Asia Economics Flash

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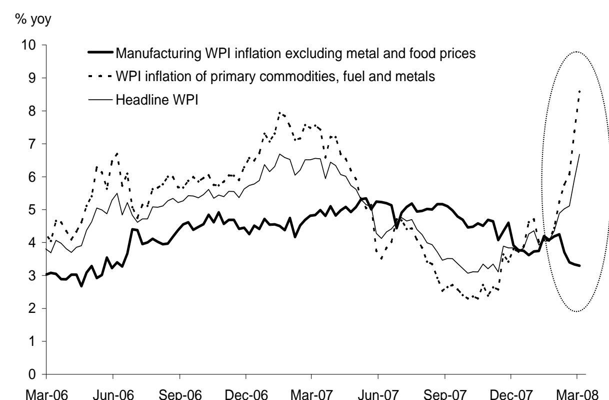
Inflation in India: The war is on

- Inflation accelerated to 6.7% in mid-March from 4.6% in February, in a spurt significantly above ours and the market's expectations.
- Inflation is being primarily fueled by high global commodity prices feeding through to domestic prices. However, inflationary pressures are not solely supply-led, as money growth remains high, and a big wage hike for civil servants is on the anvil.
- Given the negative supply shock from elevated global commodity prices, we do not think that the current surge in inflation is temporary. Notwithstanding some correction in the very short term due to strong policy action, we are increasing our inflation forecast to 6.5% over the next 6 months, coming down gradually to 5% by the end of FY09 due to a falling output gap and further policy action.
- As the current level of inflation is politically unacceptable, policy will need to tighten. Given loose fiscal policy due to spending pressures, the onus will fall on monetary policy. We now expect that the central bank will hike rates in April, instead of leaving them unchanged. We are also taking away our 50-bp cut in the latter half of FY09.
- We expect a 4% appreciation in the INR from current levels over a 12-month period, and our new 3, 6, and 12-month targets for USD/INR are 39.3, 38.8, and 38.3 respectively, from 40, 39.3, and 38.8 previously.

Inflation, as measured by the WPI, accelerated to 6.68% in mid-March, well above ours and the market's expectations as well as the Reserve Bank of India's (RBI) target of 5%. Although we expected inflationary pressures in the near term,[1] we did not expect the extent of the run-up in the last month, and especially the rapid pass-through of elevated global commodity prices to domestic prices.[2] In this article, we attempt to answer 3 main questions.

Exhibit 1: Inflation has unexpectedly accelerated due to rising commodity prices...



Source: CEIC, Goldman Sachs Economics Research.

Goldman Sachs

[1] See *India M3 and inflation: Liquidity loose, inflation up on fuel prices,* Asia Economics Data Flash, January 21.

[2] One explanation for the sudden spike in the metals component of the WPI is that previous increases in metals prices were not adequately captured, and these were factored in at one go.

What are the factors causing the spurt in inflation? What is the outlook for inflation? What might the policy response be?

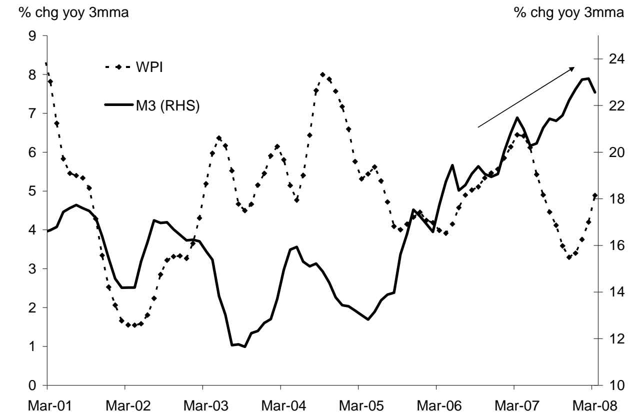
I. What are the factors causing inflation?

