

UBS Investment Research

Emerging Economic Focus

India's Hard Choices (Transcript)

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*Misfortunes one can endure – they come from outside; they are accidents.
But to suffer for one's own faults – ah, there is the sting of life.*

— Oscar Wilde

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OK for now ... but then?

The common received wisdom in the market today is that India is one of very few EM countries facing an immediate and urgent inflation problem. At a time when consumer price inflation rates in the emerging world have been falling sharply for the past 12 months and are only now beginning to trough, India is the only major economy where official headline CPI inflation has not only been accelerating steadily through the year, but is also much higher than in the previous boom period. From an average rate of 6.4% in 2007 and 8.3% in 2008, official consumer inflation for industrial workers reached nearly 12% y/y over the past three months (and the alternative measures for agricultural and rural laborers are higher still).

These figures put both short-term interest rates and long-term bond yields in sharply negative territory and in turn suggest that the RBI is far more “behind the curve” than any of its global counterparts, heightening the apparent risk of aggressive policy hikes just around the corner – and perhaps a sudden and painful shake-out in the bond market

But is it really true? In order to make sense of the issue we invited South Asian economist **Philip Wyatt** and emerging FX/fixed income strategy head **Bhanu Baweja** to give their views in our weekly EM conference call; we also brought on India equity research head **Suresh Mahadevan** to give an overview of equity markets going forward.

The key finding is that India's inflation problem is almost certainly overstated today – and as a result we still have a receiving bias on local rates, although we are long the INR – but there are still significant uncertainties about the behavior of food prices and underlying core inflation on a structural basis over the medium-term horizon. And this implies that inflation is likely to remain one of these biggest sources of market volatility going forward.

A word of background

Before we turn to the transcript of the call itself, we need to provide a few words of background on Philip’s recent research on the quality of inflation data in India (*The Inflation Enigma Explained, Asian Economic Perspectives, 26 November 2009*).

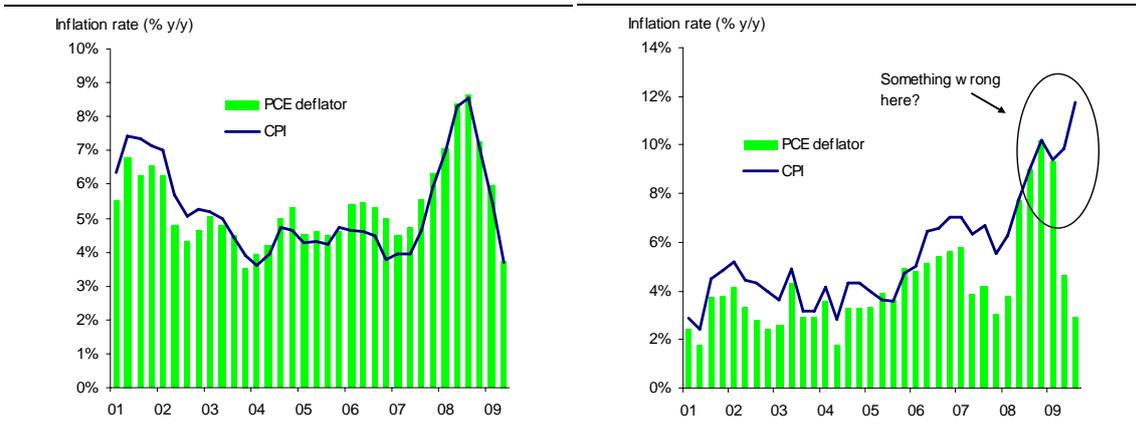
Here’s the idea. In any economy, there are at least two ways to measure consumer price inflation pressures: (i) a direct CPI index, and (ii) the implicit personal consumption expenditure (or PCE) deflator in the national accounts. In advanced countries both are used extensively, and some policymakers strongly prefer the latter indicator to headline CPI.

For emerging markets as a whole, the two indices generally tell you exactly the same thing; Chart 1 below shows average CPI inflation and average PCE deflator inflation for a basket of 25 major EM countries, and you can see the one-to-one mapping from one to the other.

