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The burden of price

Inflation causes, effects and policy responses

CRISIL INSIGHT May 12, 2022

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Genie's out, inflation to become more broad-based this fiscal

The Indian economy may have won the rounds against Covid-19, but there's a new opponent in the ring now — rising prices — which are threatening to deliver a one-two punch.

Inflation based on the Consumer Price Index (CPI) has risen consistently for the past 7 months, reaching an 8-year high of 7.8% in April.

Such persistent inflation, including the rising core part, is set to become the biggest headwind to India's economic recovery this fiscal.

CPI-linked inflation may have spent three years at above 4%, the mid-point of the target range set by the Reserve Bank of India (RBI). But it is set to become broad-based across most goods and services this fiscal, ominously rising to 6.3% in fiscal 2023.

In this insight, we explain the evolution of inflationary trends and its implication on the economy, and assess the policy options to deal with it.

The evolving drivers of inflation

		CPI inflation (y-o-y%)			
	Weight (%)	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Food and beverages	*45.9*	6.0	7.3	4.2	6.0
Fuel and light	*6.8*	1.3	2.7	11.3	7.5
Core	*47.3*	4.0	5.5	6.0	6.5
All	*100*	**4.8**	**6.2**	**5.5**	**6.3**

Source: National Statistical Office, CEIC, CRISIL

CPI inflation is likely to rise across food, fuel and core[1] to 6.3% this fiscal from 5.5% last fiscal

- **Food, weighted at 39%, is the most volatile component and one of the biggest movers of CPI inflation. Food inflation will be driven by the rising costs of production, surging international crop prices and extreme weather-related disruptions.**

  Prices of wheat and sugar (India's major exports) and vegetable oils (a major import) have skyrocketed in the wake of the Russia-Ukraine war. The recent ban on palm oil exports by Indonesia may make already expensive edible oils even costlier.

  Weather: India may enjoy a fourth successive year of normal monsoon, which is critical for production, though its distribution remains a monitorable. Other weather events will also have a bearing on production, such as the adverse impact of recent heatwaves on wheat yields.

  Cost of production: Meanwhile, food production costs are rising. Farm input costs, measured as a weighted index of specific sub-components of the wholesale price index (WPI), jumped 20.1% on-year in fiscal 2022, even higher than headline WPI (12.9%). The costs were driven by diesel (52.2% in March 2022), fertiliser (7.8%), pesticides (12.4%), and animal feed (17.7%). This will lead to higher minimum

[1] CPI excluding food and beverages and fuel and light

support prices (MSPs) this fiscal since they are pegged to changes in production cost and are influenced by international price trends. CRISIL Research expects a 4-5% increase in cost of cultivation this year, which will spur MSPs by 3-5%. Wheat, edible oil and cotton will likely see a steeper rise in MSPs.

- **Fuel inflation to stay high**
  - As crude prices are expected to stay elevated through the fiscal, CRISIL Research expects Brent crude to average $94-99 per barrel in calendar year 2022 (up 33-40% on-year), or even higher if the geo-political tensions continue. We estimate every $10 per barrel rise in Brent crude would raise headline CPI by ~40 basis points (bps)
  - Weakening of the Indian rupee will add to the imported cost of crude and commodities
  - The excise duty cuts in November will not be sufficient to reduce fuel inflation since crude prices will likely stay above $90 per barrel this fiscal

  Moreover, the rising fuel prices will indirectly raise inflation in other commodities through higher transportation costs.

- **Core inflation will harden as producers pass on cost pressures to retail prices, and become broad-based as services inflation rises along with goods inflation**

Consumer prices yet to catch up with surging producer costs

In fiscal 2022, WPI inflation surged to 12.9%, while CPI inflation rose at a much lower 5.5%. Even after excluding food, which makes headline numbers volatile, non-food WPI, at 15.7%, was much higher than non-food CPI at 6.7%. This indicates producers did not pass on cost pressures fully to consumers, which may be because of the weak demand post the pandemic. Household consumption expenditure, which accounts for 57% of domestic demand, was the weakest to recover until fiscal 2022.

