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Are we headed for a hard landing? The view from November 2013

The Malcolm S. Adiseshiah 2013–14 Mid-Year Review of the Indian Economy

November 16, 2013, New Delhi

National Council of Applied Economic Research
India International Centre

Prepared by the National Council of Applied Economic Research
11, I.P. Estate, New Delhi 110 002

September 2014

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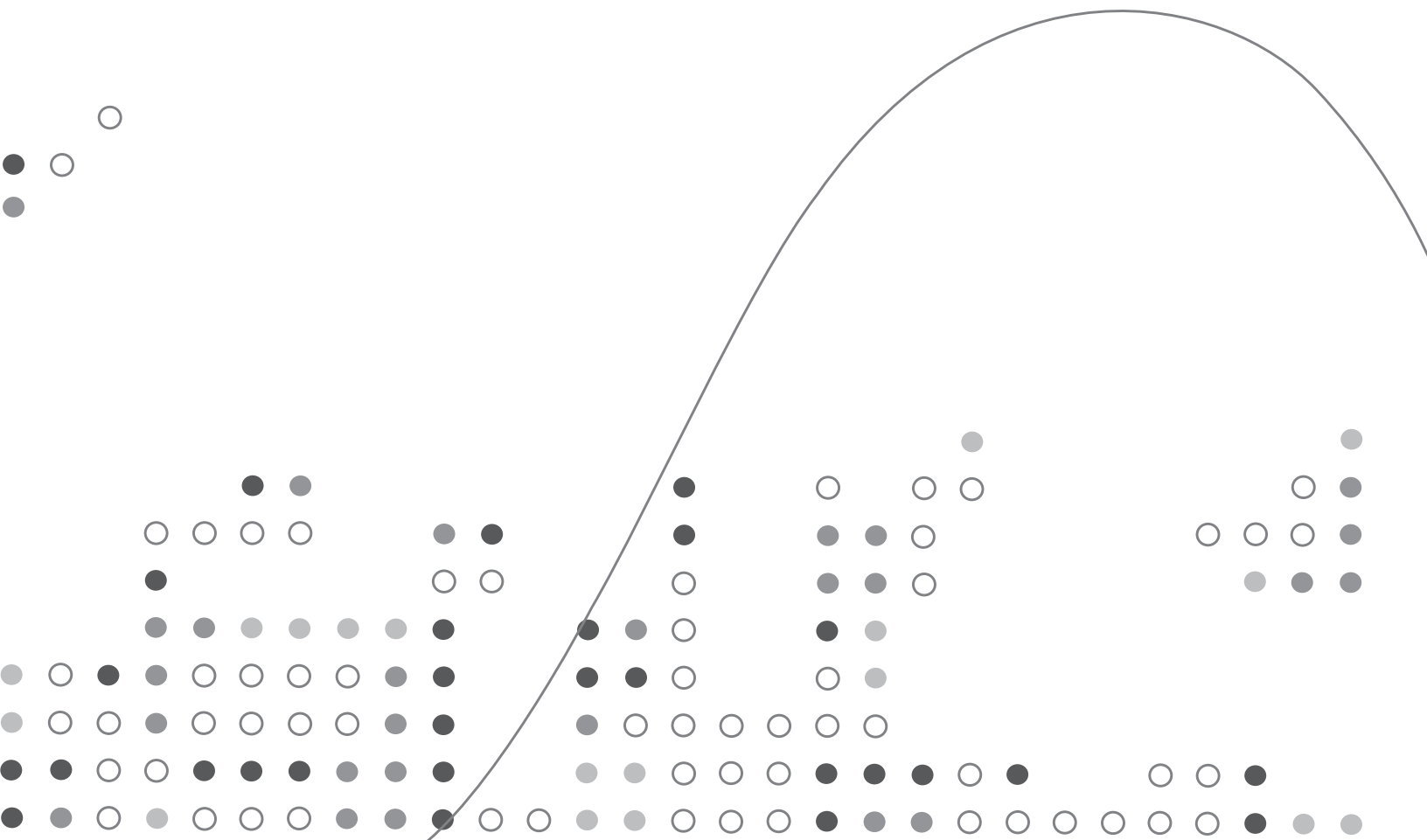

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Printed at
M/s Archana
C 78, Okhla Industrial Area
Phase-1, New Delhi-110 020

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Preface

NCAER, the National Council of Applied Economic Research, is privileged to present the 2013-14 *Malcolm S. Adiseshiah Mid-Year Review of the Indian Economy* for the third successive year in partnership with the India International Centre.

As in FY 2013-14, slow economic growth and relatively high inflation continue to plague the economy even as there are strong signs that sentiment is improving with the arrival of a reform-minded Modi Government with its unprecedented electoral support. For the year reviewed in this publication, the Indian economy grew at its slowest in seventeen quarters during the first quarter of 2013-14, with a GDP growth rate of only 4.4 per cent. Lacklustre industrial growth and faltering services sector growth were the key contributing factors. The only silver lining was a bountiful monsoon with its promise of record agricultural production in 2013-14.

This weak domestic performance was greatly compounded by an uncertain external environment, thanks to fears about the timing and pace of the US Federal Reserve's actions to end its quantitative easing. Talk on 22nd May of the possibility of the Fed phasing out its bond buying programme, under which it has been buying bonds, including Treasuries, to the tune of some $85 billion since December 2012, led to large scale exit of foreign institutional investors. The rupee depreciated 7.5 per cent against the dollar between 22nd May and 15th July, 2013. Confidence boosting measures implemented by the Reserve Bank of India (RBI) in July 2013 proved inadequate. The rupee stabilised only in September 2013 after Raghuram Rajan, the new RBI Governor, took over on 4th September and announced a further set of confidence-boosting measures.

In the short run, the then upcoming general elections added yet another layer of uncertainty. The *Mid-Year Review* highlights the policy flip-flops and paralysis that plagued policymaking in New Delhi in the run up to the elections and contributed to the slowdown in growth across the economy, especially in sectors like manufacturing, mining and energy. The *Mid-Year Review* gives special attention to the mining and energy sector by way of two special articles on the *Revival of the Mining Sector* and *Natural Gas Pricing and India's Energy Security.*

Given this background of slow industrial and services growth, high inflation, a weak external sector, an abundance of scams, low business confidence, and not-so-credible fiscal deficit numbers, India appeared close to a macro crisis to many. Not surprisingly, it seemed entirely sensible to ask the question in the title of the *Mid- Year Review* in November 2013 when the Mid-Year Review was hosted on Saturday, November 16, 2013 at the wonderful India International Centre. By that time, NCAER had also substantially lowered its GDP forecast for 2013-14, and this was widely reported in the media.

Fast forwarding to September 2014, new GDP numbers are showing a modest turnaround, and the economy is now expected to grow at around a 5.2-5.7 per cent. The hope is that the latter part of 2014 will show a revival of growth and moderation in food inflation. The key message emerging from this *Review*, however, remains as pertinent today as it was in November 2013—the need to revive business confidence and increase productive investments. In the short-term, policy certainty and tackling long-ignored policy reforms and governance issues are clearly required. Over the longer term, deeper reforms are needed to ease supply-side bottlenecks in manufacturing and agriculture and allow more leeway to the Reserve Bank of India to formulate a monetary policy that targets inflation. The Modi Government has much that is underway by way of reforms, and expectations run high at the end of its first 100 days in office that it will deliver. There is much to be done and little time for waffling.

I am grateful to Dr Kavita Sharma, Director, IIC, and her team, particularly Premola Ghose, IIC's Head of Programming, for partnering with NCAER in this activity. We are deeply grateful to Dr Bimal Jalan, former President of NCAER's Governing Body and former RBI Governor and Member of the Rajya Sabha, who kindly agreed to chair the seminar and led a lively discussion. Dr Kirit Parikh, IRADe, and Dr Rajiv Kumar, Centre for Policy Research, the invited discussants, enriched the Q&A that followed with their sharp and insightful comments. Dr Lekha Chakraborty, NIPFP, and Ms Soma Banerjee, *Economic Times*, presented two special articles on the Mining Sector and Natural Gas Pricing, respectively. Dr Pralok Gupta of the Indian Institute of Foreign Trade authored the Services chapter.

I also wish to acknowledge the financial support of the Think Tank Initiative (TTI), managed by Canada's International Development Research Centre, for funding NCAER's preparatory work underlying the *Mid-Year Review*. I am particularly grateful to Samar Verma of the New Delhi IDRC Office for his thoughtful TTI partnership with NCAER.

The 2013-14 NCAER team was ably co-led by Shashanka Bhide, Mythili Bhusnurmath and Bornali Bhandari. Saurabh Bandyopadhyay, Rajesh Chadha, Purna Chandra Parida, Anil Sharma and Anjali Tandon authored chapters on key sectors for the *Review*. On the organisational side, this work was supported by NCAER staff, Farha Anis, Himani Gupta, Charu Jain, Shweta Jain, Sudesh Bala, P P Joshi, and Praveen Sachdeva. I am grateful to each of them for their dedication to this task.

New Delhi
September 2014

Shekhar Shah
Director-General
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Acknowledgments

The authors would like to acknowledge the support of Praveen Sachdeva, Farha Anis, Himani Gupta, Charu Jain, Shweta Jain and Sudesh Bala at NCAER who assisted them in the preparation of this Review.

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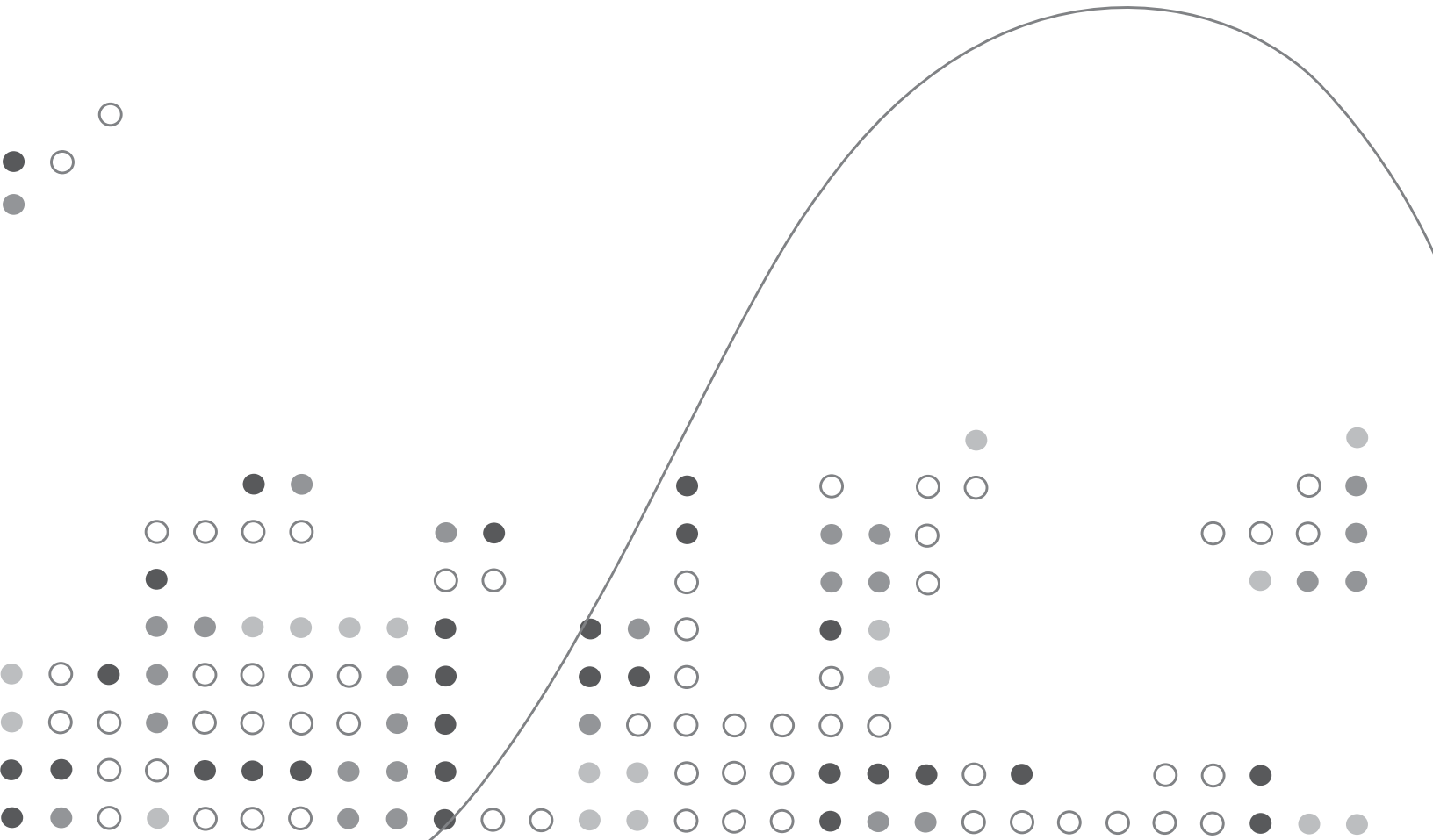
Mid-Year Review of the Indian Economy 2013–14

PART I: Overview



Overview

Mythili Bhusnurmath

The best thing that can be said about the first half of the current fiscal is that it is behind us. By all reckoning, the worst is now over. Admittedly, there is little to cheer as yet as far as both industry and the services sector are concerned. But agriculture is expected to register satisfactory, possibly even above-trend growth (thanks to bountiful rains) and that should shore up overall growth and result in beneficial spinoffs for the rest of the economy.

Part 1

There is only one word to describe the first six months of the current financial year: tumultuous! Any hope that the economy had bottomed out after hitting a decadal low of five per cent GDP growth in 2012–13 proved short-lived when first quarter Gross Domestic Product (GDP) growth for 2013–14 plummeted to 4.4 per cent, the slowest quarterly growth in the past seventeen quarters.

Growth in the second quarter is also likely to be subdued partly on account of the upheaval caused by developments on the external sector. The outlook for the third and fourth quarters is not much brighter, thanks to a combination of domestic and external factors.

On the domestic front, though the government has embarked on a flurry of activity during the past few months, these are unlikely to bear fruit in the near-term given the political uncertainty on account of the impending general elections in May 2014. On the external front, likewise, there is uncertainty regarding the timing and pace of the US Federal Reserve's (Fed) move to taper its record stimulus programme under which it has been pumping liquidity into the system by buying bonds worth US$ 85 billion every month. Any reduction in the Fed's bond buying programme will drive investors away from emerging markets and led to volatility in the forex market.

In such a scenario, it is not surprising that estimates of GDP growth during 2013–14 by various agencies have progressively been lowered. While the government has not formally lowered its estimate of 6.5 per cent announced at the time of the Budget, the Prime Minister's Economic Advisory Council in its latest Economic Outlook published in September 2013 has lowered its estimate from 6.4 per cent (projected in April 2013) to 5.3 per cent.

All other agencies, including the International Monetary Fund (IMF) and the Asian Development Bank (ADB), peg GDP growth at between 4.3–5.6 per cent. NCAER's own projections (based on two alternative forecasting models) place GDP growth for the current fiscal at between 4.8 and 5.3 per cent. The main driver of this relatively low GDP growth rate is strong agricultural growth. Thanks to above average rainfall, the farm sector is expected to record a strong showing even as industrial growth remains lack-lustre and services sector growth slows down.