But then turn to Chart 2 showing the behavior of the two indices in India. Once again, headline CPI inflation has accelerated rapidly in recent quarters ... while according to the PCE deflator, the consumer inflation rate is *dropping* sharply, from 10% y/y at the end of 2008 to only 2.9% as of September.

Chart 1: This is most EM countries ...

Chart 2: ... and this is India



Source: Haver, CEIC, UBS estimates

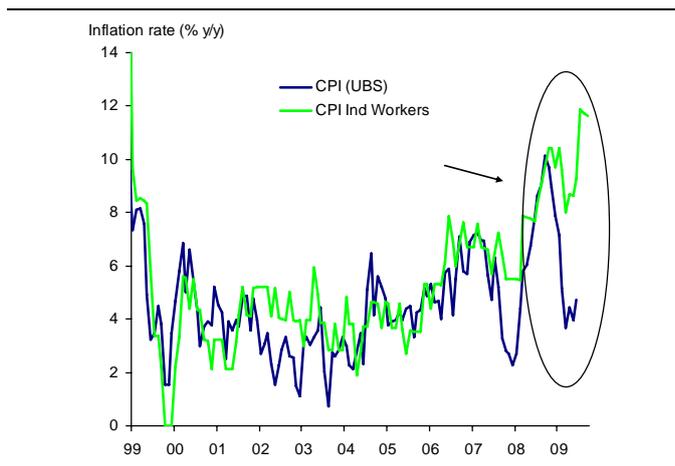
Source: Haver, CEIC, UBS estimates

A new UBS CPI index

Clearly one of these measures is out of whack – but which one? According to Philip, the headline CPI index is the less believable of the two, for the simple reason that services prices are both mismeasured and under-represented in the basket, and thus that the headline index is overly sensitive to recent food price spikes.

When he calculates an adjusted “UBS CPI index” using the official data for food and manufactures but a proxy series for services prices (using the services deflator from the production-side national accounts, and revised weights), lo and behold, he ends up with a path almost exactly in line with the PCE deflator series, i.e., with low and falling inflation in India (Chart 3).

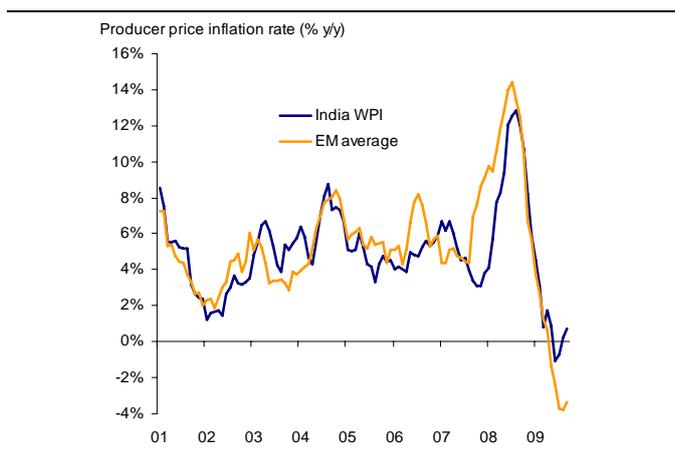
Chart 3: The new UBS CPI index



Source: CEIC, UBS estimates

Does this make sense? In at least two important ways, it does. First of all, looking back at Chart 1 it jibes well with the behavior of both CPI and PCE deflators in nearly every country in the broader emerging world. And second, it matches up much better with India’s upstream wholesale price index – which in turn is virtually identical to producer price indices across emerging markets (Chart 4).

Chart 4: Producer price inflation



Source: Haver, CEIC, UBS estimates

The bottom line is that on a balance-of-risk basis, we should probably be thinking about inflation as less of an immediate pressing concern, and thus perhaps a more accommodative central bank stance going into 2010.

And then?

But this still leaves open the question of structural inflation pressures ... which in turn brings us to the topic of the recent EM conference call. The following is the full transcript of the call:

Part 1 – The economic view

The growth backdrop

Philip: To begin with, a quick word on the overall economy. We believe that the external shock of the global recession has delivered a temporary one to one-and-a-half year slump in Indian economic activity. Indian real GDP growth lowed from just over 9% to close to 6% (we pencilled in 6% in our forecasts, but with the latest

September reading of 7.9% growth the final number could be closer to 6.5%). However, for 2010 we see a much stronger recovery in construction and investment delivering an overall growth number closer to, say, 8.7% to 9%. This also means a pick-up in credit demand. As I'm sure Bhanu will discuss below, the uptick in the demand for credit should continue to put upward pressure on the yield curve, whereas today credit demand is relatively low.