When we come to this fiscal, producer cost pressures have increased. After Russia invaded Ukraine, there has been a surge in the prices of commodities, spanning agri-products, metals and fuel. They remain elevated given the still-raging war, growing trade restrictions, and China's stringent pandemic curbs, which are disrupting supply chains. Hence, this fiscal, producers will be forced to pass on heightened cost pressures to retail prices.

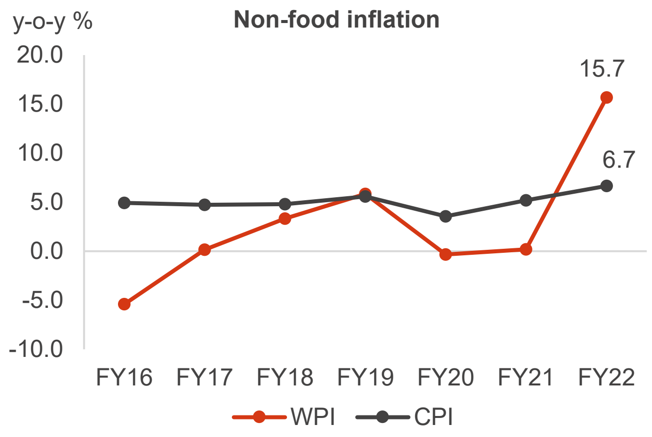
The price hikes, however, may not be able to absorb the higher logistics, raw materials and employee costs all in one go. A CRISIL Research analysis of 800 large and mid-sized companies across 43 sectors indicates earnings before interest, tax, depreciation and amortisation (Ebitda) margin may drop 150-200 bps in fiscal 2023 to 18%. Margins of large corporates will likely take a smaller hit, meaning larger firms will pass on prices to a greater extent.

Services inflation to rise

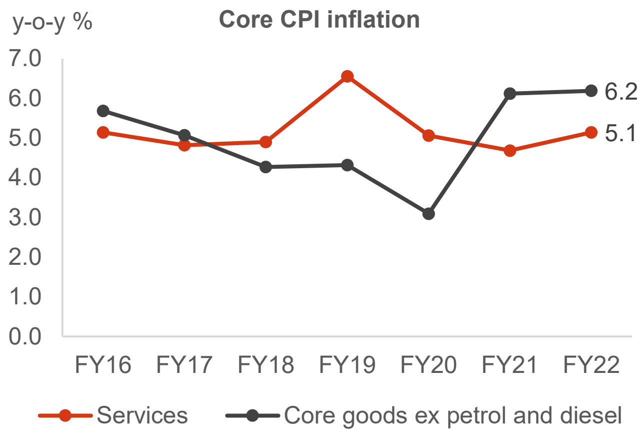
The services sector bore the maximum brunt of social-distancing measures. Services inflation trended lower than core goods inflation in the past two years since cost pressures could not be passed on to the same extent. However, with the impact of the pandemic waning, services activity should strengthen in fiscal 2023, boosting their prices.

The services sector is also facing rising cost pressures. Findings of S&P Global India Services PMI show input costs increased this April at a near-record pace, and are getting passed on to consumer prices amid the rebound in demand.

Limited pass-through of producer costs so far



Services yet to catch up with goods inflation



Source: NSO, Office of Economic Advisor, CRISIL

Crude hits a century. So, what’s different this time?

Brent crude oil prices have remained above the $100 per barrel mark since March 2022, and will likely stay around this level throughout fiscal 2023.

The last time crude prices were this high was between fiscals 2012 and 2014. CPI inflation had averaged 9.2% then. This time around, we expect CPI inflation to be lower at 6.3% in fiscal 2023.

This is because food and core inflation—together carrying 86% weight in the CPI basket—may be lower. Food inflation had crossed into double digits during fiscals 2012-14, driven by the deficient monsoon, rising MSPs and demand boost. Monsoon is expected to be normal in fiscal 2023, which will keep a lid on food inflation. Weaker demand conditions will limit the rise in prices of certain food items, such as pulses. That said, higher costs, rising international prices and MSPs will put pressure this year as well.