The latter two factors - lack-lustre industrial growth and faltering services sector growth - have been a disconcerting feature of the first six months of the current fiscal. While GDP numbers for the second quarter

are expected only later in the month - 29 November 2013, first quarter GDP numbers and second quarter Purchasing Manager's Index (PMI) numbers for industry and services suggest GDP growth in the first half of the year is unlikely to touch five per cent.

A notable aspect of the first quarter was the turmoil on the external front. The immediate trigger was the US Federal Reserve Chairman, Ben Bernanke's testimony of 22 May suggesting the US Fed might start tapering its Quantitative Easing programme sometime later this year.

Though Bernanke was careful to couch his statement with a number of caveats, markets promptly took fright. His subsequent clarification at the press conference on 19 July only made matters worse. Though he reiterated that the Fed's policy of buying US$85 billion of bonds each month to depress longer-term interest rates remained intact, markets in emerging and developing economies (EMDEs) were spooked.

The resultant mayhem on Indian markets was marked by large scale exit of foreign institutional investors (FIIs), especially debt funds. This led to a sharp depreciation of in the exchange rate of the rupee vis-à-vis the dollar by 7.5 per cent during the period 22 May to 15 July, compelling the Reserve Bank of India (RBI) to announce liquidity tightening measures on 15 July in a bid to raise the short-term interest rate and thereby curb volatility in the exchange rate.

These measures were reinforced on July 23, 2013 and were only partly eased by the Bank in its Mid-Quarter Review of 20 September 2013 when the RBI lowered the rate of interest on its marginal standing facility by 75 basis points to 9.50 per cent. This rollback was facilitated by the US Fed's decision at its meeting on 18 September 2013 to defer its plans to taper its bond purchase programme till it had clear signs of US economic recovery.

The resultant breather, together with some confidence-boosting measures announced by the new RBI governor, Raghuram Rajan who took over on 4 September 2013, brought some much-needed stability to the forex market. The ₹/US$ exchange rate, which had closed at an unprecedented low of ₹68.85 to the dollar on 28 August 2013, recovered to trade in the ₹62–63 range by late September.

Stability seems to have returned but economic agents are on edge. Is this stability only superficial? Will the next six months be any better?

The Mid-Year Review looks at past trends and tries to give readers an informed preview of the six months to come. Part I provides an overview. Part II analyses sectoral trends on the basis of available data and Part III contains two papers, one on the revival of the mining sector and the other on pricing of natural gas and energy security by two experts in these areas.

The performance and outlook for the various sectors is detailed below.

Part II

Agriculture, Industry and Services

The rain gods have been kind to us. Monsoon rainfall during June-September, 2013–14 has been excess-to-normal in large parts of the country. The actual rainfall received during the entire monsoon season was six per cent above its long-term average. Of the total 36 agro-meteorological sub-divisions, 31 sub-divisions covering

about 78 per cent of all districts in the country received normal to excess rainfall. The spatial distribution of seasonal rainfall at the level of sub-divisions and districts has also been fairly good this year.

The outlook for agricultural production has improved tremendously. This is reflected in the first advance estimates of kharif output released by the ministry of agriculture. According to these estimates the output of kharif food grains is likely to be in the region of 129 million tonnes, marginally above the previous year's estimated output of 128 million tonnes.

In many cases our estimates are higher than the estimates put out by the ministry. This is because of differences in the method used to arrive at these estimates. The ministry's estimates are based on information supplied by the state governments. Our own estimates for the kharif season are based on regression models which incorporate the impact of monsoon rainfall as well as trend factors, both of which suggest significant improvement in the output of various crops.

The outlook for the rabi season is also positive. Consequently, the stocks position of cereals is more than satisfactory. Indeed the concern now is that we have stocks much in excess of our requirements. The total stock of cereals at the end of September is a staggering 55.4 million tonnes as against a buffer stock norm of approximately 32 million tonnes. The inevitable fallout is wastage and accompanying loss due to spoilage.

Ironically, massive stock-piling presumably with an eye to ensuring food security might be having the opposite effect as record food production and procurement seem to have gone hand in hand with rising cereal prices. Food inflation has been over 18 per cent for two months in a row (August and September). And though much of the increase has been on account of a sharp rise in the prices of fruits and vegetables (especially onion), and protein items, the responsibility for the rise in cereal prices must be put squarely at the government's door. Repeated calls to offload some of the stocks to rein in open-market prices have fallen on deaf ears. However, the better outlook for agriculture in general and the onset of the winter (traditionally a period when prices of fruits and vegetables fall) should see food inflation come down to more manageable levels in the second half of the year.

The performance of industry and within industry, of manufacturing, has been nothing short of dismal. The index of industrial production (IIP) for April-August 2013 grew marginally by 0.1 per cent mainly on account of contraction of the mining and manufacturing sectors. Excluding capital goods and the mining sector, IIP grew by 0.5 per cent during the period.

In terms of use-based industries, consumer durables and basic goods, which together have a 54 per cent weight in IIP, pulled down overall growth. Capital goods have been particularly volatile -15.6 per cent growth in July was followed by a two per cent decline in August. Unfortunately, the quality of IIP data, marked by frequent revisions and spikes in output of certain items, makes it very difficult to make any clear prognosis about the sector.

However, all is not bleak. The output of eight core industries has improved for three consecutive months with September recording a growth of eight per cent, with steel, cement and electricity leading the recovery.

As of now the improvement in core sector performance has not translated into higher industrial growth. However, on a year-to-date (YTD) basis, the growth of eight core industries decelerated to 2.3 per cent during April-August 2013 from 6.3 per cent in the corresponding period last year.

The services sector grew 6.2 per cent during Q1 of 2013–14 compared to 7.6 per cent during the same period last year largely on account of a moderation in the growth of 'construction' and 'trade, hotels, restaurant, transport and communication' sectors.

Developments in lead indicators of the services sector reveal a mixed picture. Passenger and commercial vehicles sales and some segments of the aviation industry contracted even though indicators like tourist arrivals, railway freight revenue and steel production showed signs of improvement.

The Reserve Bank's services sector composite indicator, which is based on growth in indicators of construction, trade and transport and finance, showed a downturn in Q1 of 2013–14, but a modest pickup in July-August. Either way what is clear is that the services sector can no longer be the engine of growth. Growth has hit a plateau and this sector alone cannot power growth, and more importantly, provide employment opportunities to our teeming millions.

Money Credit and Finance

The monetary situation continues to be extremely challenging. The first quarter saw the Reserve Bank of India (RBI) ease its monetary stance as inflationary pressures seemed to be receding. According to the RBI's Annual Policy statement for 2013–14 announced in May 2013, the Bank's policy stance for 2013–14 has been guided by two factors. One, the fact that growth has decelerated continuously and steeply, more than halving from 9.2 per cent in Q4 of 2010–11 to 4.5 per cent in Q3 of 2012–13. And two, the fact that 'although headline WPI inflation has eased by March 2013 to come close to the Reserve Bank's tolerance threshold, food price pressures persist and supply constraints are endemic, both of which could lead to a generalisation of inflation and strains on the balance of payments.'

Based on these two premises, more specifically a growth projection of 5.7 per cent and inflation projection of 5.5 per cent, the RBI projected a M3 growth of 13 per cent for 2013–14 and an aggregate deposits growth of 14 per cent for scheduled commercial banks (SCBs).

However, since in the Bank's assessment, growth is likely to remain subdued during the first half of this year with a possible modest pick-up in the second half of 2013–14, it reduced the repo rate by 25 basis points to 7.25 per cent. In consonance with this the reverse repo rate was adjusted down to 6.25 per cent, the Marginal Standing Facility (MSF) to 8.25 per cent while the CRR was kept unchanged at four per cent.

The reduction in the repo rate combined with the increase in the government's spending during Q1: 2013–14 helped ease liquidity conditions in the system. However, hopes of further easing were quickly belied following the US Fed Reserve Chairman Ben Bernanke's hints, mid-May 2013, about tapering the Fed's bond buying programme. The resultant mayhem in the forex market with the Rupee depreciating sharply against the dollar, forced the RBI to reverse its stance.

On 15 July the MSF rate was hiked sharply by 300 basis points above the policy repo rate under the LAF to 10.25 per cent. The overall allocation of funds under LAF was also capped at one per cent of the Net Demand and Time Liabilities (NDTL) of the banking system. On 23 July the RBI tightened liquidity further by restricting access to LAF by way of repos at each individual bank level and restricting it to 0.5 per cent of the bank's own NDTL with effect from 24 July, 2013. Rules for maintenance of CRR were also tightened.

These measures had an immediate impact on bond yields though the rupee continued to be under pressure (touching an all-time low of ₹68.85 on 28 August 2013) till early September. Stability returned to the market only it became evident that the Fed was not going to commence its tapering any time soon.

The RBI in its mid-quarter review of monetary policy on 20th September (for the first time the original date of the Review was pushed backed to after the Federal Open Markets Committee meet) rolled back some of the exceptional liquidity-tightening measures announced in July but raised the repo rate 25 basis points to 7.5 per cent. This was again raised to 7.75 per cent in the Second Quarter Review announced on 29 October 2013. The MSF rate was correspondingly reduced 25 basis points to 8.75, thereby restoring the corridor between the two rates to 100 basis points.

The slowdown in the economy impacted both deposit as well as credit growth. Deposit growth has been slowing over the past few years as savers responded to negative real rates of interest by turning away from banks towards gold and other physical assets. As on 6 September 2013, deposit growth was only 13.4 per cent, compared to 14.5 per cent in the previous year. Credit growth, in contrast, was higher at 18.2 per cent compared to 16.6 per cent in the previous year.

As far as stock markets are concerned, it was a roller-coaster ride during the first six months as Foreign Institutional Investors (FIIs) first fled the market on talk of Fed tapering and then returned with almost as much vigour once it became apparent the Fed would stay the course for a while. On 16 August the BSE Sensex tanked 769.41 points, the largest single day fall in four years. The Nifty also nose-dived 234 points. On 21 August the Sensex slipped below the 18,000 mark to close at 17,905.91. However by the end of August, it had recovered ground to again touch the psychologically important level of 18,000 before touching a high of 20,646 on 19 September 2013. It has since gone on to touch an all-time high of 21,034 on 30 October 2013 on the back of strong overseas inflows.

External Sector

According to the IMF's World Economic Outlook (October edition) world economies moved much more in lockstep during the peak of the global financial crisis than at any other time in recent decades. Correlations of GDP growth rates, which had been modest in the years before the crisis, rose dramatically during 2007–09. The increased co-movement was not confined to the advanced economies, where the global financial crisis was centered, but was observed across all geographic regions and among advanced, emerging market, and developing economies.

Since 2010, however, correlations have fallen back sharply. The IMF considers this move from a period of globally synchronised collapse and recovery to one in which the world's economies move more independently

of each other—which the IMF calls a "multispeed global economy"—a return to normalcy. But there is a difference in the 'normalcy' that we are witnessing now compared to pre-crisis. The difference is that while EMDE's are still growing faster than advanced economies, the gap between them has shrunk. The former are no longer growing as fast while the latter seem set to see a recovery in growth.

In September 2013 the World Trade Organisation (WTO) cut its forecasts for trade growth in 2013 and 2014 to 2.5 per cent and 4.5 per cent respectively, well below the 20-year average of 5.4 per cent. Meanwhile the Hague-based CPB Netherlands Bureau for Economic Policy Analysis estimated global trade volume fell 0.8 per cent in August, after recording a 1.8 per cent jump the previous month. This was the weakest performance since a 1.1 per cent decline in February.

Individual country performances reflect the same unhappy position. The US trade gap was more or less static in August at $38.8 billion as exports fell 0.1 per cent and imports were largely unchanged. Chinese exports fell in September and even with the yen falling this year, the volume of Japanese exports declined last month.

The fall in world trade is a direct consequence of slowdown in emerging markets and dollar weakness, driven by signs that the US Fed is likely to continue its stimulus. The dollar has declined five per cent on a trade-weighted basis since mid-July. Of course this raises the fear of a return to currency wars as countries go in for competitive devaluations to make their exports competitive. There are also indications that protectionism is on the rise.

Inevitably, this has resulted in a flurry of bilateral trade agreements, though such agreements are a much less advantageous for countries like India than the multilateral trade system. Thus there are ongoing talks to create the Trans-Pacific Partnership, an 11-nation free-trade zone linking an area with about $26 trillion in annual economic output. The US and the European Union are also discussing a trade deal while Canada and the EU signed an accord recently.

But there are some hopeful signs. According to a new leading indicator published by economists at UniCredit SpA and based on inputs such as activity at Chinese sea ports and in air cargo, there are signs of a 'significant recovery' in global trade in coming few months. Much hope is pinned on Bali round of the WTO scheduled to be held in December 2013. But chances of substantial progress remain bleak as the main global players are not seriously engaged

Most of the tumult in the first half of the year was caused by developments on the external sector. In common with emerging markets the world over, the exchange rate of the rupee in terms of the US dollar fell sharply following the May 2013 remarks of the US Fed Chairman, Ben Bernanke about a possible tapering of the US bond purchase programme in the course of the year. The rupee, however, declined much more than other currencies, barring the South African Rand and the Indonesian Rupiah, in view of our more adverse current account deficit (CAD). The rapidity of the decline - it depreciated by 17.7 per cent against the US dollar during mid-May to end-August 2013 - caught markets unawares and destabilised the forex market.

Fortunately, by early September 2013 the rupee had recovered ground and appreciated by six per cent and further by 1.9 per cent by 25 October 2013 as market sentiments improved. The recovery, which was almost as dramatic, was driven primarily by Fed's decision to defer its tapering and maintain the pace of

its quantitative easing (QE), aided to some extent by the RBI announcing a number of measures such as the opening of a forex swap window for the public sector oil marketing companies, offering a concessional swap facility for deposits raised by banks under the FCNR (B) scheme and allowing banks higher overseas borrowing limits. Sentiment was also boosted by definite signs that the CAD will be more manageable this year; despite the widening of the CAD to 4.9 per cent of GDP in Q1: 2013–14 as against 3.6 per cent of GDP in Q4: 2012–13. The trade balance seems to have responded to the policy measures taken by the government and the RBI. Gold imports have declined significantly (though there are indications that smuggling is on the rise) and exports have picked up. As a result the trade deficit is $80.1 billion in the first six months of this fiscal down from $ 91.8 billion in the comparable period last year.

For now external risks have come down. But the recent CAD improvement cannot be taken for granted. It must be bolstered through more structural adjustments. Greater attention will also need to be paid to altering the pattern of financing of the CAD - towards stable long-term capital inflows and away from volatile portfolio flows especially debt flows. This is critical given that the share of external debt, especially short-term debt measured by residual maturity - has risen sharply in recent months.

Prices

After showing signs of moderation in the early part of the current fiscal, inflation has re-emerged as a major problem, thanks to soaring vegetable prices, in particular onions during the closing days of the first half. Both wholesale and retail consumer price inflation levels are well above tolerance levels at 6.46 per cent and 9–10 per cent respectively, as at the end of September 2013. Retail inflation in India is the highest among all the BRICS (Brazil, Russia, China, South Africa). Worse, inflationary expectations also reign high, making the battle against inflation an uphill task.