The current spike is being caused primarily by higher global commodity prices in agriculture, fuel, and metals feeding through to domestic inflation. Indeed, growth in prices of these 3 components in the WPI is currently running at 8.6%, while all other manufacturing, with a weight of 44% in the WPI is at 3.3% (see Exhibit 1). However, it is incorrect to think that inflationary pressures are solely supply-led. Broad money has been growing at upwards of 20% for the past 15 months, well above the RBI's stated objective of bringing it down to 17%-17.5% (see Exhibit 2). Additionally, India having entered a metal-intensive growth phase driven by infrastructure and construction, demand for metals remains elevated even as raw material costs are rising rapidly. This is contributing to the rally in metals prices.

The pass-through of global commodity prices into local prices has been a dominant factor in the recent spike in inflation. The price of wheat itself has risen over 20% in the last 4 months. In agricultural commodities, the escalating trend of food inflation is due to a combination of global dry conditions, the ever-increasing use of food crops for fuel, rising disposable incomes and demand, and long-term structural reasons associated with under-investing in commodities.

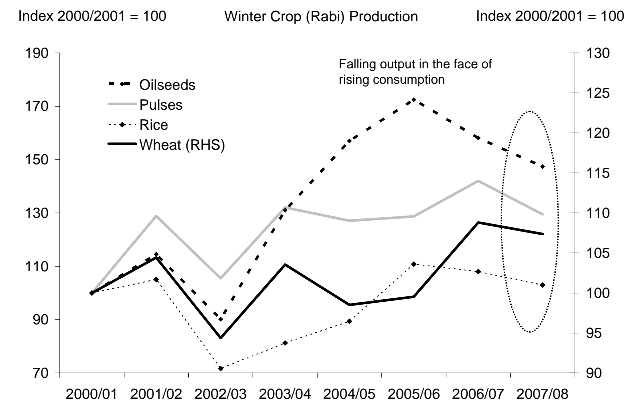
In India, food inflation is a consequence of a decline in the planted area of food grains and oilseeds, due to insufficient winter rains, and structural problems where

Exhibit 2: ...and rapid M3 growth in the last 15 months



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: Food production in India has fallen this year, further increasing prospects of imports



Source: Department of Agriculture and Cooperation, Goldman Sachs Economics Research.

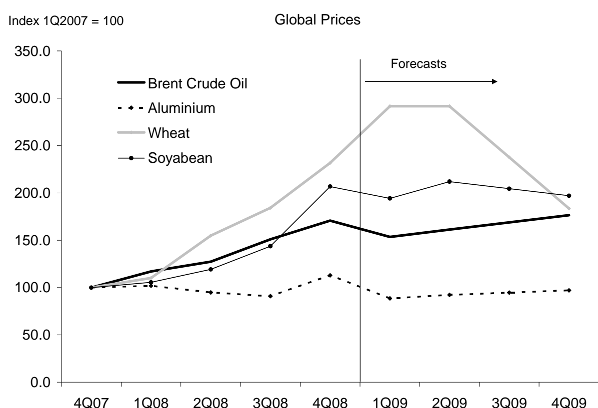
Exhibit 4: India is a price taker of key commodities

	Total commodities[1]					
Rank	Top producers		Top exporters		Top importers	
1	GCC	774,043	GCC	502,330	EU-27 + Switzerland	-518,357
2	United States	603,550	Russia	197,882	United States	-327,392
3	Russia	417,679	Norway	99,228	Japan	-164,136
4	China	318,857	Canada	84,736	Korea	-93,489
5	EU-27 + Switzerland	309,181	Algeria	60,576	China	-53,171
6	Canada	172,803	Nigeria	58,560	Taiwan	-50,521
7	Mexico	128,593	Mexico	49,548	Total Eastern	-31,028
8	Brazil	124,457	Total Caspian	48,338	Turkey	-29,886
9	India	109,228	Venezuela	47,615	India	-28,775
10	Norway	107,181	Libya	41,617	Thailand	-15,060
11	Total Caspian	97,498	Australia	36,381	Pakistan	-7,126
12	Venezuela	90,892	Angola/Cabinda	36,251	Croatia	-5,319
13	Indonesia	85,707	Brazil	29,712	Cuba	-4,074
14	Algeria	82,245	Indonesia	29,065	Morocco	-4,036
15	Nigeria	79,040	Chile	28,101	Bangladesh	-3,424
16	Australia	67,023	Malaysia	17,480	South Africa	-2,898
17	Argentina	57,587	Argentina	15,140	Hong Kong	-2,741
18	Libya	53,660	Colombia	12,866	Singapore	-1,195
19	Malaysia	48,971	Vietnam	12,815	Ghana	-799
20	Egypt	39,577	Ecuador	10,168	Mongolia	-35