Core inflation was higher between fiscals 2012 and 2014 despite lower WPI inflation compared with fiscal 2022. Weak and uneven demand conditions in fiscal 2022 led to lower pass-through of cost pressures. While demand got a boost from the fiscal stimulus then, the injection last fiscal was less, and targeted towards the most vulnerable sections. With the impact of the pandemic waning, fiscal support is likely to reduce further in in fiscal 2023. This will limit the demand-driven push to core inflation this fiscal.

Low food and core inflation have kept CPI lower than the previous spike so far

	Brent crude price (US$/barrel)	WPI - all commodities	CPI - all commodities	CPI food	CPI fuel	CPI core
FY12-FY14	110.8	7.0	9.2	9.8	10.9	8.6
FY22	80.0	12.9	5.5	3.8	11.3	6.0

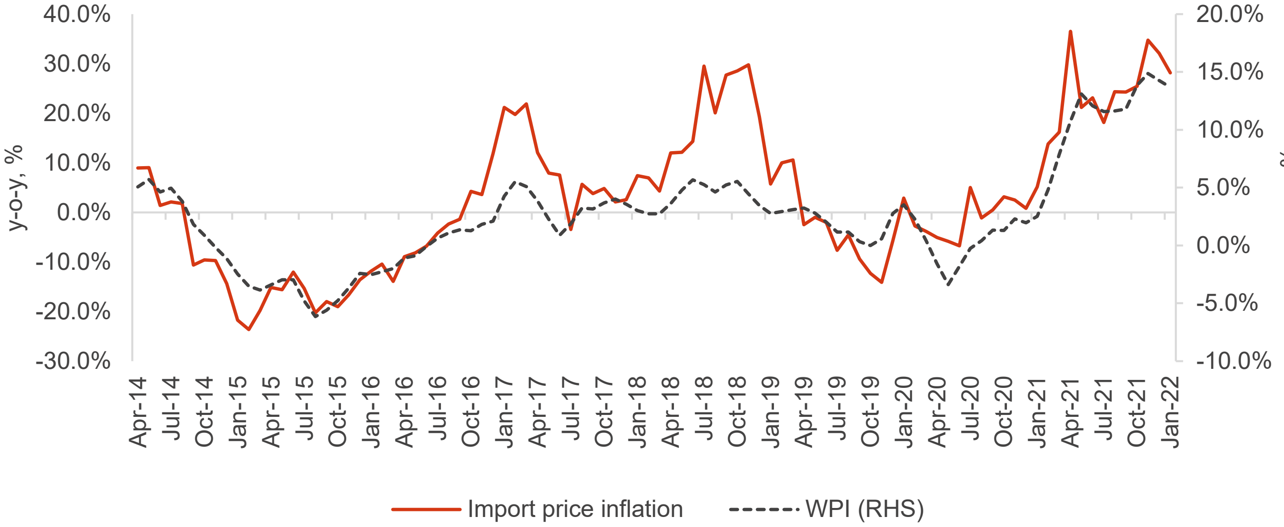
Source: World Bank, Office of Economic Advisor, NSO, CEIC, CRISIL

The role of imported inflation

Measuring the pass-through of import price inflation to wholesale price inflation

Changes in import prices affect the cost of production, and thereby, domestic inflation. Historically, import price inflation (proxied by changes in the import unit value index [UVI]) is highly and contemporaneously correlated with WPI-based inflation *(see figure below)*[2].

Pass-through of import prices to WPI is contemporaneous



Source: DGCIS, Office of Economic Advisor, CRISIL

In fiscal 2022, import price inflation remained in double digits (owing to high international commodity prices and the low base of fiscal 2021) which fed into higher WPI inflation. The contribution of import price inflation to domestic inflation is derived as the weight assigned to imports (the share of imports in non-agriculture, non-public administration and community services GDP) multiplied by import price inflation. For April-January 2022[3], import price inflation rose 26.9% on-year, while WPI inflation rose 12.8%. We estimate the impact of higher import inflation on WPI at around 7.8 percentage points, or 60.9% of WPI inflation, indicating most of the inflation is due to high international prices and the depreciating rupee. Contrast this with the pre-pandemic five-year period of fiscals 2016-20, when import price inflation accounted for, on average, only 28.3% of WPI. International commodity prices were contained for much of this period (barring fiscal 2019), and import prices grew at a modest 1.2%.