The argument that inflation in India is driven by supply side factors and hence, monetary policy has a little role to play cuts no ice. In the absence of supply augmentation, there is no alternative to keeping prices in check by reining in demand, even if such demand-compression results in raising interest rates and dampen investment. This is true not only from a pure economics perspective, but even more if seen through the prism of the political economy that is not only poor but is also a functioning democracy.

Public Finance

Budget 2013–14 was presented against the backdrop of a slowdown in both global and domestic economic growth, as well as large fiscal and current account deficits. The main objective, therefore, was to spur economic growth and return to the path of fiscal rectitude especially since the high fiscal deficit was seen as a major factor contributing to the decline in private sector investment.

In keeping with this objective the Finance Minister (FM) projected a fiscal deficit to GDP ratio of 4.8 per cent for the current fiscal, down from the previous year's budget estimate of 5.1 per cent and actual achievement of 4.9 per cent.

Inevitably, the estimates were criticised as being unduly optimistic. To start with, Budget 2013–14 relies largely on revenue-led fiscal consolidation. Hence, its success will depend on the revival of investment and growth. Thus budget estimates of gross tax revenue are based on estimated nominal GDP growth of 13.4 per cent and though rising prices may ensure nominal GDP comes in somewhere close, tax revenue is unlikely to grow commensurately when real growth is so low. It is still early to dismiss the promises made in Budget 2013–14 outright. But the portents to date are not encouraging. With growth likely to be significantly lower than the 6–6.5 per cent projected in the Budget, it may be difficult to achieve the budgeted tax-GDP ratio of 10.9 per cent even with the budgeted tax buoyancy of 1.4 per cent during 2013–14.

Indeed gross tax revenue growth during the first quarter of 2013–14 was lower than a year ago due to deceleration/decline in major tax revenues. The other major items of government revenue such as disinvestment receipts of ₹400 billion are likely to be just as problematic given the volatile conditions in financial markets.

A positive feature on the non-plan expenditure front is the envisaged containment of expenditure on subsidies at two per cent of GDP in 2013–14. Unfortunately, this is likely to remain a non-starter despite efforts at phased deregulation in diesel prices thanks to the rise in international oil prices and sharp depreciation in the exchange rate of the rupee vis-à-vis the dollar. This is expected to put upward pressure on fuel and fertiliser subsidies in 2013–14 even as under-recoveries of oil companies have risen dramatically. For now the impact of National Food Security Act on food subsidies is expected to be within manageable limits in 2013–14. But it is likely to add considerably to fiscal pressures in the medium term.

As per the latest numbers released by the Controller General of Accounts the fiscal deficit has already reached 76 per cent of the Budget Estimates (BE) during the first six months of the year compared to 66 per cent in April-September 2012 period. The cumulative fiscal deficit reached 3.7 per cent of GDP during April-September 2013 (vs. the budget estimate of 4.8per cent of GDP for full fiscal year (FY)14).

Despite the apparent flaws in the underlying assumptions of Budget 2103–14 (as borne out by subsequent developments as well), the FM, P Chidambaram has refuted all criticism on the grounds that the economy is showing signs of bottoming out and recovery is round the corner.

However, there are reasons to doubt whether the FM will be able to abide by the line he has drawn in the sand as far as the Gross Fiscal Deficit (GFD) is concerned. These include (a) the distinct likelihood of a shortfall in tax revenues target due to slowdown in growth, (b) increasing subsidy burden (a 10per cent rupee depreciation increases India's oil subsidy by 0.3–0.4 per cent of GDP), (c) difficulty in achieving divestment target on weak capital markets, (d) a rise in food subsidy burden under the National Food Security Act and (e) pre-election sops in the run-up to parliamentary elections in May 2014.

Forecast

The good thing about the first half of the current fiscal is that it is now behind us and almost by definition the next six months should be better. Though risks factors to growth have got amplified and positive factors have weakened, the temporary breather from the Fed's decision to defer the tapering of its bond buying

programme could work to our advantage. Provided we use the breather to do the many structural reforms that have been pending for long!

Unfortunately, with the general elections due in May 2014 and five states scheduled to face elections before December 2013, political economy issues are likely to dog decision-making and hence economic activity in the next six months. We've already seen how the flurry of positive moves - hike in FDI limits in a number of spheres, passage of the Pensions Bill etc - during the second quarter have failed to lift sentiment/increase investment activity.

Forecasting economic growth during crisis or recession periods is becoming difficult due to unusual structural shifts in some of the key macroeconomic parameters. A study by Simon (2011) for the US economy found the variation between the actual GDP growth rate and New York Fed's projections is significantly large during recessions compared to the Fed's track record in forecasting. In the Indian context, too, wide variations between the actual and projected GDP growth rates have become the norm.

For the current fiscal, all agencies started with optimistic growth numbers of around 6.5 per cent in their preliminary assessments but have since revised their estimates steadily downward. NCAER is no exception! We expect growth is expected to remain low in the current fiscal despite better performance in agriculture as the sector's share in total GDP is only about 14 per cent.

This view is further supported by investment data released by the Centre for Monitoring Indian Economy (CMIE) for the quarter ended on June 2013. New investment announcements during Q1:2013–14 at ₹784 billion were 32 per cent lower than the quarterly average of ₹1.1 trillion new proposals announced during 2012–13. New investment proposals in the manufacturing sector also slipped 47 per cent to ₹544 billion over its year ago level. Commissioning of new projects fell to ₹270 billion in Q1: 2013–14, the lowest in the past 34 quarters. On a positive note, the quantum of stalled projects has improved 34 per cent to ₹940 billion during the June 2013 quarter compared to the year ago level. Weakening private investment is also corroborated by the continuous decline in business confidence. The NCAER-MasterCard Business Expectations Survey reveals that business confidence index has been declining continuously since April 2012 mainly due to weak overall economic conditions and an unfavourable business environment. The June 2013 quarter, however, shows a marginal improvement in business sentiment though questions regarding sustainability remain.

Against this backdrop, we have re-assessed the economic outlook for the current fiscal year using two approaches: (1) quarterly GDP growth assessment based on a quarterly model that incorporates some of the inter-sectoral relationships and the evolving pattern of variables over time and (2) annual GDP growth assessment based on a more detailed annual macro-econometric model. The assumptions underlying the two approaches have been detailed in the Section on Forecast.

Based on our assumptions regarding exogenous variables, we have revised our quarterly GDP estimates from Q2:2013–14 onwards. The GDP growth rate at 2004–05 constant prices is estimated at 5.3 per cent for 2013–14, a downward revision of 0.4 percentage points over our July 2013 estimate of 5.7 per cent. GDP growth in all three quarters has been revised downwards compared to our previous estimate in July 2013. This is mainly due to contraction of output in industry and services sectors.

While agricultural output is revised upwards from 3.3 per cent in July to 4.1 per cent in the current estimates on account of better rainfall, industrial growth is revised downward to 2.9 per cent from earlier estimates of 4.5 per cent in July 2013. Services sector growth rate is also revised downward from 6.8 per cent in July 2013 to 6.6 per cent in the current estimates.

It is important to note that the current quarterly model is unable to fully capture the impact of a few important factors such as investment, exchange rate, interest rate etc. on sectoral output. Hence, the trend slowdown or policy impact of these variables on output at the sectoral levels is difficult to quantify accurately.

The second approach, based on a more detailed annual macro-economic model, gives us overall GDP growth, in constant 2004–05 prices, at 5.2 per cent in 2013–14 which is 0.7 percentage points lower than our earlier estimate of 5.9 per cent in July 2013. A substantial downward revision of growth is made in the case of the services sector followed by a marginal decline in the growth in industry. In case of agriculture, we estimate a higher growth rate of 3.9 per cent compared to our earlier estimate of 3.2 in 2013–14.

In an alternative scenario, where we assume disinvestment revenue will fall short of our baseline target of ₹40,000 crore and the exchange rate would depreciate more than what we have assumed in the baseline, overall GDP growth, in constant 2004–05 prices, is estimated at 4.8 per cent. At the sectoral level, industry is expected to grow by 2.6 per cent and services by 6 per cent in 2013–14. Thus, the annual model gives a GDP growth range 4.8–5.2 per cent for the current fiscal.

Special Themes: Revival of the Mining Sector

A major lacuna to date is the absence of studies on the impact of public policy -especially fiscal policy -on mining firms and their competitiveness. Lekha Chakraborty' s paper on the mining sector is one of the few comprehensive papers that looks at the sector, in particular, at its competitiveness.

It looks at the legal and fiscal policy transition in the mining sector of India against the backdrop of the Planning Commission's High-level Committee Report on National Mineral Policy 2006, and the subsequent Mines and Minerals (Development and Regulation) Bill, 2011. It challenges the orthodox view was that the productivity in the mining industry is largely determined by the quality of mine endowments, geological characteristics and production cycle.

Chakraborty concludes that while there are several factors that affect the competitiveness of the mining industries, technology and government policy, especially the royalty regime, are critical. Other important factors are the cost of production (infrastructure costs and raw material costs etc), firm financing (debt financing), capacity utilisation and market uncertainty (sales realisation).

Though the legal framework of the mining sector has incorporated the environmental and human developmental aspects in its recent policy, the fiscal regime related to mining is in a state of flux. The current methodology of royalty estimation on an ad valorem basis on the ore needs to be discontinued. Instead, royalty estimation should take care of the value chain and estimate royalty on the basis of concentrate, and in plausible cases, the value of the metal at the end of the value chain.

Natural Gas Pricing and India's Energy Security

Recent attempts to streamline gas prices and align them with markets have been hampered by the fact that the two anchor consumers of gas, namely fertilisers and power sector, are heavily subsidised and are not in a position to absorb market-determined prices for gas. To add to the complexity, the perception that gas is a limited and scarce fuel has persuaded the government to prioritise its use and allocate it to various consumers based on certain criteria. Industries that came into being on the back of priority allocation then have to be serviced continuously leaving little flexibility for market forces to operate.

As long as the public sector accounted for a substantial chunk of domestic gas production, administering domestic gas prices posed few challenges and blunted the urgency to let market forces decide prices. However, the advent of private gas producers has changed all that.

Additionally the presence of a single gas transmission company that acts as both trader and transporter has rendered gas pricing non-transparent. Liquefied natural gas (LNG) terminals operate as bundled entities, performing the entire gamut of activities from procuring, purchasing, transporting, storing to regassifying and supplying to end consumers. The net result is LNG pricing is also non-transparent. On account of the wide price differential between gas supplied under the administered price mechanism (APM) and gas imported in the form of LNG, the former in effect, cross-subsidises the latter. The downstream regulator who has no jurisdiction over gas pricing, has been trying to introduce transparency in billing, albeit with limited success.

In short, gas pricing in India has been vitiated by political economy considerations, unscientific and at times, ad hoc pricing policies and incumbent monopoly practices. A comprehensive pricing policy based on a rational approach and long-term vision is the need of the hour.

Concluding Remarks

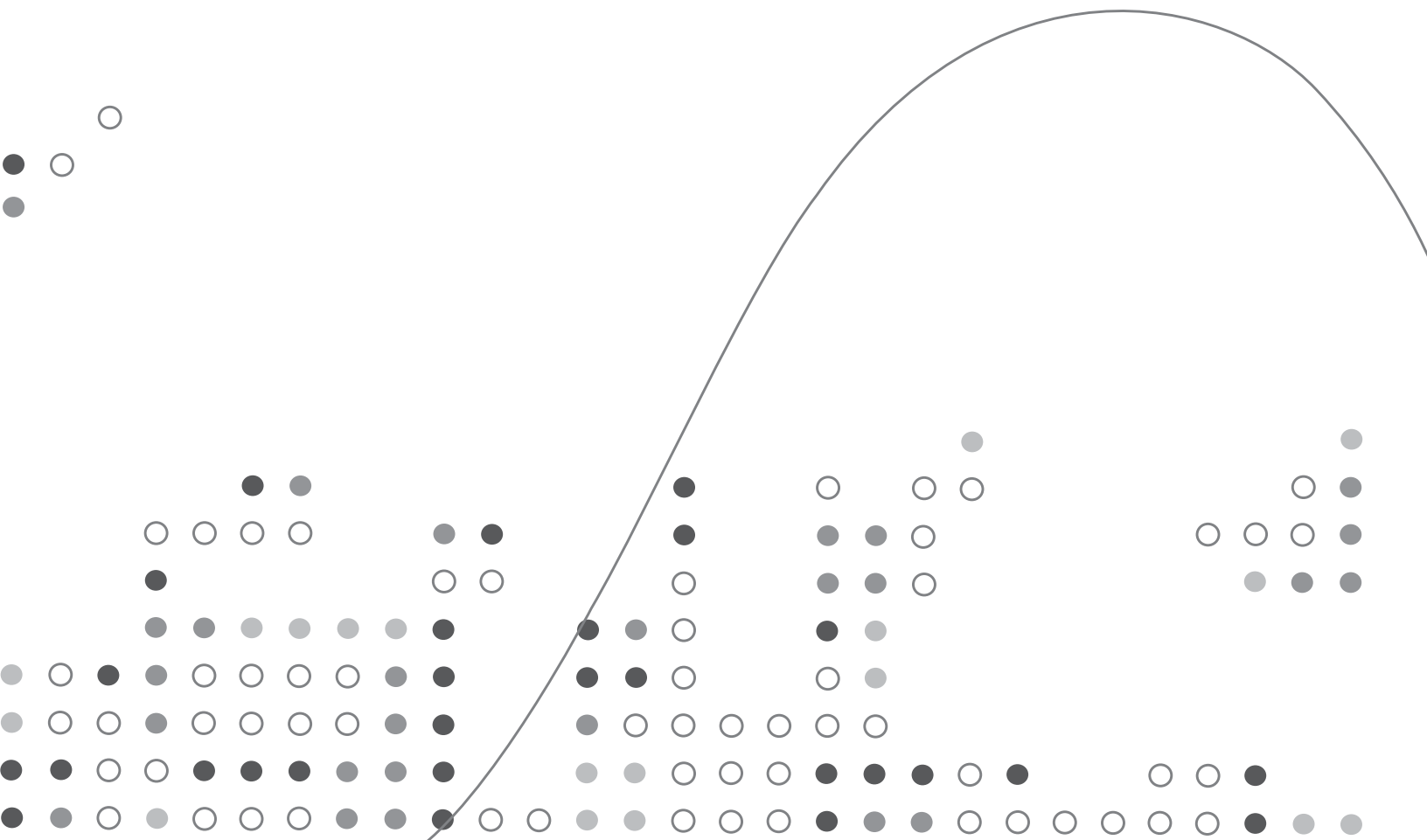
The best thing that can be said about the first half of the current fiscal is that it is now behind us. The Mid-Year Review shows that apart from agriculture, that is expected to register satisfactory, possibly even above trend growth, there is very little to cheer as far as both industry and service sector growth are concerned.

While the slowdown is in part the result of global cyclical conditions that have impacted most emerging markets and developing economies, in our case it has been exacerbated by domestic factors. Fortunately many of these can be addressed through concerted policy actions and their implementation. As the RBI report on Macroeconomic Developments puts it, 'Small but sustained policy steps can deliver growth back to the economy.'