Official inflation overstated

And this leads us to a conversation on inflation. When we talk about India inflation we should consider two basic factors. One is the demand side, and the other is supply. If you look at headline CPI today, the official measure is up by 11% to 12% y/y; meanwhile the WPI rate, which is what most market participants watch, was down to 1% or 2% y/y at the trough and has only recently moved up to the 4-5% range. During this call I'm going to explain (i) what I think is going on, and (ii) what the possible policy implications should be.

First of all, it's important to clarify what the official CPI data are telling us. And in the case of India I think there's a clear case of mis-specification of the index. The basic problem is that the services component is significantly under-represented, rather old and inaccurately measured. So while the government conducts its own surveys to improve it, what I've done is to amend the official index using the services component from the GDP deflator data to produce our own revised CPI index. And generally speaking this version follows the official rate of inflation, but there's a much stronger cyclical element to it.

What our own CPI index is telling us today is that inflation is not really close to 11% or 12% y/y – in fact, it's closer to 4% or thereabouts today, having been as high as 7% to 8% percent just over a year ago. This still gives India an “inflation premium”, if you like, relative to most Asian economies, but it's certainly nothing close to double-digit levels.

But inflation likely to re-kindle soon

What I believe has happened since the Lehman bankruptcy is this: the pull-out of foreign capital in India resulted in a swing towards risk aversion and a slump in economic activity. The reaction of the central bank was to cut rates deeply, more than they would have done otherwise, and to inject funds into the system in order to maintain a fairly constant high rate of money growth at around about 18% to 20% y/y. So credit growth slumped, economic activity also slumped, and with that our measure of inflation also sank, albeit not to zero.

Looking ahead, because balance sheets in India are still in relatively good shape and demand for credit can recover – unlike, say, the demand for credit in the West, which is much more heavily impaired by over-indebtedness. When Indian credit demand recovers we'll then see a move back up in inflation, possibly close to where it was last year, and I think the range we should be looking at is around 6% to 7% y/y. And for policy rates to stay close to zero or above in real terms, they would need to rise by at least 100 basis points and possibly as much as 150 basis points from current levels.

At a more basic level, the injection of liquidity by the central bank has in effect “locked in” yesterday's demand-driven inflation, and so when the risk of credit aversion diminishes – or, to use economic jargon, when velocity recovers – we should see a spring back in inflation. And we believe this is just starting to happen.

Agricultural policy and food prices

But it's not as simple as that. That's the demand side to the story, but there is also the issue of supply, and here I think the key thing to look at is something we refer to as the terms of trade. Terms of trade is a ratio, and in this case I've computed a ratio of agricultural prices to non-agricultural prices; if we do that we can observe a very clear reduction in the ratio starting from 1998-99 all the way through to 2004-05. One of the policies of the previous and current governments has been to try and rectify that drop and make it more profitable to be a farmer again by raising procurement prices for grains and cereals. In so doing, we believe the government is helping to build relatively high grain stocks for a rainy day.

This is all very well, but what it means is that the terms of trade ratio I just mentioned has been rising for the last few years, since 2005-06. And this has placed upward pressure on local food prices, exacerbated significantly by the drought of this year, and has placed upward pressure on headline inflation. So these two effects have combined to produce an average rate of CPI inflation in this country which is higher than it would have been otherwise.

Supply is coming – but not tomorrow

What can we say about the details on the supply side? Well, one thing we're starting to see is a rise in investment in agriculture. It certainly is slow relative to the rest of the economy, but to give you some numbers, if you look at real agricultural capex it has started to rise quite smartly from low single-digit growth in the first half of the decade to double-digit growth in the last three years. The average rate since 2000 has been 6.1% y/y. While it's true that the supply side impulse via grain product has not yet started to kick in fully, we believe that this government will continue to maintain an upward trend in the ratio of agricultural to non-agricultural prices in order to continue to give farmers an incentive to generate a more sizeable response, in the form of a bigger boost to agricultural activity.