Sources of India's import price inflation

The high import price inflation of 26.9% on-year in fiscal 2022 was primarily due to higher crude oil, metals, and edible oil prices, as seen from the export price indices of countries, which account for a major share of India's imports. For the top five countries/regions, accounting for ~60% of India's imports, export price inflation (which is import price inflation faced by the rest of the world, including India) was highest for the Gulf Cooperation Council (consisting of major oil exporters such as Saudi Arabia and the United Arab Emirates) at 33.6% in 2021, largely

[2] Import UVI is measured in domestic prices and thus includes changes in exchange rate and reflects the cost of freight, transportation, etc.
[3] Data on trade indices released by DGCIS is available only till January 2022

due to the rise in crude oil prices. Export price inflation of advanced economies such as the United States and the European Union was higher than that of developing regions such as China and the Asean (Association of South-East Asian Nations).

With commodity prices still on the boil owing to the Russia-Ukraine conflict, import price inflation for India, via its major importing destinations, is unlikely to let up soon. This, combined with the weakness of the rupee, will feed into domestic inflation through the WPI. Given the high costs already weighing on their margins, producers are expected to pass them to retail prices, with the extent of pass-through to CPI expected to be higher this fiscal.

Top five regions, accounting for 60% of India's imports, saw double-digit export price inflation last year

Region	Share in India's imports, %	Major imports	Export price inflation in CY2021, %
Gulf Cooperation Council	17.8	Crude oil, gems and jewellery, chemicals	33.6
China	15.5	Electrical machinery, iron and steel	10.7
Asean	11	Animal or vegetable oils, electrical machinery	10.2
EU	8.5	Machinery and mechanical appliances, gems and jewellery, aircraft	11.7
US	7.0	Petroleum products, machinery and mechanical appliances	13.9
World	100		15.5

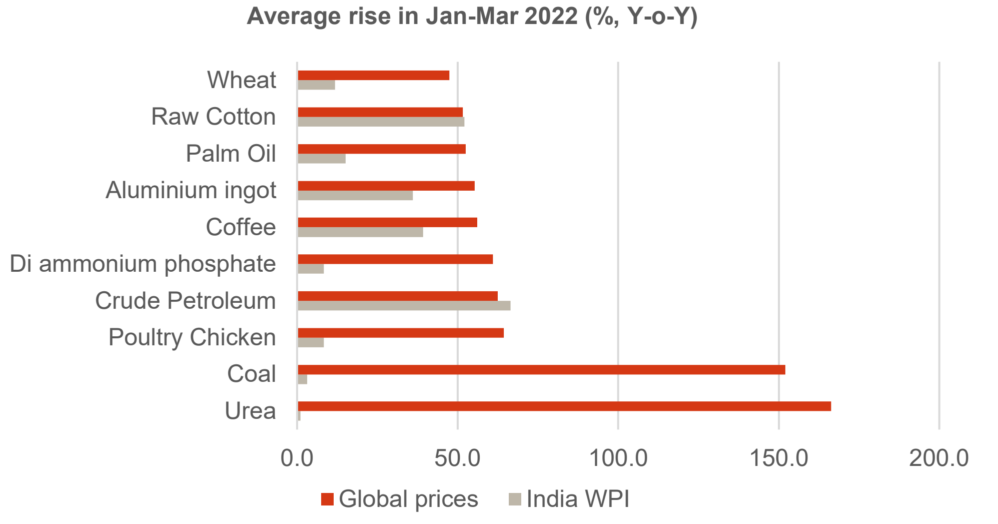
Note: Share in India's imports in fiscal 2022

Source: WTO, Ministry of Trade and Commerce, CEIC, CRISIL

Commodity-wise pressure on WPI inflation

While the international price rise seems to have been fully passed on for a few WPI commodities (such as crude oil and cotton), there is only a partial pass-through in others. For instance, low WPI inflation in DAP and urea (despite a surge in international prices) reflects the subsidised nature of fertilisers. There could be more upside pressure on WPI inflation if global prices continue to remain high or rise.