[1] Petroleum, natural gas, coal, aluminum, copper, nickel, zinc, lead, cotton, sugar, coffee, cocoa, corn, wheat, soybeans, palm oil, barley, oats, sorghum, rice and meat.

Source: Goldman Sachs Commodities Research.

Exhibit 5: Our Commodities Team expects global commodity prices to stay elevated over the next 12 months



Source: Goldman Sachs Commodities Research.

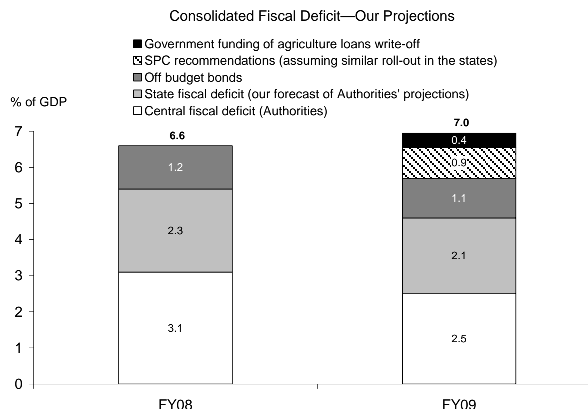
supply capacity is not keeping up with demand growth. The main crops causing inflation are wheat, oilseeds, rice and pulses.

The most recent spurt in inflation has been caused by higher metals prices being passed on to consumers. Hence there were increases of 11% and 15% in the metals sub-index of manufactured goods in the first two weeks of March. High global oil prices, is showing up in naphtha, fuel oil, and aviation turbine fuel (ATF), even though nearly 70% of domestic oil prices, especially gasoline and diesel are administered.

II. What is the outlook for inflation?

We do not think that the current surge in inflation is just a temporary spike. First, commodities are in a structural bull phase according to our Global Commodities Team.[3] India being one of the largest commodity importers will continue to be significantly affected (see Exhibits 4 and 5). In wheat, for instance, world inventories are at their lowest since the 1970s, and we estimate that India will import around 2.5-3 million tons, making it difficult for prices to ease off. Second, a rising fiscal deficit in part due to a large wage hike for civil servants will continue to put upward pressure on prices, as we have been arguing,[4] and keep inflationary expectations elevated (see Exhibit 6). Third, high money supply growth over the preceding 15 months will also increasingly spill over into prices.

Exhibit 6: A rising fiscal deficit will stoke inflationary pressures



Note: If the states implement similar increases, the consolidated wage and pension bill could increase by roughly 1.8% of GDP. Our base case assumes a one-half split of the bill between FY09 and FY10.

Source: RBI, IMF, CEIC, Goldman Sachs Economics Research.

Exhibit 7: Government policies to curb inflationary pressures have started coming on the table

Government steps to control agricultural prices
March 31, 2008
Imports duty on all crude edible oils to zero
Imports duty on refined palm oil cut to 7.5%
Pulses exports ban extended by one more year
Ban on non-basmati rice
Imports duty on maize cut to zero from 15%
March 27, 2008
Withdrawal of export's duty exemption scheme benefits available on nearly 50 items including steel and non-basmati rice, certain mineral ores, cement, etc
March 20, 2008
Slash duties on some edible oils
Ban exports of edible oils
Cut duties on milled and non-milled rice
From last year
Ban of wheat trade in the commodity exchange
Ban on wheat exports
Rise in the Minimum Support Price of wheat from Rs750 per quintal to Rs1000 per quintal
Whittling down the customs duty on import of pulses to zero till March 31,

Source: Reuters, Goldman Sachs Economics Research.