The question is will the government take those steps. And even if it does will economic agents respond. The answer, unfortunately, is unlikely. Not until we get some clarity on the political front. Till then it would seem we are condemned to limp along, somewhere above our infamous Hindu rate of growth, to be sure. But nowhere near our earlier dreams of double-digit growth.

Mid-Year Review of the Indian Economy 2013–14

PART II: Recent Trends and Patterns in the Economy



Agriculture

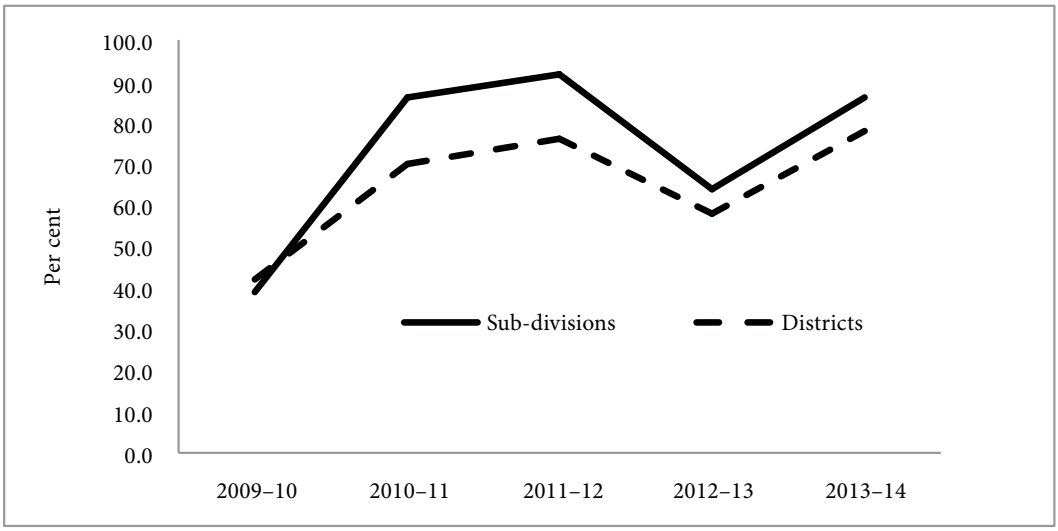
Anil Sharma

Normal to excess monsoon with even spatial distribution has translated into higher agricultural output than last year. The prospects for the Rabi crops are also promising. Growth in agriculture is expected to shore up overall GDP growth.

A.1 The South-west Monsoon

Monsoon rainfall during the June-September period of 2013–14 has been excess to normal in large parts of the country. The actual rainfall received during the entire monsoon season has been six per cent above its long-term average. Of the total 36 agro-meteorological sub-divisions, 31 sub-divisions covering about 78 per cent of all districts in the country have received normal to excess rainfall. The spatial distribution of seasonal rainfall at the level of sub-divisions and districts has also been fairly good this year as reflected in the shares of sub-divisions and districts that received normal to excess rainfall (Figure A.1). Without a doubt, in comparison to both 2012–13 as well as 2009–10 (which was a drought year) the spread of monsoon rainfall during 2013–14 has been fairly satisfactory.

Figure A1: Agro-meteorological Sub-divisions and Districts with Normal Rainfall



Source: India Meteorological Department.

The monsoon arrived in Kerala and its adjoining parts on time, June 1 and advancement of Southwest monsoon rainfall during the month was fairly vigorous. It proceeded rapidly and covered the entire southern peninsula, north-eastern states, and most parts of the central India in the second week of June and progressed further to some more central and northern parts of the country in the beginning of the third week. The spread of monsoon rainfall this year was so fast that it covered the entire country on 16th June, nearly a month ahead of the normal date, which is usually July 15.

According to the India Meteorological Department (IMD) the pace of advancement of monsoon rainfall during 2013 has been the fastest in the last six decades. As a consequence, overall rainfall during the month of June was excess/normal in 33 and deficient or scanty in only 3 (Arunachal Pradesh; Assam and Meghalaya; and Nagaland, Manipur, Mizoram, and Tripura) out of 36 meteorological sub-divisions.

During the month of July, 11 sub-divisions from the north, eastern, and southern parts of the country received deficient rainfall. Of the remaining 25, 12 sub-divisions received normal and 13 sub-divisions from the central and western parts of the country received excess rainfall.

In August, rainfall activity weakened compared to the first two months of the season. Only 8 sub-divisions received excess rainfall and 18 received close to normal rainfall. The remaining 10 sub-divisions, including parts of Maharashtra, Karnataka, Orissa, Bihar, and parts of north-east, received deficient rainfall.

The monsoon rainfall activity reduced further in the month of September, though, some parts of the country witnessed heavy rainfall. These include parts of Rajasthan, Gujarat, Maharashtra, Karnataka, Andhra Pradesh, and Kerala. Seventeen sub-divisions received deficient or scanty rainfall, while 10 sub-divisions received normal rainfall.

A comparison of the performance of monsoon rainfall during the period from the beginning of June to the end of September over the last four years reveals that this year's rainfall has been the best in three of the four major regions of the country (Table A1). The only exception is the eastern region, which on the whole received below normal rainfall. But, for the national as a whole the performance of monsoon rainfall was much better, about 7.7 per cent above normal as measured by the rainfall indices computed on the basis of un-irrigated area under foodgrains as weights.

A.2 Prospects for 2013–14

From an overall perspective it is evident that this year's monsoon rainfall was marked by much better spatial as well temporal distribution despite some hiccups during the season. This has improved the outlook for agricultural production tremendously. This is reflected in the first advance estimates of kharif output released by the ministry of agriculture (Table A2).

According to these estimates the output of kharif food grains is likely to be in the region of 129 million tonnes, marginally above the previous year's estimated output of 128 million tonnes. The advance estimates of output for oilseeds, cotton, and sugarcane are also higher in comparison to previous year's estimates.

The underlying input driving these estimates is the area allocated to various crops. The numbers suggest there has been a significant growth in the area allocated under various crops. While the area under cereals and pulses is up five per cent and that allocated to oilseeds has increased 10 per cent, the area under all crops has increased four per cent compared to last year's acreage.

Our own estimates for kharif season based on regression models, which incorporate the impact of monsoon rainfall as well as trend factor, also suggest significant improvement in the output of various crops.

Among cereals, the output of kharif rice is expected to be in the region of 95 to 100 million tonnes, which is higher compared to the numbers put out by the ministry. It is clear from these estimates that but for the deficiency in monsoon rainfall in the eastern region, which is a major rice growing region, the output of kharif rice would still be much higher compared to last year's output. For coarse cereals our estimates suggest that the output is likely to exhibit 15 per cent to 23 per cent increase, which, again, is higher than the estimates produced by the ministry of agriculture. The reason for higher growth in our projections is good rainfall in the areas where coarse cereals are cultivated. On the other hand, for pulses our estimates suggest only 13 to 17 per cent increase in output, which is lower than the first advance estimates released by the ministry of agriculture.

Like coarse cereals and pulses, the outlook for improved performance of oilseeds is also encouraging. Our estimates for this year suggest significant improvement ranging from 33 per cent to 36 per cent over last year's output. This is better than the initial estimates of the ministry, which show only 15 per cent increase in the expected output of oilseeds. This again is due to better rainfall and consequent improvement in area allocated to oilseeds.

For cotton, the ministry's estimates place output at about 35.3 million bales, which is four per cent more than last year's output. The estimates computed by us suggest a growth of nine per cent to 22 per cent. The projected rate of growth for jute and mesta is close to the projections made by the ministry.

In the case of sugarcane, the preliminary estimates by the ministry have placed output of sugarcane at about 341.9 million tonnes, which is approximately one per cent higher than last year's output. Our own estimates also suggest only a modest improvement or even a fall in output compared to last year's output.

These differences in projections made by us and those prepared by the ministry are due to differences in methods used to arrive at these estimates. The ministry's estimates are based on information supplied by the state governments; our estimates, on the other hand, are based on regression models. Notwithstanding these differences, it is likely that rates of growth in output of various crops will be close to our estimates when the second and third advance estimates are released by the ministry in the subsequent months. It is important to flag that estimates of food grain production released by the ministry indicate that output is likely to remain below the levels of output achieved in 2008–09 (118 million tonnes) and 2007–08 (121 million tonnes). Our estimates, on the other hand, are somewhat in line with these numbers.

A.3 Outlook for Rabi Season and Food Prices

The outlook for the rabi season also remains positive and quite favourable for the following reasons. For most part of the year, the incidence of pests and diseases has remained below the economic threshold level. The current level of water storage in major reservoirs of the country at the end of September was also significantly higher – about 16 per cent above last year's storage level and 18 per cent above the average storage for the last ten years.

The higher level of soil moisture and sufficient availability of irrigation water means that output in the rabi season is expected to be far better than last year's output.

As far as stocks of cereals, the situation continues to be both satisfactory as well as worrisome. The Food Corporation of India (FCI) has procured 38.1 million tonnes of wheat, just 9.8 million tonnes more than what was procured last year (28.3 million tonnes). The procurement of rice has also been fairly high, 32.4 million tonnes as against 35.1 million tonnes procured last year. The consequence has been the swelling of stocks held by government agencies. The stocks of wheat and rice has been reckoned at 36.1 million tonnes and 19.0 million tonnes, respectively as against the buffer stocking norms of 11 million tonnes for wheat and 5.2 million tonnes for rice for October 1.

Adding the stock of coarse cereals held by state and the central agencies, the total stock of cereals adds up to 55.4 million tonnes at the end of September. With overflowing granaries, wastage has also increased due to lack of adequate storage space.

To make matters even more worrisome, stocks are likely to swell further with procurement of rice from October to December. The cost of holding stocks has been fairly high for the last few years, and the same is likely to increase. This has, perhaps, been done to facilitate implementation of the new Food Security Act, but there are serious problems that need to be addressed to make it work on the ground (Box A1). Also, finding ways of disposing off surplus stocks through a combination of open market operations, exports, and increasing allocations under food supply programmes is still extremely essential to avoid wastage and expansion of food subsidies.

As far as food inflation is concerned, though the average rate during the first six months is low compared to last year, yet price rise in cereals, vegetables, eggs, meat and fish and condiments and spices is still in the double digits (Table A3). The items that have seen moderation in prices this year include pulses, milk, other food articles, and manufactured food products. This year food inflation is mainly driven by cereals, vegetables, and eggs, meat and fish.

With much better agricultural outlook for the year as a whole, expectations are that food inflation will come down as the year progresses. The prices of items such as cereals, vegetables, and other food items, which have witnessed significant increase during the first six months of the year should see some moderation. Much, of course, will also depend on the policy framework – disposal off surplus stocks through open market operations and exports and overall trade in general.

Box A1: The National Food Security Act 2013

The National Food Security Bill, which has been under discussion after its introduction in the Parliament in December 2011, was finally passed first as an ordinance in July 2013 and then by Parliament in August 2013. Under the Act, priority households covering 75 per cent of rural population and 50 per cent of urban population will get five kilogram (kg) of foodgrains per person at a highly subsidised price of rupees one per kg for coarse grains to rupees three per kg for rice.

Notwithstanding the governments laudable intention of addressing malnutrition and providing food security the Act has drawn a lot of criticism on the following grounds.

First, coverage under the bill is much higher than even what the poverty estimates reveal – according to the latest estimates for 2011–12, the population benefiting from subsidised food should not exceed 22 per cent (26 per cent in rural areas and 14 per cent in urban areas).

Second, problems of malnutrition and food security cannot be addressed through the provision of subsidies food alone because these require a combination of policies on health, sanitation, and awareness of better nutrition. The problem of malnutrition in India is more due to poor public health facilities, abysmal sanitation, and inadequate nutrition.

Third, there are valid questions about the government's ability to implement the Act because the mechanism of providing subsidised food is the same old Public Distribution System (PDS), which has been a source of large scale inefficiencies in procurement, storage, and distribution of foodgrains for the last of four to five decades. It is not clear how making food security a right can address these concerns.

Fourth, instead of relying on an age-old, seriously-deficient delivery system, the government could have provided cash transfers to the poor. This would have eliminated the enormous leakages in the current system and also empowered the poor and allowed them to buy what they need - food which has high proteins and other micronutrients (milk, eggs, meat, fruits and vegetables).

Fifth, because the overall cost of funding this initiative is likely to be much higher than claimed, the better way to handle nutrition and food security is to create more employment opportunities, better infrastructure facilities, and improve agricultural productivity. These will have a long lasting impact on under nutrition and food security.

Table A1: Deviations in the Monsoon Rainfall Indices from the Normal (%)

S. No.	Region	2010–11	2011–12	2012–13	2013–14
1.	Eastern	–18.16	–3.46	–8.05	–15.80
2.	Western	1.89	10.32	–3.38	27.18
3.	Northern	11.49	10.12	–7.23	6.36
4.	Southern	22.35	–5.16	–15.30	13.13
	All India	–0.74	4.36	–6.80	7.68

Source: Computed.
Notes:
1. These are deviations in regional level rainfall indices computed on the basis of un-irrigated area under foodgrains as weights.
2. The eastern region includes - Assam, Bihar, Jharkhand, Orissa, and West Bengal.
3. The western region includes - Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra, and Rajasthan.
4. The northern region includes - Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Uttar Pradesh, and Uttarakhand.
5. The southern region includes - Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu.

Table A2: Estimated Crop Output during 2013–14

Crops	Estimated Output (Ministry of Agriculture) (Million tonnes/bales*)		Change (Per cent)	Our Estimates of Crop Output for 2013–2014	
	2012–13	2013–14		Estimate I	Estimate II
Rice					
Kharif	92.8	92.3	–0.5	95.1	99.7
Coarse cereals					
Kharif	29.5	31.0	5.1	33.9	36.4
Pulses					
Kharif	5.9	6.0	1.7	6.7	6.9
Foodgrains					
Kharif	128.2	129.3	0.9	135.6	142.9
Oilseeds					
Kharif	20.9	24.0	14.8	28.4	27.7
Cotton*	34.0	35.3	3.8	37.1	41.7
Jute and Mesta*	11.3	11.2	–0.9	11.3	11.7
Sugarcane	338.9	341.7	0.8	341.9	331.1

Source: Computed.
Notes :
1. Estimate I has been worked out using output equations.
2. Estimate II has been worked out using area and yield equations

Table A3: Changes in Prices of Food Articles (April to September, 2011–12 to 2013–14)

S. No.	Product	Nominal change in 2011–12 over 2010–11 (Per cent)	Nominal change in 2012–13 over 2011–12 (Per cent)	Nominal change in 2013–14 over 2012–13 (Per cent)
1.	**Food Articles**	9.0	10.0	5.6
2	Cereals	5.0	8.7	15.7
3	Pulses	–5.7	23.6	–3.6
4	Vegetables	5.4	28.0	36.2
5	Fruits	24.2	–3.6	3.1
6	Milk	8.5	9.2	4.5
7	Eggs, meat and fish	9.9	15.8	13.1
8	Condiments and spices	7.1	–15.4	13.4
9	Other food articles	21.7	12.6	–1.8
10	Food products	7.9	7.5	4.6
11	Dairy products	9.1	6.7	0.5
12	Sugar group	4.6	9.9	2.1
13	Edible oils	14.7	10.6	–1.0

Source: Government of India, Office of the Economic Advisor, Ministry of Commerce and Industry, New Delhi.
Notes: These changes in wholesale price indices are with respect to averages of six months for these commodity groups.