Domestic prices in many commodities yet to catch up



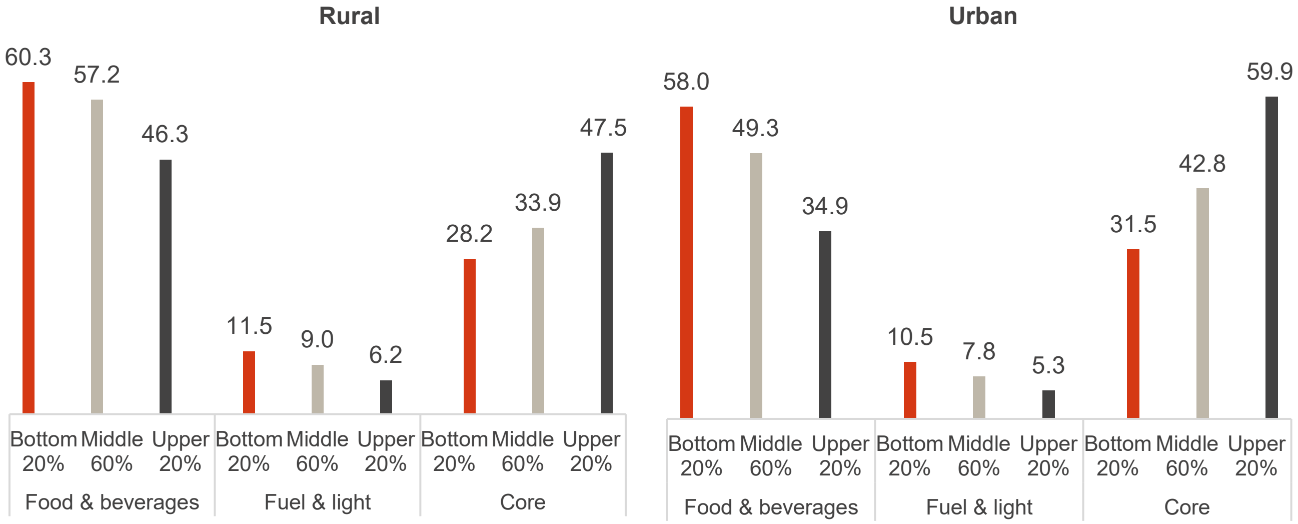
Source: World Bank, CRISIL

Rising food and fuel inflation to affect the poor more

The burden of inflation differs across income segments given the varying composition of their consumption baskets. According to the 2011-12 Consumer Expenditure Survey of the National Sample Survey Organisation (NSSO), food has the major share in expenditure for the bottom 80% of the population. For the upper 20%, core has the largest share. While the share of fuel is lower than that of food and core for all income groups, it is relatively higher for the bottom 20%. In the charts below, we show the average expenditure for each income class on major CPI categories.

This implies inflation burden on the poorer segments depends more on food and fuel inflation. Hence, rising food prices and elevated fuel inflation in fiscal 2023 will pinch the poorer population more.

How consumption baskets (share of major CPI categories) differ across income segments



Source: NSSO, NSO, CRISIL

Mapping these expenditure patterns with current inflation trends reveals that the urban poor have borne the maximum brunt of inflation after the pandemic. This was driven by higher food and fuel inflation in urban areas. However, the rural poor, who were provided relief by low food inflation in the previous fiscal, could face more pressure from rising food prices in this fiscal.

CPI inflation across different income segments (y-o-y; %)

	Rural			Urban		
	Bottom 20%	Middle 60%	Upper 20%	Bottom 20%	Middle 60%	Upper 20%
FY22	5.4	5.4	5.6	5.8	5.6	5.6
FY21	5.9	6.0	5.9	7.0	6.8	6.4
FY16-FY20	4.2	4.2	4.4	4.0	4.1	4.2

Source: NSSO, NSO, CRISIL

How inflation is cramping policy space

The surge in international commodity prices and the ensuing global uncertainty have accentuated growth and inflation risks for the Indian economy. Policy space, both monetary and fiscal, is being tested on multiple fronts:

Rising inflation, external risks brought forward rate-hike cycle

A sharp rise in the inflation outlook for this fiscal, along with the increasing pace of monetary policy tightening by major central banks, has completely eroded the already limited policy space available to the RBI to support growth.