Until this happens, unfortunately, we are left with an inflation rate in this country which is likely biased upwards by as much as 1% to 2% per annum by higher food prices. And keep in mind that agriculture is not the only issue; there's also the question of oil prices, which currently are relatively inflexible. If global oil prices move up in 2010, India will be put in a position where it has to adjust domestic fuel prices upwards.

I.e., this could be another factor in pushing up headline inflation rates, and these combined could in turn have the effect of inducing the central bank to hike rates more than it otherwise would. As things stand today, even though the level of demand in the economy is still less than strained, we do think that these potential supply-side factors are strong enough to induce the central bank to hike rates, possibly as early as this coming January at their meeting.

Will the RBI hike rates?

So as a result, we should probably think about the policy reaction as being biased towards a hike in policy rates, and a continuation in a series of upward steps through 2010 and into 2011.

However, there are also limits to how aggressive the central bank can be in hiking interest rates. The three main obstacles to hiking too quickly are (i) it might limit the re-expansion of credit and therefore growth, (ii) it may prompt a quicker appreciation of the currency, and (iii) it may increase the cost of fiscal funding. In our view these three factors won't stop the central bank from initiating a rate hike – but they can certainly govern the speed of rate hikes next year.

Summing up

To summarize, as I said, the inflation rate in India is currently skewed by supply-side factors, and specifically food prices. But tomorrow (meaning 2010) the recovery in demand and in credit growth will probably lift headline CPI further by around about two percentage points. And crucially, remember that this increase is against the base of our own CPI inflation measure, which is much lower than the officially-reported CPI figures; in other words, we expect the rate of inflation to increase from 4.5% y/y today to close to 6.5% next year. And this, in turn, will be a major factor behind the catch-up in policy rates from the current low levels.

Part 2 – The strategy view

Our favored trades

Bhanu: Let me start by outlining our favored trades, and then move on to what I think of the inflation situation in India: where I agree with Philip and also, importantly, where I would disagree with his conclusions.

So, in the rates space we are receiving in the one year; we put out a note this morning highlighting a receiving position in the one-year OIS from 5.03, and our target on that trade is 4.70 to 4.60. What I want to stress here is that this is a completely tactical trade; we've been worrying about rates going up in India, and they have gone up tremendously and very quickly. Since the end of November we've seen rates go up by 50 basis points, and through the course of the year rates in India have increased by more than anywhere else in Asia.

For instance, in the one-year they have increased by about 150 basis points from their lows, compared with Korea where it's only been about 100 basis points (and Korea is the one other place in Asia where rates have gone up quite a lot). So Indian rates have already moved; ahead of the policy meeting in January that Phil mentioned we are tactically received, and again we just put out a note on this today. As I will mention in a moment, we are more worried about inflation in 2010 and would want to be structural payers of rates in India if this economy is going to bounce back. But at this point, as I said, tactically we receive; that's on fixed income side.

Why long the rupee?

In the FX side we are long the INR – except that we're not playing it on the dollar axis. Looking at some of the work that UBS global economist Andy Cates has done on productivity, we would expect India's real effective exchange rate to appreciate based on productivity differentials, and we do think a fair amount of that is going to come from the nominal effective exchange rates.

But we don't want to look for USDINR downside in a big way from here, because we do not want to take a lot of euro-dollar risk, especially with what's going on in Greece, which we are quite concerned about. Rather, we prefer to be short the European axis and be long India. So, for example, we are short sterling against INR; we've had this trade on for a while and we see this is a structural trade. We got in at around 78 and we do think that this can go towards 70 and below.

Inflation won't spoil the nominal appreciation story (for now)

Let me just add one quick point on the FX trade: There is, of course, the risk that the real effective exchange rate appreciation comes completely from inflation, i.e., that currency appreciation is just not realized in nominal terms. In the months ahead we anticipate a situation where although inflation stays reasonably elevated, it happens in the context of continued capital inflows into India. And as we see it, the Reserve Bank of India is probably going to be the first central bank in Asia that really stares the end-game of FX reserve accumulation in the face; in other words, it will really hit up against the "unholy trinity" of trying to manage interest rates, exchange rates and inflation all at the same time.