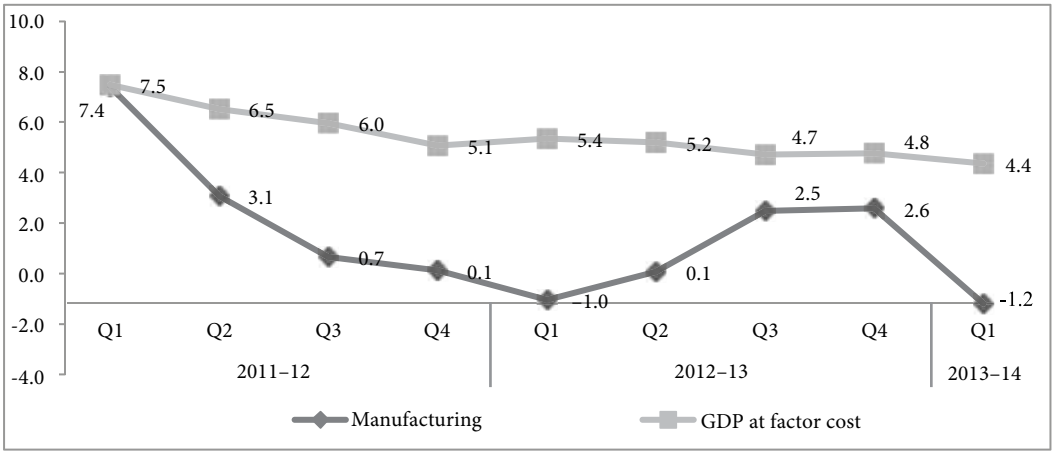
Industry

Saurabh Bandyopadhyay

Industrial sector is in a recession especially the manufacturing and mining sectors. Higher agricultural growth and weaker rupee may help the sector to recover in the next six months but an uncertain economic environment, high inflation and therefore high interest rates, are strangulating the economy.

In line with the lower Gross Domestic Product (GDP) growth, manufacturing growth dipped to one per cent in FY 2012–13, compared to 2.8 per cent in the previous fiscal on year-on-year (y-o-y) basis. The downturn continued unabated during the first quarter of the current fiscal with manufacturing growth slipping to (-) 1.2 per cent (Figure I1).

Figure I1: Growth of GDP and the Manufacturing, (% y-o-y)



Source: Central Statistical Organisation.

Construction, mining and electricity, gas and water have fared poorly. While the mining sector has been ailing for quite a few years due to policy uncertainties (including outright ban) construction and electricity, gas and water supply recorded positive growth but with a declining trend (Figure I2).

Better agricultural performance in the coming quarters is expected to boost demand for manufactured goods and help the sector turn around.

I.1 Components of the Index of Industrial Production (IIP)

The Index of Industrial Production (2004–05=100) is the leading indicator to indicate performance of industries in the country. IIP is reported every month by the Central Statistical Organisation (CSO), and comprises 399 products/groups, categorised into three broader groups, i.e., mining, manufacturing and electricity. Growth of industry is observed to be volatile across sectors and showed a downward trend in the seasonally adjusted series. More specifically, industrial performance during April-August has noticeably borne out the fact that India is indeed in the midst of a deep-rooted industrial deceleration. For three

consecutive years, industrial growth at the sectoral level has shown a declined sharply. Manufacturing growth, with 75.5 per cent weight turned negative during April-August 2012–13 as well as during the corresponding period of 2013–14 (Figure I3). Mining, with a weight of 14.16 per cent, revealed severe structural weakness due to widespread policy uncertainties, and exhibited negative growth of (-)1.72 per cent during April-August 2012–13 and fell further to (-)3.35 per cent in the same period of the ongoing fiscal 2013–14.

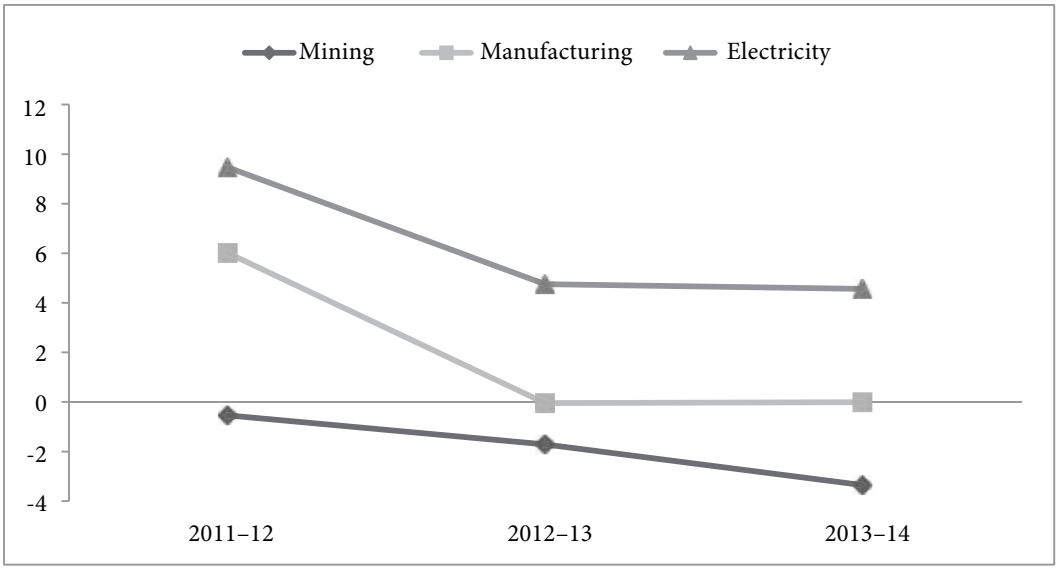
Electricity is the only sector with positive growth, though with a declining trend.

A steep decline in this sector was noted during 2012–13 (a decline of almost 5%!) and a slight decline (around 0.2 per cent) in 2013–14 due to uncertainty in the mining of coal and subsequent lower supply of coal to the thermal power plants of the country.

Figure I2: Performance of the Supplementary Sectors Linked to Manufacturing (% y-o-y)

Source: Central Statistical Organisation.
Note: 2013–14* relates to the growth of Q1 (y-o-y).

Figure I3: Sectoral Performance: April-August Comparison (% y-o-y)



Source: eaindustry.nic.in

The picture is somewhat mixed if we turn into analysing the performance of the use-based classification of the IIP.

The grim performance of the capital goods sector (which is crucial to support manufacturing activity) during April-August, 2012–13 (–14.4%) is mitigated and reached positive trajectory in the ongoing fiscal. Intermediate goods, too, notched a better performance (Table I1). However, the steep decline in the consumer durables sector, with growth receding to -11 per cent during April-August, 2013–14, compared with five per cent growth recorded during the same time of the previous year, remains a cause for worry.

I.2 Performance at the Two-digit Level

An in-depth scrutiny of industry performance at the two-digit classification level reveals that:

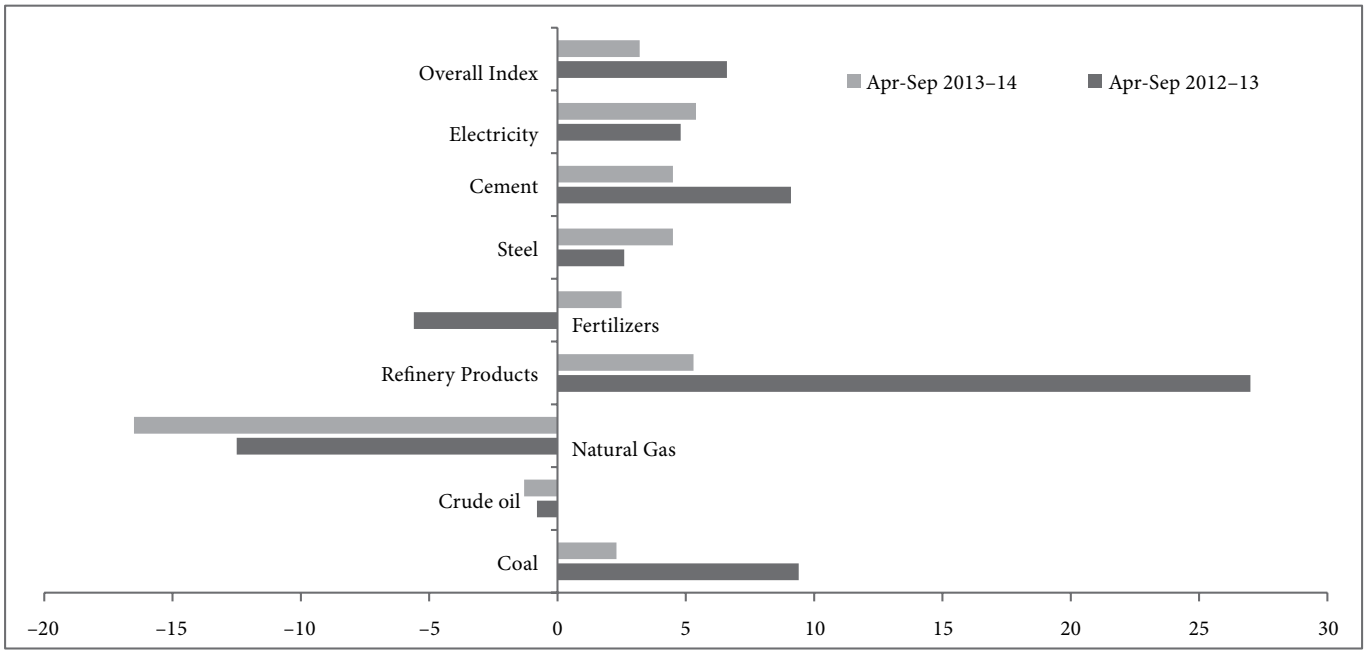
1. Of the total weights (755.2), weights of 321.2 (i.e., 42.6%) of the manufacturing industries recorded positive growth.
2. Wearing apparel; dressing and dyeing of fur recorded the highest 41.1 per cent growth during April-August, 2013–14 compared with –3.7 per cent growth recorded during the same period of the previous fiscal.
3. With the growth of 29.4 per cent, electrical machinery and apparatus positioned second in terms of growth rate achievement during April-August, 2013–14, compared with –31.8 per cent growth rate recorded in the same period of the previous fiscal. One may argue, however, that the achievement in this fiscal might have been nullified by the loss registered in the previous year.
4. Industries which recorded a growth rate of over eight per cent are the leather products, coke and petroleum products along with chemicals and chemicals product.

However, close to 60 per cent of manufacturing industries show negative growth rates or a worsening of performances in the April-August period of the ongoing fiscal.

I.3 Performance of the Core Infrastructure Sectors

The eight core infrastructure industries (with a weight of 37.9 in IIP) showed an improved performance in September 2013–14 (Figure I4). The overall index rose eight per cent in September. All sectors have recorded a positive growth, with highest growth achieved by refinery products (32.1%), followed by electricity (12.6%), coal (12.5%) and cement (7.3%). The only industry that reported a decline in production in September was natural gas (–14.1%) and crude oil.

Figure I4: Core sector: A Snapshot (% y-o-y)



Source: eaindustry.nic.in

For coal, this is the highest growth achieved in the last 12 months and came despite a strong base (22.2% growth in September 2012). Coal India, with around 80 per cent share in total production, reported 15.6 per cent growth in output. The company also achieved 99 per cent of its production target for the month. The improved availability of coal increased electricity generation by 12.6 per cent. As per the data released by the Central Electricity Authority (CEA), coal based electricity generation increased by 21.9 per cent in September 2013, compared to its year-ago level. It more than compensated the fall in gas based (–31.3%) and nuclear power (–5.2%) generation and weak growth in hydel power generation (3.1%).

Construction activity in India has gathered momentum after the monsoon. This has increased the demand for cement as well as steel and is reflected in a healthy 6.6 per cent rise in steel production.

However, when compared to the corresponding performance in the previous year the performance in the first half of the current financial year is discouraging. Coal production has grown 2.3 per cent, down from 9.4 per cent growth recorded in the same period of the previous financial year. Crude oil production declined from –0.8 per cent to –1.3 per cent and there is a huge decline in the natural gas sector (–16.5%), probably reflecting the uncertainty on price mechanism for natural gas and the controversy linked to allocation of gas block and production control by the principle private producer.

Refinery products, on the other hand, have recorded a growth of 5.3 per cent, down from 27 per cent during the same period (i.e., April-September) of the previous year.

I.4 Credit Availability

Credit growth to industry declined from 23 per cent in 2010–11 to 15 per cent in 2012–13.

There was a noticeable decline in bank credit extended to the construction, infrastructure and mining sectors but credit to the commercial sector has picked-up since the middle of Q2. Overall industrial credit growth (y-o-y) was at 17.6 per cent as at the end of September with sectors such as basic metals, chemicals, cement, gems and jewellery, wood and food-processing delivering an above-average growth.

I.5 Outlook

The outlook for the sector is none too bright although it has a very high potential (Box I1). Overall industry is expected to grow at a slower pace than last year. Weak industrial growth would bring in adverse impact in infrastructure, cement, steel, power, construction and automobiles, where sales volumes will remain under stress due to the relentless re-adjustment in the investment cycle along with decelerating consumption. The slow pace of industry will also impact employment generation and will put a pressure on income growth.

Box I1. Industrial Corridors

The National Manufacturing Policy argues that development of manufacturing is key to industrial growth. On average, manufacturing forms 16 per cent of Indian GDP. Over the last five years (2007–12), it has grown at an average rate of nine per cent. The goal is to increase the rate of growth to 12 to 14 per cent. The manufacturing sector has the potential to absorb excess labour out of agriculture. Lack of adequate power and transport infrastructure, land acquisition issues were held as challenges for development of industry. The new economic geography argues about developing industrial zones or clusters across geographies and developing value chains in these zones or clusters to improve economic growth and development. There are several industrial corridors proposed to be built in India namely the Delhi Mumbai Industrial Corridor (DMIC), Kolkatta-Amritsar-Delhi and Mumbai-Bengaluru Chennai corridor. Essentially these will ease infrastructural constraints, lower transport and connectivity costs and the transition to urbanisation will be done in a smart and planned manner. Further they will bring long term benefit to business and industry. For example, currently most transportation of goods between Delhi and Mumbai takes place on road transport and can take up to 14 days. The DMIC by developing dedicated freight corridor can transfer goods from Delhi to Mumbai in 13 to fourteen hours. Developing values chains like in East Asia can become a reality. The biggest challenge in building industrial corridors is land acquisition and scaling up.

Sources: 1. Delhi-Mumbai Industrial Corridor website. http://delhimumbaiindustrialcorridor.com/,
2. Pricewaterhouse Cooper. 2012. Point of View: National Manufacturing Policy. http://www.pwc.in/en_IN/in/assets/pdfs/industries/industrial-manufacturing/national-manufacturing-policy-pov.pdf, October.