Although the RBI is shifting focus to inflation control, the 40 bps repo rate hike and 50 bps rise in the cash reserve ratio on May 4 were clear signals that rates will move only northwards in the foreseeable future. And, they will do so at a faster pace.

There are four reasons behind the off-cycle tightening announcement:

1. **Inflation is not only rising faster than expected, but also getting broad-based:** All three engines (food, fuel and core) are expected to move up in this fiscal. Although demand has been weak, generalisation of inflation meant the RBI could no longer look through it as a supply-driven phenomenon.

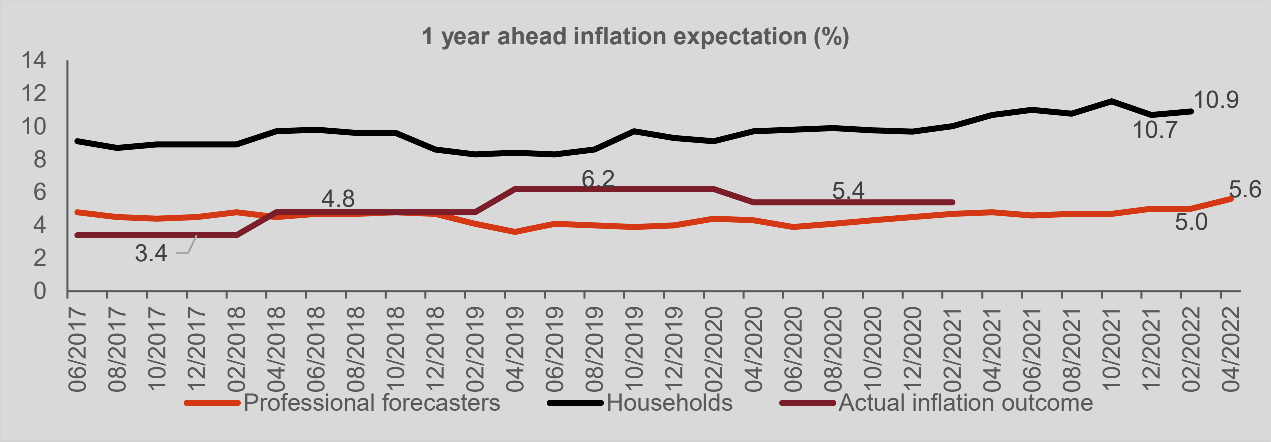
2. **The aggressive rate hike announced by the US Federal Reserve (Fed) and tightening global financial conditions:** India is better placed today than in 2013 to face Fed actions since it has a stronger forex shield and lower current account deficit (CAD), but it is not immune. S&P Global expects seven rate hikes by the US Fed in calendar year 2022, the most post 2008. As a result, the shock is much bigger than that in 2013. India has seen net capital outflows since October 2021. Hence, a part of the reason behind the move was to mute the impact of Fed actions.

3. **The risk of inflation expectations getting unanchored:** Both household (RBI survey) and business inflation expectations (IIM-A survey) have been rising.

4. **Average CPI inflation of 6.3% in January-March 2022, above the RBI target of 2-6%:** The RBI forecasts inflation for April-June at 6.3%. One more quarter over the 6% mark and the central bank will owe the government an explanation.

We expect the RBI to raise repo rates by another 75-100 bps in the rest of this fiscal, which implies rising cost of borrowing across all instruments. This move cannot bring down food or fuel inflation, but can help check its generalisation by curbing the second-round effects.