In this environment, we do think that the RBI will let the rupee appreciate, especially given what's happening with food price inflation. So once again we're looking for nominal appreciation and playing this theme through sterling.

But more concerned about structural food prices

Turning to the medium term we defer to Phil completely on the macroeconomic calls, as he's a very keen watcher of the Indian economy. But let me just present a tuppence-worth of what our medium-term concerns are, and I have to say that I am a good bit more concerned on inflation than Phil has suggested earlier. This is because although I agree that this is a supply-side phenomenon at present, in my view this is not a shock – i.e., just a failure of the grain crop this year – but rather a structural problem. And more importantly, we are reaching levels where this supply-side problem could translate into a demand side as well.

Why do I say that this is a secular problem? Well, again, Phil referred to an increase in agricultural investment, but the way we see it that increase has been really marginal, and in our view we would have to see this go up a long way before it has an appreciable impact. Let me give you a few numbers. Since the 1960's India investment/GDP ratio has gone up from 15% to 35%; a large part of this has come since 1990, and since then

the RBI has presided over a significant increase in the savings and investment ratios. Indeed, this has been one of RBI's outstanding achievements.

But at the same time the agricultural investment/GDP ratio has fallen from 15% (again using 1960 as a base) to 5% percent just before the current crisis. Of course this reflects in part the decline in the overall share of agriculture in the economy, but that said even crop yields in India have declined and are presently much lower than the average for developing economies, and certainly much lower than the average for the developed world. The only two crops in which yields are even remotely comparable to global averages are sugar cane and wheat; for other major crops, according to the Food and Agriculture Organization, crop yields in India are anywhere from 25% to 70% lower than global averages.

Moreover, the amount of irrigated arable land in India is about 41% of the total. Again, what this tells you is that there is not much room for shocks out there. So we have low crop yields, low irrigated area and a consistent rise in the subsidy/GDP ratio; overall subsidies are around 14% of GDP, and a large part of these go to agriculture.

So we do worry about investment in agriculture being too low; we worry about crop yields being too low, and we do think that as agriculture incomes rise – for instance, because of the special rural employment guarantee act – in the foreseeable future you will see a much greater elasticity of food demand compared to supply, and thus prices will go up as rural incomes go up. So as the government builds more roads and more schools in rural areas, this is likely to push food inflation higher.

Budget policy also inflationary

Another concern is the fiscal side, since over the past few years we've seen that there's very limited room on the expenditure side for things to improve, i.e., we are completely dependent on the revenue side if we want to see the fiscal deficit come lower.

On the expenditure side of the budget there are three major items that make up the bulk of spending: interest payments, subsidies, and wages. None of these have come significantly lower any time in the last 20 years, and we don't believe the government is very keen on pushing them lower going forward either. And on the wage front, this is how a supply-side problem could eventually translate into a demand-side problem. Under the eleventh five-year plan we saw a pretty big increase in government salaries, and a lot of this has been because of food price inflation. So if food price inflation remains high we would expect to see higher wages as well; we're already seeing that now, and I believe this will continue to have an impact on the next 24 to 36 months. And this naturally passes through into manufactured goods inflation and services inflation due to higher public sector wages.

Now, mind you, private credit growth in India has hardly picked up, but M3 growth in India is still reasonably high at about 17.5% to 18% y/y, and clearly that's because of government borrowing being quite high. For next year's budget we do think that the government will try to calm market nerves by coming up with a smaller government borrowing program, but unless the government can increase the direct tax/GDP ratio in a big way – and so far what we've seen really hasn't satisfied us that that is the case – we are left to depend entirely on a booming economy to try and rein in the fiscal problem. But again, that booming economy will also mean that credit growth becomes that much higher, and excess liquidity in the system (which is very high at this point) starts to disappear.

What about capital flows?

One final point on the inflation issue is that as long as global interest rates remain fairly low, we would expect strong capital flows coming into India, due both to high nominal interest rates as well as high growth rates. So far we haven't seen a big increase in the monetary base, but we have to be very careful in looking at the

behavior of net foreign assets and net domestic assets, and how the RBI is going to limit the amount of commercial borrowing.