Given that the origins of the current inflationary spike lie in a negative supply shock, we believe it will be more difficult to wring it out of the system than if it was purely due to demand pressures. Strong policy action in the near term may temporarily reduce prices as the current level of inflation is politically unacceptable. The measures being taken by the government (see Exhibit 7), and base effects may temporarily reduce inflation in the near term, but over a 6-month period, we expect inflation to remain high as commodity prices are expected to remain elevated. Over a 12-month period, we expect some moderation due to a falling output gap and policy

[3] See *Commodities: The Revenge of the Old 'Political' Economy,* March 14.

[4] See *India: Fiscal policy—It's all downhill from here*, Asia Economics Flash, February 21.

action (see Exhibit 8). Our new forecasts for inflation are 6.5% over the next 6 months, slowing to 5% by the end of FY09 (see Exhibit 9), with prices remaining volatile in the near term reflecting the movement in global prices and government action.[5] This will make inflation significantly higher than the average 4.4% in FY08.

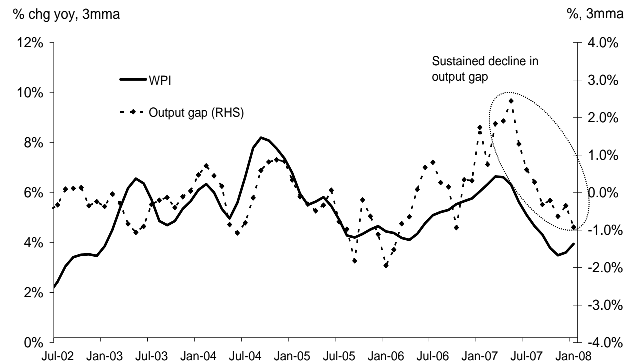
III. What can the policy response be?

With inflation currently running above what is politically acceptable, the policy response can be expected to be quite strong. A number of measures have already been put into place by the government, including duty cuts and export taxes to encourage imports and discourage exports, and these may be expected to continue. However, these are one-time measures for an enduring problem of high commodity prices. In the near term, the government may be able to bring inflation down, but given the nature of the increase in prices, there is no alternative but to create additional supply.

We think that the RBI will tighten monetary policy in response to the high inflation and lax fiscal policy. At a time of rising inflation, the government has been given the recommendation to hike public sector wages by 20%-40%. A big pay hike for 5.4 million civil servants does not fulfill distributional concerns and will exacerbate inflationary pressures. With fiscal policy remaining loose, the onus will fall on the central bank, and we now expect that instead of rate cuts to boost supply in the latter half of FY09, it will have no option but to raise rates, either through the cash reserve ratio or repo rate. We now expect that the central bank will increase the repo rate by 50 bp in FY09 due to inflationary pressures. Monetary tightening, however, would be an inferior response to a largely supply-side phenomenon. We believe it will hinder exactly the sort of capacity creation and increase in supply which is warranted to reduce inflation.