Inflation expectations in India



- Household inflation expectations have an upside bias, which means they have always been substantially above the actual inflation outcomes. Such a phenomenon is observed not only in India, but in other economies as well (both advanced and emerging). It be partly attributed to the limited ability of households to form an informed opinion
- Inflation expectations of professional forecasters, on the other hand, are closer to the actual inflation outcomes since they are better informed and analytically superior.
- That said, inflation has surprised even professional forecasters on the upside, both in fiscals 2020 and 2021. Actual inflation outcomes for both the current year and one-year-ahead periods turned out to be higher than expected
- As per the latest surveys, inflation expectations of both households and professional forecasters have gone up. In fact, household inflation expectations have been trending up since the beginning of fiscal 2021, when the pandemic had struck, and are now at the highest level (10.9%) in our analysis period
- Inflation expectations of businesses also buttress the rising inflationary pressures in the economy. According to the IIM-Ahmedabad Business Inflation Expectations Survey, one-year-ahead business inflation expectations rose to 6.12% in March from 6.09% in February – the highest-ever reading since the survey started in May 2017. These capture the expectations of businesses on the cost side. As commodity prices spurted after February and are expected to remain high and volatile in the near term, the expected inflation likely rose further. Given that businesses are generally price setters, increased cost pressures they face could potentially feed into actual inflation outcomes
- The sharp rise in the RBI inflation forecast for this fiscal (to 5.7% from 4.5% earlier) in its latest monetary policy meet clearly reflects the broad-based inflationary pressures in the economy

Fiscal policy will need to take steps to tame inflation and address its ill-effects on the vulnerable

Fiscal policy will need to pull its weight to control price rise. The central government has undertaken a few measures and may need to top them up or introduce new ones to curb inflationary forces. However, these fiscal interventions involve a tradeoff for the government: a reduction in taxes and/or increased provisioning for subsidies leads to added fiscal pressure.

- **Food subsidy:** Higher subsidy is required due to increase in MSPs (warranted due to increasing farm input costs). Food subsidy bill has already gone up by Rs 80,000 crore due to extension of the Pradhan Mantri Garib Kalyan Ann Yojana.
- **Fertiliser subsidy**: With rise in international fertiliser and natural gas prices (an important input for fertiliser production) the government would need to upwardly revise its budgeted fertiliser subsidy.
- **Import duty:** High international edible oil prices had prompted a reduction in import duty of various vegetable oils last fiscal. In February, the duration of the duty cuts was extended till October 2022. A further extension may lead to shortfall in import duty collections.
- **Excise duty**: The elephant in the room remains crude prices, the largest import item for India. The central government had reduced excise duties on petrol and diesel in November 2021 when crude oil prices had risen to $81 per barrel. With crude oil forecast to be higher at $94-99 per barrel on average for calendar 2022, fuel inflation is likely to remain elevated- intensifying the need to cut duties further.

Gross tax collections are expected to exceed targets this fiscal. Despite these, it may still not be enough to offset the additional spending needs highlighted above. The tax collection budget estimate of the central government was conservative to begin with. Add to that expectation of higher-than-budgeted nominal growth (the Ministry of Finance had assumed a nominal GDP growth of 11.1% in this fiscal; this is set to be higher owing to high inflation) and buoyancy in Goods and Services Tax collection, and the scope for higher realisation of receipts increases. But the increase in subsidies and shortfall from duty revenue takes out the fiscal space so created. We expect that the net shortfall from these opposing forces (higher overall tax collections versus higher spending requirement) could go up to 0.4% of GDP this fiscal.

In such a scenario, the government has a difficult choice to make: either reduce its capital expenditure (capex) plans or allow another year of high fiscal deficit. The government growth strategy, as outlined in the budget, hinges on the fiscal space for infrastructure development created by reshuffling of revenue expenditure towards capital expenditure and delaying fiscal consolidation to the medium run. The prospect of higher spending to control inflation challenges this plan.

Conclusion

Rising cost pressures in this fiscal arising from global supply-chain disruptions and high international commodity prices will add to the inflationary impulse already visible since the previous fiscal.

While WPI-based inflation soared to double digits, the pass-through to CPI was incomplete owing to uneven demand recovery in the economy.

As the economy opens up further and conditions for consumption of contact-based services improve, core inflation is expected to rise with pressure from the services segment as well. Fuel inflation, too, faces pressure from elevated crude oil prices.

Lastly, risks to food inflation have also risen despite expectation of a normal monsoon this year. Therefore, we expect a broad-based rise in CPI.

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