Summing up

So again, the bottom line is that while we are receiving rates at this point we are very concerned about inflation and will likely be structural bears through 2010. We are long the INR as well, but are also cognisant that a lot of the real effective exchange of appreciation could come through inflation, and will be keeping a close eye on this trend. And in our view there's absolutely no room for further external shocks here. The economic history of India has been littered with famine; so far the rabi crop is doing all right, but in the coming months if we see another crop failure we don't believe we have enough food stocks to keep inflation low.

Part 3 – The equity view

Very bullish on the structural side

Suresh: I want to take maybe two or three minutes to outline how we are thinking about Indian equity strategy. We started taking a very bullish view in October 2008, around 14 months ago, because at that time we felt markets were way too cheap; with Indian equities trading below 10 times earnings and continued strong growth potential, we felt it was time to be very bullish.

Philip's work on our leading economic indicator pointed to a significant recovery, and the economy did avoid a recession and maintained impressive growth. Another dramatic factor was the stable government – and for me this is a big “game-changer”, particularly because India has a tremendous demographic advantage right now. Dependency ratios are falling rapidly, we have more than 80 million people joining the workforce in the next 15 to 20 years, and if they can find useful employment then the country, the economy and corporate profits should prosper. This is why I think that a stable government is such a big issue; if we were to have this call three or four years down the line, I think there is a good chance that we could look back at 2009 as a key inflection point for the country.

So in terms of the structural view we are very positive on India. Philip also believes that the economy can maintain 8% growth or above for the next decade or two; this is partly due to attractive demographics, but also due to better government policies.

And still overweight on the tactical front

What about the tactical trade? Well, clearly it was easier to make a high-conviction call on India when the market index was trading at 8,000 than now with the index at 17,000. But having said that, I continue to remain positively biased on the market for a few reasons. First of all, data point on economic growth and corporate earnings continue to show positive momentum in the global pick-up, and this should remain a positive factor going forward.

Second, I believe that this government is likely to deliver on reforms. And given that are out another four years or more, 2010 and 2011 become important years to push something through. I am generally optimistic about the way things are so far; we have seen some of the best-in-class corporate people getting involved, and if that is the shape of things to come we'll be happy with this government. India has always had a lot of potential, but over the past 20 years we have fallen way behind China even though we started in roughly the same place. The next five years of stable government could give the economy an opportunity to realize its potential. Although it's also worth noting that this makes the government the biggest risk factor going forward as well.

Sectoral calls

In terms of sectors, I'd like to highlight three or four key areas. We are very positive on the auto sector in view of (i) the strong structural fundamentals, (ii) the good recent data points and our expectation for continued

momentum, and (iii) the high quality of the companies that are there. India can also become a large export hub in our view, as we have significant advantages with respect to cost; as the world shifts towards smaller cars in order to control emissions, this is where India's core competency is.

Two other sectors we are very bullish on are cement and telecoms. We like cement because we like infrastructure as a theme; however, while infrastructure stocks are trading at very expensive levels, 23 or 24 times earnings, cement stocks can still be picked up at or slightly below replacement value. On the telecoms side there has been a lot of selling in view of the price war going on, but we believe the worst is already in the price.

One controversial call I want to highlight is IT services, where we are relatively cautious. I think the whole world loves IT services, but recessions historically have been "reset" points for this sector, and while we have no doubts that growth will pick up again, in our view the pace will be less than what most investors are expecting. So on IT services we have a moderate underweight position on.

In terms of short-term targets, over the next year we believe that the Sensex can go to 20,000 from around 17,000 now. We expect around 9% earnings growth in 2010, followed by growth rates of 20% in 2011-12.

Part 4 – More on agricultural prices

Jonathan: Normally at this point I turn immediately to listeners for questions and answers, but first I would like to ask Philip if he wants to respond to some of the macroeconomic and food issues that Bhanu raised.

Don't count out supply

Philip: I'd like to emphasize that a big part of the discussion that Bhanu provided on the supply-side response is correct in its starting point; yes, the agricultural sector is underinvested, but it's been underinvested for many years. And the overwhelming evidence from China in the 1980s and many other emerging markets is that you need pricing power as a main incentive to induce companies and capital to invest. It's precisely this change in pricing power that we're now seeing in the agricultural sector that leads me to expect that India can move meaningfully more investment into this corner of the economy.