Table I1: IIP-Performance in terms of the Use-based Classification: April-August Period of Comparison (% y-o-y)

	Basic goods	Capital goods	Intermediate goods	Consumer durables	Consumer non-durables
2011–12	7.6	7.4	0.9	4.5	4.3
2012–13	2.8	–14.4	1.0	5.1	1.6
2013–14*	0.5	0.7	2.3	–11.0	6.6

Source: eaindustry.nic.in
Note: These figure refer to April-August, 2013–14.

Services

Pralok Gupta

The services sector has been the engine of Indian economic growth in the last decade. It was IT services exports to the United States which primarily pushed services export growth from India. The recent slowdown in the services sector has both affected and been affected by the overall slowdown in both external and internal economic growth. These challenges have brought forth the challenges being faced by the services sector and especially the lack of diversification within the sector. A vision and a plan to develop the services sector is the need of the hour which will foster both growth and employment within the sector and throughout the rest of the economy.

S.1 Backdrop

The services sector is one of the key reasons for India's phenomenal rise on the global arena in the post liberalisation era. The services sector has contributed significantly to growth, Gross Domestic Product (GDP) and integration with world markets during this period. However, despite its large contribution to almost all aspects of the Indian economy, it is perhaps one of the least understood and researched areas. While on one hand, the services sector is considered as the upcoming part of the Indian economy which has and will continue to put India on a high growth path, on the other, there is concern over the implications of this services-led growth for inclusiveness and employment creation. Despite a significant jump in the share of services in GDP, the sector's contribution to employment has increased only marginally over the liberalisation period in India. Due to this phenomenon, many economists have characterised India's growth story as one of 'jobless growth', i.e., high growth that has not been accompanied by the creation of an adequate number of jobs. There are also concerns about the sustainability of the high growth rates experienced in various services subsectors.

The rapid growth of the services sector in India in the post-reform era and has helped India emerge as one of the fastest-growing economies in the world in the last decade. In 2011, India was ranked 9th and 10th in the world in terms of overall GDP and services GDP, respectively. India has also figured as the topmost country in terms of the increase in the share of services in GDP (8.1%) for the period 2001–2011. The compound annual growth rate (CAGR) of services for the period 2001–2011 in India was 9.2 per cent, second only in the world after China. Given its growth performance, the contribution of the services sector (excluding construction) to overall GDP has increased sharply, from 41 per cent in 1990–91 to 56.5 per cent in 2012–13. If we include the construction sector, the share would increase to 64.8 per cent in 2012–13.

Major commercial services showing high shares include trade, transport by other means (i.e. excluding railways), banking and insurance, and real estate, ownership of dwellings, and business services, besides construction (Table S1). For 'trade', though the growth was a modest to 6.5 per cent, the share improved to 16.6 per cent in 2011–12. 'Transport by other means' maintained its share at 5.4 per cent levels with 8.6 per cent growth. 'Banking and insurance' was the most dynamic sector in 2011–12 with a growth of 13.2 per cent and marginal improvement in its share at 5.7 per cent.

'Real estate, ownership of dwellings, and business services' also experienced robust growth of 10.3 per cent and witnessed marginal improvement in its share at 10.8 per cent. 'Other services', which include community services (education, medical, and health being the major ones) and personal services, grew at a slower pace

of 6.5 per cent in 2011–12 with a share of 7.9 per cent both in 2010–11 and 2011–12. However, some sub-sectors within community services, such as coaching centres and membership organisations, have not only experienced high growth rates but their shares in this segment are also rising. 'Construction' has been growing unevenly since the global crisis and is having a share of 8.2 per cent.

In spite of very robust growth over the past couple of years, there are concerns about lopsided growth and sustainability of services growth in India (Box S1). Signs of deceleration are already emerging in this sector owing to both domestic and international factors. In 2011–12 and 2012–13, there was a deceleration in the growth rate of the services sector at 8.2 per cent and 6.6 per cent, respectively. Among the major broad categories of services, 'financing, insurance, real estate, and business services' decelerated to 8.6 per cent in 2012–13 after showing robust growth both in 2010–11 and 2011–12. While in 2011–12 growth in 'trade, hotels, and restaurants' and 'transport, storage, and communication' slowed down to 6.2 per cent and 8.4 per cent, respectively, in 2012–13, 'trade, hotels, and restaurants' and 'transport, storage, and communication' combined grew by an estimated 5.2 per cent.

The performance of the services sector during the first six months of the current financial year (2013–14) is also not very encouraging. As per the Reserve Bank of India statistics, the services sector grew only at 6.2 per cent during Q1 of 2013–14 compared to 7.6 per cent during the same period last year, largely due to moderation in the growth of 'construction' and 'trade, hotels, restaurant, transport and communication' sectors. 'Community, social & personal services' is the only subgroup which showed improvement in Q1 of 2013–14 as compared to the same period last year. Table S2 shows the growth rate of various services sub-sectors during the first quarter of FY2012–13 and FY2013–14.

Lead indicators of services sector also pointed towards subdued services sector activity during the first six months of the current financial year. Whereas some indicators of the services sector, such as passenger and commercial vehicles sales and some segments of the aviation industry contracted, other indicators like tourist arrivals, railway freight revenue and steel production showed signs of improvement. The RBI has prepared a services sector composite indicator based on growth in indicators of construction, trade and transport and finance. This composite indicator showed a downturn in the first quarter, but a modest pickup in July-August of fiscal year (FY) 2013–14. The recently published RBI forecast of India's GDP for 2013–14 (Survey of Professional Forecasters on Macroeconomic Indicators, 25th Round (Q2:2013–14)) lowers the growth forecast for services to 6.2 per cent from 7.1 per cent in the previous round.

Box S1: Synergy between Services and Manufacturing

Thus, it seems that the initial euphoria of services growth in India is misplaced. This may partly be attributed to a lack of synergy with the manufacturing sector. This is in contrast to China where both the manufacturing and the services sectors are growing hand-in-hand. In this context, it is worth noting that though China has shown the highest services CAGR of 11.1 per cent in the 2001–2011 period, the share of services in its GDP has changed only marginally during this period. However, for India, high services CAGR (9.2 per cent) is also associated with the highest change in its contribution to the GDP. Thus China's growth story is based on the development of both the industrial and services sectors, whereas, India's growth story is mainly driven by the services sector heedless of industry.

The growth and liberalisation of India's services sector and the consequent rise in its share in India's GDP is not well correlated with employment generation in India. Table S3 shows the share of employment per sector in India for the years 1993–94, 2004–05, 2007–08 and 2009–10. The data reveals that while the share of employment in the tertiary sector (predominantly services) increased over the years, the primary sector (predominantly agriculture) is still the dominant employer. The share of the primary sector in employment fell sharply between 1993–94 and 2004–05. The consequent rise in the share of employment in the secondary (predominantly industry including construction) and tertiary sectors was fairly balanced between the two.

This observed trend for India is in contrast to the trend in developed and some developing countries wherein the contribution of services sector to employment not only increased over time with development, but services also became the dominant player in employing human resources in these economies. For instance, by the beginning of 2000, about three quarters of employees were working in services in several OECD countries. Not only developed countries, even developing countries, such as Latin American countries Chile, Peru, Colombia, Panama and many Asian countries, such as Korea, also have a significantly higher share of services in their overall employment. Among BRICS countries, only China and India have a low employment contribution of services. However, the gap between employment and GDP contribution of services for India is much wider than China. This is because of the fact that share of services is low for both GDP and employment in China due to the predominance of its industrial sector.

A closer look at India's employment data reflects that there are widespread differences in employment in various services sectors and states across India. While some states, such as Kerala, have a high share of employment in the services sector, states like Chhattisgarh, Madhya Pradesh, Gujarat have relatively low shares of employed people in services. Many north-eastern states like Sikkim, Tripura and Manipur have a high share of employment in services. From a sectoral perspective, construction; trade, hotels, and restaurants; and public administration, education, and community services are the three major employment-providing services across different states.

There are also wide differences in the employment share of the services sector between rural and urban India. It is much higher in urban India for most states as compared to rural India. The latter implies that services growth has more or less been concentrated in urban India and that the fruits of high services growth have not percolated to rural India. A natural corollary of this imbalance is that of late there has been a lot of internal migration in India from rural to urban areas for employment, including in the service sector. Such rural-urban migration has increased the challenges for the urban civic bodies, which are already finding it difficult to meet the growing needs of rapid urbanization in India, and it is evident that employment trends in the services sector have in part contributed to these challenges.

S.2 Trade in Services

The services sector has also contributed to India' enhanced trade performance. Services exports have grown significantly, from less than USD seven billion in 1995 to over USD 141 billion by 2012. As per the RBI statistics, the services exports during the first quarter of FY 2013–14 were USD 36.5 billion, slightly up from USD 35.8 billion during the corresponding period in 2012–13. During April-July period of 2013–14, the cumulative services exports have amounted to USD 50.93 billion. India's share in global services exports has

also risen from 0.5 per cent in 1995 to over three per cent in 2012. The sector's share in the country's exports has risen from around 18 per cent in 1995 to over 39 per cent in 2011.[1]

However, India's services exports have, by and large, revolved around one service sector, i.e., Information Technology (IT) services and one market, i.e. the United States (US). As per the National Association of Software and Services Companies (NASSCOM) statistics, the IT services exports contributed to around USD 69 billion and USD 76 billion in FY2012 and FY2013, respectively. Thus, around half of the total services exports from India consists of IT services exports. The US is the major destination for India's IT services exports by contributing more than 60 per cent to such exports. Other services and other markets have not contributed to exports in a significant way, although there is potential for services exports across many other services and markets.

Services sector has also contributed significantly to inward foreign direct investment (FDI) in India. As per the Department of Industrial Policy and Promotion (DIPP) statistics, the services sector FDI equity inflows were around USD 1.2 billion for the first five months of the current financial year (2013–14). Cumulatively, such inflows stood at around USD 38 billion for the April 2000 to August 2013 period. The sub-sectors attracting higher FDI equity inflows include construction, telecommunication, computers and hotel and tourism.

India is also actively involved in signing services FTAs with countries both within and outside the Asian region. In fact, the trend is to negotiate comprehensive trade agreements covering various trade issues, such as goods trade, services trade, investment, IPRs, etc. However, to what extent these agreements are motivated by economic principles and to what extent by political considerations is difficult to understand. The outcomes with respect to the services sector, in terms of boosting services exports to partner markets and easing associated barriers are not quite clear.

S.3 Underlying Challenges and Policy Suggestions

Services sector in India suffers from lack of backward and forward linkages with agriculture and industrial sectors. This sector needs to be linked with the other two sectors in order to have sustainable and inclusive growth. For instance, if the agriculture sector (primary) could have been linked with the agro processing industries (secondary) in rural areas, which in turn been linked to various input services (tertiary) such as financial, transport, insurance etc., sustained growth and more employment may have been generated. This would have also solved the problem of large scale migration from the rural areas to the urban settlements.

Another important issue is that many of these services require domestic reforms before they can become globally competitive. The problem here is that the issue of domestic reforms is often confused with the issue of opening up and liberalisation of these services.

There is inadequate recognition of the importance of capacity building, standards, skilling, regulatory architecture and other such domestic issues for strengthening India's services sector, regardless of the issue of liberalizing the concerned services.

1 Source: UNCTAD Statistics

The export basket of India's services trade is not well diversified. There is a need to focus on the issues, concerns and on the way forward to realise the unrealised export potential that India possesses in services other than IT services (Box S.1). For instance, there is growing appreciation of the immense potential for globalisation of Indian health care services. However, due to the lack of systematic approach, the potential of health services exports is not well explored. Although there is some understanding of the implicit and explicit barriers to health services trade and of the facilitating factors, the understanding in this regard remains limited and often anecdotal.

One of the very important factors hindering export potential of India's services is the lack of a nodal ministry dealing with various aspects of services trade. As services trade is a complex subject and rules of trade are still emerging at the international level, the individual ministries dealing with various services are not well aware of these developments. Moreover, there is also a lack of coordination among various ministries and regulatory bodies involved for various services. In such a situation, it becomes difficult to export many services, such as accountancy or architectural services which are governed by their respective professional councils, though these services have significant export potential.

A related issue is the lack of awareness about services trade and India's potential in this sector both at the central and state government levels. It is generally observed that trade officers and line ministries are not well conversant with the disciplines and modalities of services trade. In fact, in many states, there is no organisation responsible for overseeing matters concerning services trade.

Data availability also poses serious limitations to understanding India's trade potential in services and its realization. Bilateral data disaggregated at sectoral level is not available, which also imposes a limitation on analysing the impact of various services FTAs signed by India.

An important development in services trade at the international level is the Trade in Services Agreement (TISA). The stalling of the Doha Development Round led some WTO Members to consider alternative approaches to opening up services markets across countries, in early 2012. The TISA is an attempt, led by developed countries, in this direction. The US, the EU and Australia, along with some other likeminded members, called the Really Good Friends (RGF) of Services, have proposed this plurilateral approach to services.

Thus far, India, Brazil, South Africa and China are not part of the TISA. However, very recently, China has expressed its intention to join this agreement. The existing members wish to apply a condition on China's entry into this agreement by stipulating that whatever is already discussed and agreed in the proposed agreement will not be discussed. This development is important for India. As an important services player, it would be difficult for India not to be part of this agreement. But whenever it does join TISA, it may have already missed out on many issues which would already have been discussed and would not be in a position to raise them again.

So, late entry into TISA could cause India to be at the receiving end in a sector where it is an important global player.

S.4 Outlook

Thus far, the services sector has not been studied in a comprehensive manner in India. Rather, various facets of services, such as growth, trade and employment have been looked into in a compartmentalised manner. For instance, with the rising current account deficit owing to a growing merchandise trade deficit, the government has recently started focussing on increasing services exports. However, there is no comprehensive policy as yet which focuses on services exports, leave aside any holistic policy to deal with domestic and international issues related to services. Therefore, the services sector needs to be studied in an integrated and holistic manner and not in silos, if its contribution not only to GDP but also to employment and exports is to be enhanced and made sustainable in the long term.

It will also be important to have more broad-based growth within the services sector in order to ensure balanced, equitable and employment-oriented growth in the economy. Such broad-based growth will require reforms in infrastructure and regulation and further liberalisation of FDI in services. These measures are likely to help in diversifying the sources of growth, thereby also increasing employment opportunities in the Indian economy.