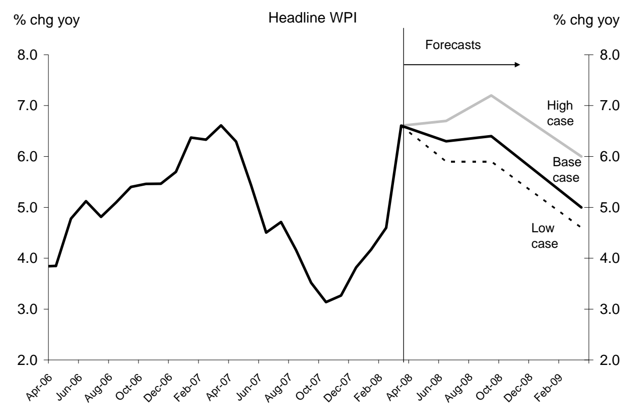
We also expect the central bank to encourage more rupee (INR) appreciation, which will be aided by higher interest rates. However, India's increasing current account deficit and a slowdown in the pace of inflows suggests that further INR appreciation will be modest. Our 3, 6, and 12-month targets for USD/INR are now 39.3, 38.8, and 38.3 respectively. Our GDP growth projection of 7.8% for FY09 is unchanged as monetary tightening compensates for fiscal stimulus.

Exhibit 8: A falling output gap is likely to take some pressure off inflation



Note: Output Gap = (Actual Output - Potential Output)/Potential Output.
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 9: We expect inflation to remain elevated in the medium term before easing gradually



Source: CEIC, Goldman Sachs Economics Research.

Eventually, the policy response to high inflation must be to create more capacity by reforming the agricultural sector and opening it to investment, rather than continued clamping down on prices. These administrative actions distort incentives and are leading to the lack of supply response which is creating the problem in the first place. In inflationary times, what can surely be avoided are large wage handouts. The appropriate policy response in our view, would be to not accept the recommendation of the Pay Commission in its entirety. It doesn't make much sense to fill up the punch bowl after the party has ended.

[5] For details on our forecast methodology please refer to the appendix.

Appendix

WPI forecasts: Our methodology

Our WPI projections are broadly based on our augmented Philip's Curve inflation model[6] which gives the following sensitivities:

A 1% fall in the output gap reduces core inflation by 0.9 percentage point (ppt)
A 1% rise in M3 increases core inflation by 0.1 ppt
A 1% INR appreciation reduces inflation by 0.15 ppt
A 1% rise in administered fuel prices increases inflation by 0.1 ppt

In order to estimate the impact of primary commodity prices and non-administered fuel prices on inflation, which are not captured in our inflation model, we projected them separately as discussed below.

We broke down our WPI Headline Index into primary, fuel and manufactured products focusing especially on those components which are influenced by commodity prices.

We forecasted the monthly index for each of the categories for the next 12 months, and arrived at our headline WPI Index by weighting the different categories according to the WPI weights.

1. For **primary commodities** we tried to estimate where prices would go in the next 12 months and run simple regressions for their pass-through into the WPI index. For price forecasts, we used the following:

- For commodities which are significantly imported, we followed our Global Commodities Team's price forecasts.
- For commodities which are mostly produced and consumed domestically, we compared domestic availability relative to demand across years and its impact on prices. We then seasonally adjusted our forecasts.
- For commodities such as wheat which are partially imported, we used both the global prices as well as domestic demand-supply gap.

2. For **fuel**, we estimated the pass-through of global prices into the fuel index accounting for the fact that only 30% of fuel prices are not administered and taking out periods in which administered prices had been changed by policy. We used our Global Commodities Team's oil price forecasts.

3. For **manufactured products**, we broke down our analysis into three parts:

- Manufactured food—we estimated the pass-through of primary commodity prices to manufactured food by means of a simple regression.
- Metals—we used our Global Commodities Team's price forecasts and estimated pass-through into the Metals WPI.
- Other manufactured products—we used our inflation model estimate that for every 1% fall in the output gap, inflation falls by 0.9 ppt. We used our FY09 projection of 7.8% yoy GDP growth to calculate the output gap. The forecasts were seasonally adjusted.

For our high-case scenario, we assumed no fall in the output gap and a larger increase in global oil and primary commodity prices. For our low-case scenario, we assumed a larger fall in the output gap and a lower increase in global prices.

[6] See *India: Fuel, fiscal and foreign inflows—can they make inflation bite?* Asia Economics Flash, December 17, 2007.

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