Also, keep in mind that there have been periods in the past in India where inflation has been low; it was only a few years ago that food inflation was between zero and 4%, averaging around 2% to 3%. It's only been since 2005, if you use the WPI measure of food inflation, that we see an acceleration away from medium single-digit growth up towards double-digit growth, to today where it's closer to 16% or 18% y/y. A large part of this year's jump is drought, but the bigger trend is a longer-term change in the terms of trade. And in my view this is a positive trend rather than a negative, if it induces a continued pick-up in real agricultural investment.

An Indonesian example

In passing I would just like to make one final point on policy responses. Indonesia provides us with an interesting example of how a supply-side shock can induce a policy response, where the authorities give up some short-term economic growth in exchange for lower longer-term inflation. In 2005 the Indonesian government decontrolled oil prices and domestic fuel prices, and as a result CPI inflation went up by about 10 percentage points. They hiked the policy rate a number of times, but real interest rates still went deeply negative; domestic demand also sank in the near term.

After a year or so, however, the authorities were able to cut rates and inflation came back down to a level that was actually lower than when they started, at around 6% or 6.5% compared to 8.5% to 9% in the period leading up to oil price decontrol. This is an example of relative price change in the economy, where oil prices have nothing to do with monetary policy and yet the authorities were put in a position where they had to respond.

The bottom line

The bottom line here is that if Bhanu is right in his assessment that inflation in India is going to be much more heavily driven by agricultural supply shortages, then we would want to prepare for a delayed economic recovery and a much steeper rise in policy rates of perhaps 200 to 300 basis points; equity investors would likely then need to step away and stand clear, waiting until inflation stabilizes a year from now. I don't believe that this is what investors are facing in India, but we would still be well-advised to study previous examples of these kinds of shocks. And I go into this in some depth in the Perspectives report.

Part 5 – Questions and answers

An Indian “Taylor rule”?

Question: I have two questions. The first is on the “Taylor rule”; Philip, I was wondering if you had done any work on deriving a Taylor rule and comparing how well your alternative measure of CPI works. I saw in your report that you had one indicator for doing comparisons, but if you have something that can measure the stance of monetary policy a little more formally that would be interesting.

Philip: That's an interesting question on the Taylor rule. The answer is that I have not done any formal analysis, but to compute it one would need to have a fairly clear view of trend rate of growth, since one of the components is the deviation from trend growth, and also of the real interest rate: does one use the policy rate or the highly constrained 10-year bond yield? These are not insurmountable issues, but I would be inclined to think that at the moment the level of nominal policy rates is sufficiently low compared to inflation, with sufficient slack in the economy, for there to be a large scope for rapid “catch-up”, if you like, back to trend-adjusted real growth.

But the response of the authorities is going to depend potentially on other non-demand factors, and that's basically what we've been discussing here with the supply-side part of the economy. And the Taylor rule is not ideal for looking at these relatively unorthodox monetary policy responses. So I'm sorry to give you a partial answer, but I'm inclined to believe there is quite some scope for rate hikes, up to 200 basis points – however, at the same time I believe that politically the authorities will only have the stomach to move by, say, 100 or so in the next 12 months.

Inflation and the real exchange rate

Question: And the second question is real exchange rate appreciation. I have complete sympathy for the view that exchange rate appreciation could come through inflation, and I was wondering if you have estimates for trend inflation in India's main trading partners and where you see the biggest gaps.

Bhanu: On the real effective exchange rate, if you just look at CPI differentials and nominal effective exchange rates, and pick out an arbitrary base year (say, 2000 or 2001), you wouldn't find the rupee massively undervalued on a real effective exchange rate basis. But if you look at the balance of payments and the RBI's FX reserve accumulation, clearly the rupee looks much more undervalued.

Our assessment is that productivity growth in India, and particularly in certain parts of corporate India, it's going to be relatively high. Our assessment also is that FDI as a percentage of GDP is likely to increase. These are both our hopes and our assumptions, and on this basis we do think the rupee is potentially undervalued by around 20% to 30%. Against major trading partners like the US and EU I think it's probably undervalued to the tune of 30% – as a disclaimer I have to say that this is more art than science – with the undervaluation margin against the US probably coming in at the lower end of the spectrum, around 15% to 20%.