Table S1: Share and Growth (% y-o-y) of Various Services in India, 2000–2001 to 2012–2013

	2000–01	2005–06	2006–07	2007–08	2008–09	2009–10^	2010–11@	2011–12*	2012–13**
Trade, hotels & restaurants	**14.6**	**16.7**	**17.1**	**17.1**	**16.9**	**16.5**	**17.2**	**18**	**25.1#**
	(5.2)	**(12.2)**	**(11.1)**	**(10.1)**	**(5.7)**	**(7.9)**	**(11.5)**	**(6.2)**	**(5.2)**
Trade, hotels & restaurants	13.3	15.1	15.4	15.4	15.3	15.1	15.7	16.6	
	(5.0)	(11.6)	(10.8)	(9.8)	(6.7)	(8.5)	(11.5)	(6.5)	
Hotels & restaurants	1.3	1.6	1.7	1.7	1.5	1.4	1.5	1.5	
	(7.0)	(17.4)	(14.4)	(13.0)	(–3.3)	(1.9)	(10.8)	(2.8)	
Transport, storage & communication	**7.6**	**8.2**	**8.2**	**8**	**7.8**	**7.7**	**7.3**	**7.1**	
	(9.2)	**(11.8)**	**(12.6)**	**(12.5)**	**(10.8)**	**(14.8)**	**(13.8)**	**(8.4)**	
Railways	1.1	0.9	0.9	1	0.9	0.9	0.8	0.7	
	(4.1)	(7.5)	(11.1)	(9.8)	(7.7)	(8.8)	(5.9)	(7.5)	
Transport by other means	5	5.7	5.7	5.6	5.5	5.3	5.3	5.4	
	(7.7)	(9.3)	(9.0)	(8.7)	(5.3)	(7.3)	(8.2)	(8.6)	
Storage	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
	(6.1)	(4.7)	(10.9)	(3.4)	(14.1)	(19.3)	(2.2)	(9.4)	
Communication	1.5	1.6	1.5	1.4	1.4	1.4	1.1	0.9	
	(25.0)	(23.5)	(24.3)	(24.1)	(25.1)	(31.5)	(25.4)	(8.3)	
Financing, insurance, real estate & business services	**13.8**	**14.5**	**14.8**	**15.1**	**15.9**	**15.8**	**16**	**16.6**	**17.2**
	(4.5)	**(12.6)**	**(14.0)**	**(12.0)**	**(12.0)**	**(9.7)**	**(10.1)**	**(11.7)**	**(8.6)**
Banking & Insurance	5.4	5.4	5.5	5.5	5.6	5.4	5.6	5.7	
	(–2.4)	(15.8)	(20.6)	(16.7)	(14.0)	(11.4)	(14.9)	(13.2)	
Real estate, ownership of dwellings & business services	8.7	9.1	9.3	9.6	10.3	10.4	10.4	10.8	
	(7.5)	(10.6)	(9.5)	(8.4)	(10.4)	(8.3)	(6.0)	(10.3)	
Community, social & personal services	**14.8**	**13.5**	**12.8**	**12.5**	**13.3**	**14.5**	**14**	**14**	**14.3**
	(4.6)	**(7.1)**	**(2.8)**	**(6.9)**	**(12.5)**	**(11.7)**	**(4.3)**	**(6.0)**	**(6.8)**
Public administration & defence	6.6	5.6	5.2	5.1	5.8	6.6	6.1	6.1	
	(1.9)	(4.3)	(1.9)	(7.6)	(19.8)	(17.6)	(0.0)	(5.4)	
Other services	8.2	7.9	7.6	7.4	7.5	7.8	7.9	7.9	
	(7.0)	(9.1)	(3.5)	(6.3)	(7.4)	(7.2)	(8.0)	(6.5)	

(Contd...)

Table S1: Share and Growth (% y-o-y) of Various Services in India, 2000–2001 to 2012–2013 *(Contd...)*

	2000–01	2005–06	2006–07	2007–08	2008–09	2009–10^	2010–11@	2011–12*	2012–13**
Construction	**6.0**	**7.9**	**8.2**	**8.5**	**8.5**	**8.2**	**8.2**	**8.2**	**8.2**
	(6.1)	**(12.8)**	**(10.3)**	**(10.8)**	**(5.3)**	**(6.7)**	**(10.2)**	**(5.6)**	**(5.9)**
Total services	**50.8**	**53.1**	**52.9**	**52.7**	**53.9**	**54.5**	**54.4**	**55.7**	**56.5**
	(5.4)	**(10.9)**	**(10.1)**	**(10.3)**	**(10.0)**	**(10.5)**	**(9.8)**	**(8.2)**	**(6.6)**
Total services (incl. Construction)	**56.8**	**61**	**61**	**61.2**	**62.4**	**62.7**	**62.6**	**63.9**	**64.8**
	(5.5)	**(11.1)**	**(10.1)**	**(10.3)**	**(9.4)**	**(10.0)**	**(9.8)**	**(7.9)**	**(6.5)**
Total GDP	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
	(4.3)	**(9.5)**	**(9.6)**	**(9.3)**	**(6.7)**	**(8.6)**	**(9.3)**	**(6.2)**	**(5.0)**

Source: Economic Survey, 2012–13.

Notes: Shares are in current prices and growth in constant prices;Figures in parenthesis indicate growth rate;
* first revised estimates @ second revised estimates ^ third revised estimates ** Advance Estimates (AE);
# includes the shares and growth of bothtrade, hotels & restaurants and transport, storage and communication only for 2012–13

Table S2: Service Sector Growth Rate in Q1 of FY2012–13 and FY2013–14

Sector	Q1 FY2012–13	Q1 FY2013–14
Trade, hotels, transport & communication	6.1	3.9
Financing, insurance, real estate and business services	9.3	8.9
Community, social & personal services	8.9	9.4
Construction	7.0	2.8
Services Sector	**7.6**	**6.2**

Source: RBI Macroeconomic and Monetary Developments Second Quarter Review 2013–14.

Table S3: Share of employment per sector in India (%), 1993–94, 2004–05, 2007–08 and 2009–10

Year	Primary	Secondary	Tertiary
1993–94	64.5	14.3	21.2
2004–05	57.0	18.2	24.8
2007–08	55.9	18.7	25.4
2009–10	53.2	21.5	25.3

Source: Economic Survey, 2010–11 and 2012–13.

Money and Capital Markets

Mythili Bhusnurmath

India is caught in the impossible trinity dilemma. The last quarter was a roller-coaster ride for the money and capital markets. And the outlook is that liquidity conditions are expected to ease on account of strong dollar inflows which means that inflation will persist.

M.1 Backdrop

According to the Reserve Bank of India's (RBI) Report on Macroeconomic Developments released on the eve of its Annual Policy statement in May 2013, liquidity conditions exhibited mixed trends during 2012–13. Overall, the liquidity situation was comfortable but was interspersed with bouts of tightness. As part of its bid to balance growth and inflation concerns the RBI lowered the policy interest rate and the statutory liquidity ratio (SLR) by 100 basis points (bps) each, and the cash reserve ratio (CRR) by 75 bps in 2012–13. It also undertook liquidity injections through outright purchases of Government Securities (G-Sec) as a part of open market operations (OMOs) totalling about ₹1.5 trillion during the year, though rising current account deficit (CAD) risks ensured the Bank moved slowly while easing.

However, despite the relatively large injection of liquidity by the RBI, adverse sentiments emanating from global and domestic developments dampened credit expansion. As a result, non-food credit growth extended by scheduled commercial banks remained below the indicative trajectory of the Reserve Bank of India (RBI). Part of the reason for this was the sharp deterioration in asset quality. Asset quality indicators of the banking sector, which had deteriorated significantly during 2011–12, worsened further in 2012–13 as slower economic growth put pressure on corporates' re-paying ability.

M.2 Monetary Developments 2013–14

The first quarter saw the RBI ease its monetary stance as inflationary pressures seemed to be receding. According to the RBI's Annual Policy statement for 2013–14 announced in May 2013, the Bank's policy stance for 2013–14 has been guided by two factors. One, the fact that growth has decelerated continuously and steeply, more than halved from 9.2 per cent in Q4 of 2010–11 to 4.5 per cent in Q3 of 2012–13. And two, the fact that 'although headline Wholesale Price Index (WPI) inflation has eased by March 2013 to come close to the RBI's tolerance threshold, food price pressures persist and supply constraints are endemic, both of which could lead to a generalisation of inflation and strains on the balance of payments.

Based on these two premises, more specifically a growth projection of 5.7 per cent and inflation projection of 5.5 per cent, the RBI projected a M3 growth of 13 per cent for 2013–14 and an aggregate deposits growth of 14 per cent for scheduled commercial banks (SCBs).

However, since in the Bank's assessment, growth is likely to remain subdued during the first half of this year with a possible modest pick-up in the second half of 2013–14, it reduced the repo rate by 25 basis points to 7.25 per cent. In consonance with this the reverse repo rate was adjusted down to 6.25 per cent, the

Marginal Standing Facility (MSF) to 8.25 per cent while the CRR was kept unchanged at four per cent.

The reduction in the repo rate combined with the increase in the government's spending during Q1:2013–14 helped ease liquidity conditions in the system. As a result, SCBs took recourse to MSF on only four occasions during the quarter, borrowing around ₹20 billion. However, hopes of further easing were quickly belied following the US Federal Reserve (Fed) Chairman Ben Bernanke's hints, mid-May 2013, about tapering the Fed's bond buying programme. The resultant mayhem in the forex market with the Rupee depreciating sharply against the dollar, forced the RBI to reverse its stance.

Saying India is caught in a classic 'impossible trinity' trilemma where it is forced to 'forfeit some monetary policy discretion to address external sector concerns', the RBI announced a spate of liquidity tightening measures aimed at 'checking undue volatility in the foreign exchange market' on 15 July 2013.

These measures included (i) a hike in MSF rate/Bank Rate; (ii) restriction on banks' access to funds under Liquidity Adjustment Fund (LAF) repo; (iii) Open Market Operations (OMO) sales; (iv) maintenance of minimum daily CRR balances by SCBs at 99 per cent of the requirement; (v) capping of Primary Dealers (PDs') access to LAF at 100 per cent of their individual net owned funds; and (vi) restrictions on gold import.

Thus the MSF rate was re-calibrated to 300 basis points above the policy repo rate under the LAF to 10.25 per cent. The overall allocation of funds under LAF was capped at one per cent of the Net Demand and Time Liabilities (NDTL) of the banking system, with the cap reckoned at ₹750 billion. The Reserve Bank also conducted open market sales of G-secs withdrawing liquidity to the tune of ₹25 billion on July 18, 2013.

On July 23, the RBI tightened liquidity further by restricting access to LAF by way of repos at each individual bank level and restricting it to 0.5 per cent of the bank's own NDTL with effect from 24 July, 2013. Rules for maintenance of CRR were also made tighter. Thus the CRR, which banks have to maintain on a fortnightly average basis subject to a daily minimum requirement of 70 per cent, was modified. Banks were henceforth required to maintain a daily minimum of 99 per cent of the required CRR.

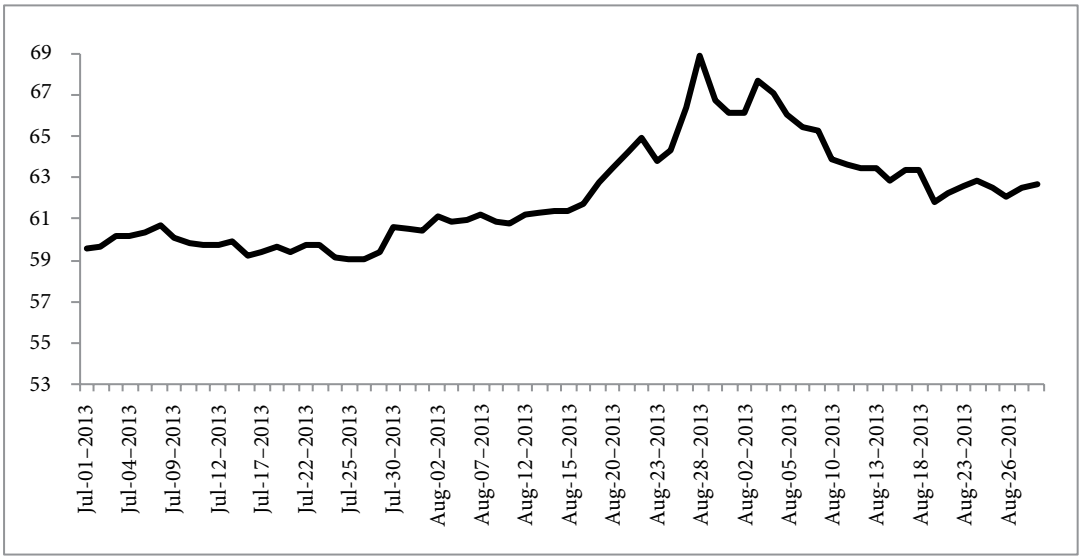
The RBI clarified that these measures would be rolled back in a 'calibrated manner as stability is restored to the foreign exchange market, enabling monetary policy to revert to supporting growth with continuing vigil on inflation.' In the event, however, these measures did not go down well with the market. On the contrary, forex, equity and bond markets tanked almost in unison. The exchange rate of the Rupee versus the US dollar continued to decline despite the emergency measures adopted by the RBI even as bond yields rose (Box M1) and overseas investors pulled out of the debt market in a big way. The nadir was reached on 28 August when the Rupee touched an unprecedented low of ₹68.85 to the dollar (Figure M1).

Box M1: Bond Yields

Bond yields showed almost as much volatility as the exchange rate during the quarter under review. Bond yields had fallen considerably during the first quarter in response to signs of improvement on the inflation front. However, following the upheaval caused by the US Fed Chairman's statement of mid May and his subsequent press conference in June where he seemed to suggest the Fed would begin to taper its bond-buying programme later the year, bond yields rose dramatically as overseas investors fled emerging market economies.

Beginning mid-July bond yields rose precipitously almost impervious to the RBI's liquidity tightening measures. After touching a high of over nine per cent mid-August, yields fell to below eight per cent. The quarter finally closed with the 10-year benchmark G-Sec in the range of 8.6–8.7 per cent, considerably higher than the yield of 7.4 per cent in April 2013, but lower than the highs of over nine per cent seen mid August 2013. Figure 2

Figure M1: ₹/US$ July-September, 2013



Source: Reserve Bank of India.

M.3 Change of Guard at RBI

Following the change of guard at the RBI, the confidence-boosting measures announced by the new governor, Raghuram Rajan and the US Fed decision at its September meet to defer tapering its bond-purchase programme, some stability was restored to the forex and bond markets. The measures announced by the RBI include a special concessional window for swapping fresh FCNR (foreign currency non-resident deposits) mobilised by banks for a minimum tenor of three years and over, at a fixed rate of 3.5 per cent per annum for the tenor of the deposit. Additionally, overseas borrowing limits of banks have been raised from 50 per cent of the unimpaired Tier I capital to 100 per cent. Borrowings mobilised under this provision can

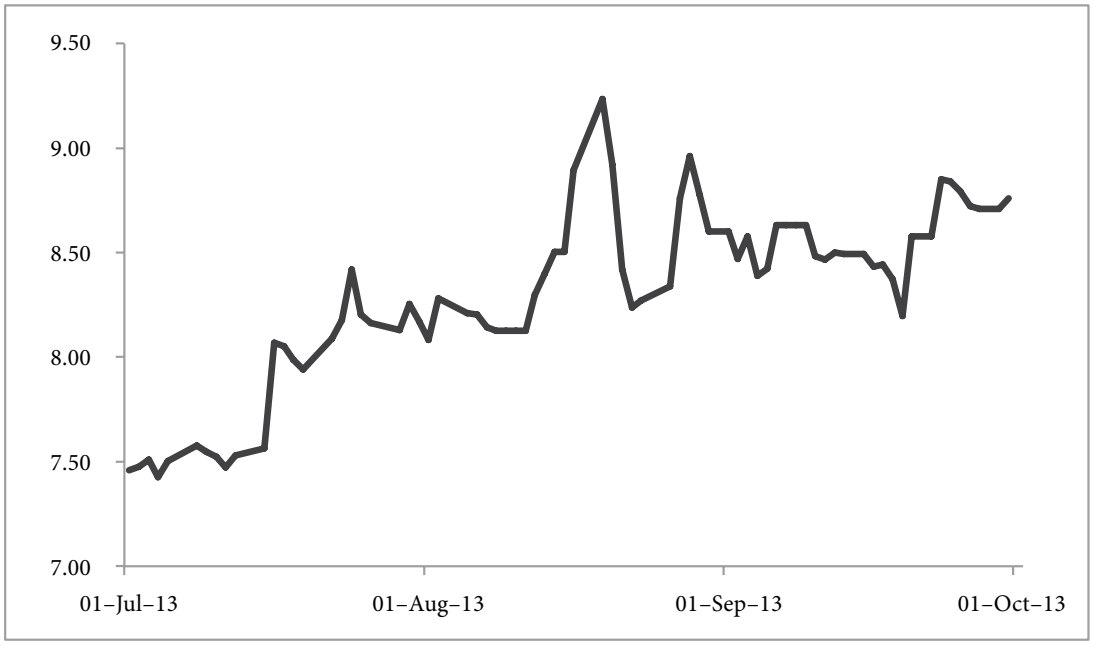
be swapped with RBI at the option of the bank at a concessional rate of 100 bps below the ongoing swap rate prevailing in the market. Both these measures are to remain in force till 30 November 2013, coinciding with the expiry of the relaxations allowed on NRI deposits. These announcements seemed to calm the market. Indeed the Rupee posted a V shaped recovery by mid September moving from a low of 68.80 on 28th August to ₹61–62 levels by the end of the quarter.

