2005)	Item groups	Weights (%)
Primary goods	15	34.05	Basic goods	88	45.68
Intermediate goods	110	17.22	Intermediate goods	106	15.69
Capital goods	67	8.22	Capital goods	73	8.83
Infrastructure/ construction goods	29	12.34	NA	--	--
Consumer durables	86	12.84	Consumer durables	43	8.46
Consumer non-durables	100	15.33	Consumer non-durables	89	21.34
Total	407	100	Total	399	100

Source: CSO

Key takeaway from the new IIP series?

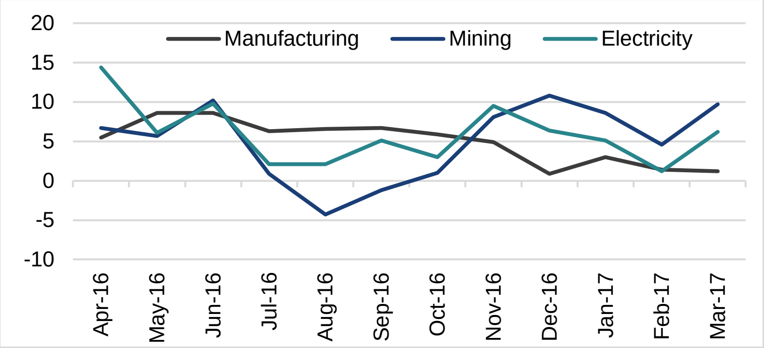
- The new series bumps up industrial growth led by manufacturing in all the years starting from 2013. However, mining growth was lower between fiscals 2013 and 2015. Growth in electricity sector remains unchanged in three of the five years (*table below*).
- Interestingly, in 2017, manufacturing IIP growth rose to 4.9% (from 3.0% in fiscal 2016) in the new series, whereas it declined in the old series with 2005 base (*table below*). The old series shows a dip in industrial growth in the year of demonetisation whereas the new series seems to show a contra trend for the year. However, the new series does show a slowdown in growth in the second half to 2.9% from 7% in the first half of fiscal 2017.

	Overall		Manufacturing		Mining		Electricity	
	FY12	FY05	FY12	FY05	FY12	FY05	FY12	FY05
Weights	100	100	77.633	75.527	14.373	14.157	7.994	10.316
FY13	3.3	1.1	4.8	1.3	-5.3	-2.3	4.0	4.0
FY14	3.4	-0.1	3.6	-0.8	-0.1	-0.6	6.1	6.1
FY15	4.0	2.8	3.9	2.3	-1.4	1.5	14.8	8.4
FY16	3.4	2.4	3.0	2.0	4.3	2.2	5.7	5.7
FY17	5.0	0.7	4.9	-0.1	5.3	2.2	5.8	4.7

Source: CSO

- While this base revision brings the IIP series in sync with the GDP series (which was brought to fiscal 2012 base earlier), it may not be completely void of volatility which is essentially a characteristic of a production based series such as IIP. CSO has introduced the concept of 'work in progress' to assuage the volatility issue. Many item groups, especially in the capital goods category, have production span of more than one month for which data will now be reported on 'work in progress' so that continuous production is accounted for and will address the fluctuations in production data.
- Since it has taken a long time (we are already in fiscal 2018) to revise the IIP base year to 2012, the scope of coverage might have already lost some relevance. To address this issue, an institutional mechanism has been established for facilitating dynamic revision of the item list of products and the panel of factories, through a Technical Review Committee under the Ministry of Statistics and Program implementation. This Committee will meet at least once a year for identifying new items that need to be included in the item basket and removing obsolete items.

IIP: Leaders & laggards



Source: CSO

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