Your other question, the more difficult one, was how do we split that between real and nominal effective appreciation, and that's very difficult to tell. If the government does manage to keep inflation in check, in our view it would have to let the exchange rate appreciate. We suspect that they will do this because the exchange

rate, sensitive as it is, is not as important politically as containing inflation is. So we still believe that a large part of that appreciation could come in nominal terms.

The risk, of course, is that we get it wrong and it comes through inflation. But we do think that there's enough at this point in terms of growth differentials between India and the rest of the world for capital inflows to come in and help fuel nominal effective exchange rate appreciation. This has not really been the case so far, but given what's happening in Europe, we do think that this is now the time that that the trade will start making sense and EURINR and GBPINR will start coming off.

The RBI and inflation expectations

Question: If I could just ask a quick follow-up question, Philip mentioned some unorthodox constraints that limit the amount of policy hikes the central bank can undertake. I understand that, but then I was wondering if you had a sense of how much damage would be done to inflation expectations by moving only 100 basis points when in reality they would need to move, say, 200 or 300 basis points?

Bhanu: That's difficult to quantify, of course, but I think a significant amount to be honest. We do finally have some statistics on inflation expectations in India, as the RBI does release numbers now; according to these data, expectations are reasonably high and if the RBI is seen as falling behind the curve I think those expectations could go higher still.

If we calculate real interest rates in India by taking the 12-month T-bill rate and subtracting average forecast inflation over the next one to two years, then they're already at zero or even -2%, i.e., real interest rates in India are not very attractive for a currency investor. The hope really is that the growth differential in India can drive capital inflows from here, but if real interest rates were to go to -5% or -6%, then it wouldn't make sense to be long the currency at all. However, my point is we're not there yet; clearly we do worry about this trend, but we're not there as yet.

Philip: I agree that we are likely to see more currency appreciation than, if you like, the desire to see it, reflected by faster local balance sheet growth or financial sector balance sheet growth and higher inflation, but keeping in mind that we expect policy rates in India to remain well above those in the West, after the currency has appreciated against the dollar beyond a certain point (which would have to be determined with reference to other large emerging markets), I believe that capital controls would become a much more favored policy to give the central bank more scope to hike rates. Things would be different if we were starting from a position where the US Fed funds rate was at 4% – but that just isn't the case.

Bhanu: As an important addendum here, if we do get capital controls in India then the call on the INR and rates would change in two ways. You would become less bullish on the INR, and the incentive to pay rates would become that much stronger, as credit growth domestically would be higher and inflows from abroad would be weaker. So we would be paying rates in that case, but the bullish case on the INR would obviously be compromised.

Fiscal revenues

Question: Could I please ask you to briefly discuss the possibilities for increasing the revenue side in the fiscal balance of the government? And actually if you could begin with a quick summary as to why revenue as a share of GDP is so low, and what the likelihood is of seeing that improve any time soon.

Philip: It's certainly true that there is a very strong cyclical aspect to taxes and revenues as a share of GDP. To give you some idea of this, the drop used to be about 2.5% to 3% of GDP, from the top to the bottom of the cycle, and this reverses as the economy recovers and expands.

Why is the base so low? There are a few main reasons for this: One is an underdeveloped tax base, and that is being rectified. The things to watch out for are the decision of the 13th Finance Commission, which is an

annual independent commission set up each to figure out ways to improve tax take. The latest points on the agenda include a discussion of VAT and improvement in the collection of state-wide taxes. There's a consolidation involved whereby sales taxes are replaced with a goods and services tax. Nothing has been decided yet for sure, but this is certainly one thing to watch in terms of announcements for the future.

Another is the income tax, as countries with high income taxes generally have a high historical level of evasion and inefficiency. Another aspect is the impact of strong lobbies in certain areas of the commercial economy that prevent the government from taxing too heavily. So there are a number of factors involved, and I think they can mainly be ascribed to India's general income level. In ten years' time India may be in a better position to raise its tax base, but this is very much a work in progress.

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