Subsequently, the RBI, in its mid-quarter review of monetary policy on 20th September (for the first time the original date of the Review was pushed backed to after the Federal Open Markets Committee meet) rolled back some of the exceptional liquidity-tightening measures it had announced in July.

The MSF rate was reduced by 75 bps to 9.5 per cent and the requirement of 99 per cent daily maintenance of CRR was reduced to 95 per cent. However, in a signal that the RBI was not taking its eye off inflation, the new governor, Raghuram Rajan, raised the repo rate 25 basis points to 7.50 per cent.

This was followed a little over a fortnight later - on 7 October 2013 - by another 50 bps cut in the MSF rate, bringing the gap between the repo (7.5%) and the MSF rates (9.0%) to 150 bps.

Figure M2: Yield on 10 year G-Secs, July 1, 2013 to September 30, 2013 (%)



Source: Reserve Bank of India.

M.4 Money and Banking

The slowdown in the economy impacted both deposit as well as credit growth. Deposit growth has been slowing over the past few years as savers responded to negative real rates of interest (thanks to soaring inflation) by turning away from banks towards gold and other physical assets. As on 6 September 2013, deposit growth was only 13.4 per cent, compared to 14.5 per cent in the previous year. Credit growth, in

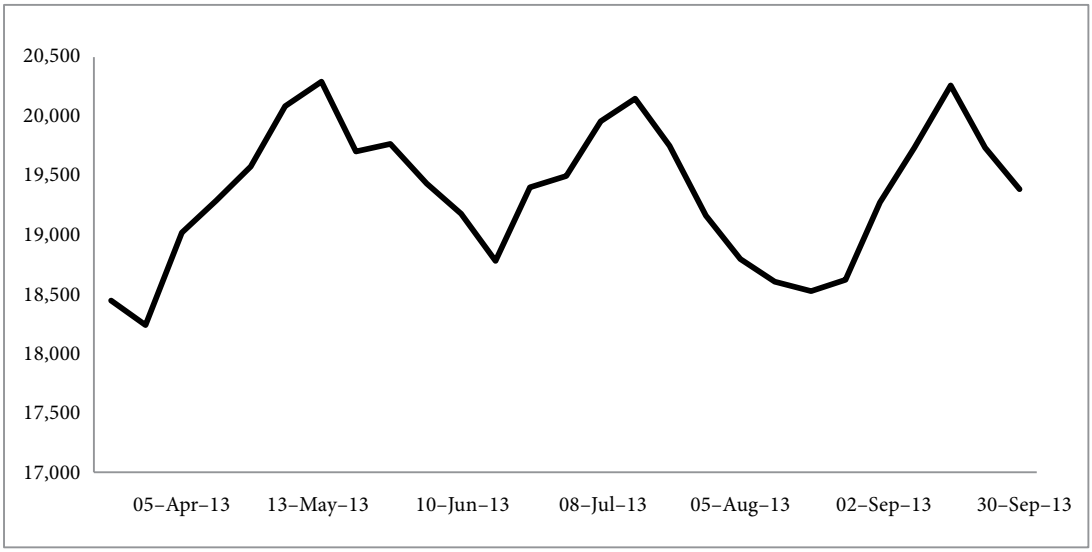
contrast, was higher at 18.2 per cent as on 6 September compared to 16.6 per cent in the previous year. As a result the incremental credit-deposit ratio shot up to 102 per cent as on 6 September 2013, up from 84 per cent during the comparable period of the previous year.

M.5 Financial Markets

It's been a roller coaster ride for stock markets as well (Figure M3). The second quarter was marked by sharp ups and downs in the Sensex as foreign institutional investors pulled out in large numbers following talk of Fed tapering (Table M1).

On 16 August the BSE Sensex tanked 769.41 points, the largest single day fall in four years on fresh concerns about the Fed withdrawing its stimulus programme. The NIFTY also nose-dived 234 points. The next few days brought little respite as FIIs continued to exit the market. On 21 August the Sensex slipped below the 18,000 mark to close at 17,905.91. However by the end of August, it had recovered ground to again touch the psychologically important level of 18,000 before touching a high of 20,646 on 19 September 2013. September has been less volatile though the month finally ended on a weak note (Figure M3). While the BSE Sensex closed at 19,727.27, the Nifty closed at 5,833.2. Broad market indices ended on a mixed note.

Figure M3: BSE Sensex Movement, April-September 2013



Source: BSE.

M.6 Outlook

Liquidity conditions are expected to ease during the second half of the year, mainly on account of strong dollar inflows. With the US Fed now expected to stay the course till early next year and the RBI girding up to boost its forex reserves, chances are we might see a return to unsterilized intervention by the RBI.

Of course, the persistence of high inflation means that the RBI will once again do a tight-rope walk - balance its need to stock up its forex coffers by buying dollars and pumping in rupees with the inflationary consequences of higher liquidity in the system.

Election time is usually characterised by much greater spending, so all told we do expect liquidity conditions to rule easy in the second half. Interest rates may move up but real interest rates will remain negative for a while longer.

Table M1: Monthly FII Net Investments *(₹crore)*

Month	Equity	Debt	Total
July	–6,086	–12,038	–18,124
August	–5,923	–9,773	–15,695
September	13,058	–5,678	7,380

Source: Securities and Exchange Board of India.

External Sector

Rajesh Chadha and Anjali Tandon

The global outlook continues to remain below the pre-crisis levels. Future policy adjustments are required for internal balancing to contain large and growing budget deficits that also impact external deficits.

E.1 Global Trends

The world economy is slated to grow more slowly at 2.9 per cent during 2013.[1] This is lower than the 3.2 per cent growth realised during 2012 (Table E1). However, the forecast for the following year 2014 is promising with growth slated to accelerate to 3.6 per cent. Growth projections for advanced economies as well as the emerging market and developing economies indicate a growth slowdown at 1.2 per cent and 4.5 per cent respectively. The existing risks of external and internal imbalances remain although in comparatively lower magnitudes, newer challenges of coordinated policy action for sustainable and balanced global growth have emerged.

The US is predicted to be the growth driver during 2013 with an estimated growth of 1.6 per cent. Economic activity in US is expected to be greatly helped by a revival in the real estate sector supported by easier lending conditions and higher borrowings. The Euro Area is beginning to show signs of stabilization in 2013 while Japan is expected to grow at two per cent during 2013 due to the stimulus package and spending on reconstruction.

While the emerging market and developing economies are expected to benefit from export growth due to stronger demand from developed countries, they face risks due to supply constraints. Brazil is expected to maintain a growth of 2.5 per cent during 2013 on account of increase in consumption and higher investment spending. Developing Asia is expected to grow at a moderate rate of 6.3 per cent during 2013. China may settle for a slightly lower growth rate at 7.6 per cent during 2013; however, growth may improve on account of its stimulus package. Growth projections for India vary from a low of 4.2 per cent to a high of 5.5 per cent.

Trade volumes are expected to expand by 2.9 per cent. Exports from advanced countries are projected to grow at 2.7 per cent in 2013 compared to two per cent growth in 2012. However, exports from the emerging market and developing economies are projected to slow down to 3.5 per cent during 2013 against 4.2 per cent in 2012. Similarly, imports of the advanced world are projected to grow at 1.5 per cent against one per cent growth in 2012. Imports of emerging market and developing economies are expected to slow down to five per cent compared with 5.5 per cent during 2012.

The global outlook continues to remain less encouraging than during the pre crisis days. Over time, imbalances have reduced due to compression in demand. This has hurt growth. Future policy adjustments are required to contain large and growing budget deficits that also impact external deficits. In addition, countries need to adapt policies for external balance. While trade surplus countries need to design policies that encourage domestic demand, the deficit countries, such as India, need to improve international competitiveness by removing supply side constraints (IMF survey, September 2013).

1 Projections in this sub-section are sourced from the IMF, World Economic Outlook, October 2013.

E.2 India's Merchandise Trade

India's external sector recovered at a remarkable pace from the global financial crisis of 2008. However, export growth has since slowed with growth turning negative (– 1.8 %) during 2012–13(DGCI&S). Likewise growth in total imports nearly stagnated at 0.4 per cent during 2012–13.

The higher growth in imports as compared to exports has resulted in worsening of the merchandise trade deficit.

The merchandise trade deficit widened from US$ 118.6 billion during 2010–11 to US$183.4 billion in 2011–12 and US$190.9 billion in 2012–13.

Quarterly trends during the past fiscal showed signs of recovery beginning in Q3: 2012–13 after decline during the preceding two quarters. Acceleration during Q4: 2012–13 was immediately followed by a decline in Q1: 2013–14. Exports have recovered in the most recent quarter, Q2: 2013–14 by expanding at 11.2 per cent. Oil imports began to accelerate during the Q2 and Q3: 2012–13, but slowed down during Q4: 2012–13 but accelerated in Q1: 2013–14. More recently, a marginal growth in oil imports has been recorded during Q2: 2013–14. Non-oil imports continued to decline during Q1 to Q3: 2012–13. After low growth during Q4: 2012–13 and Q1: 2013–14, a decline has been observed during Q2: 2013–14.

Recent data available for the first half, H1: 2013–14 shows an increase in merchandise export growth. Exports during the period April-September 2013 stood at US$152.1 billion registering a growth of 5.1 per cent compared with a negative growth of 6.2 per cent over the comparable period of the past fiscal. Since April 2013, monthly exports slowed down or declined continuously till June. However exports have picked up beginning July 2013. The year-on-year (y-o-y) export growth during the past three months of July, August and September has been 9.5, 13 and 11.2 per cent respectively (Figure E1). Export growth over the past three months has, however, been primarily driven by the low base in the comparable months last year. The month-on-month (m-o-m) growth pattern of exports, however, shows slower growth with variations (Figure E2).

Import growth continues to be in the negative zone with growth of (-) 1.9 per cent during April-September 2013 compared to (-) 2.9 per cent during comparable period of past year. Total imports during this period amounted to US$232.1 billion with oil imports at US$ 82.8 billion and non-oil imports at US$149.4 billion.

Figure E1: India's Export Growth (% y-o-y)

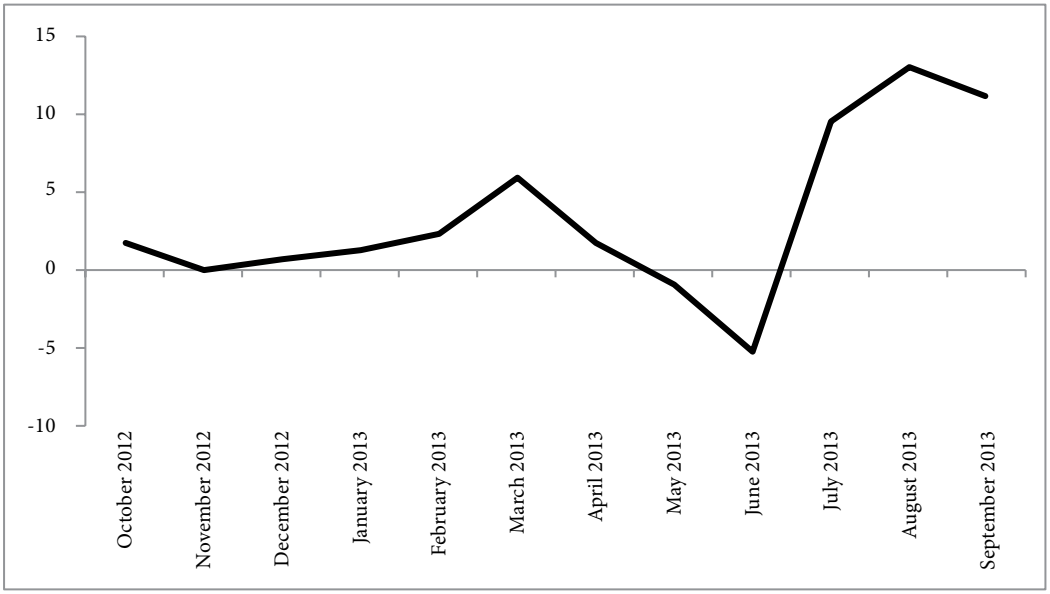
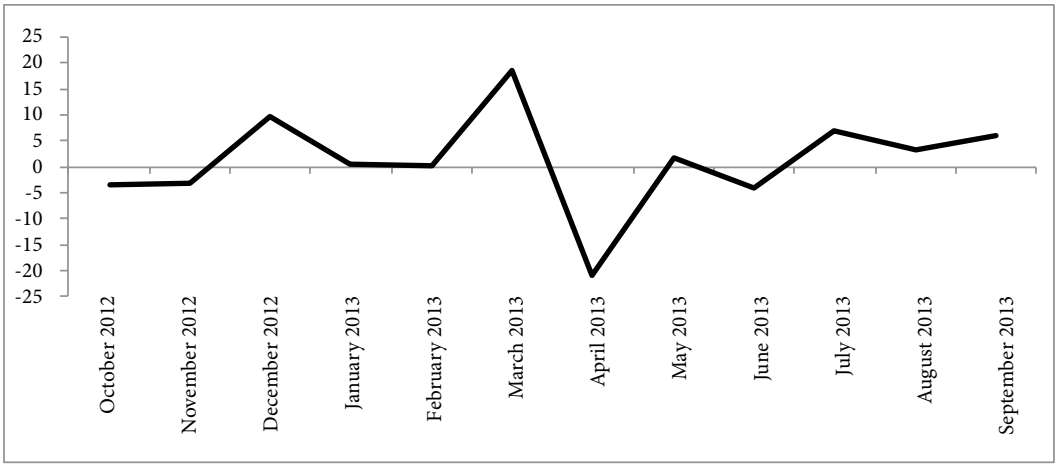


Figure E2: India's Export Growth (% m-o-m)



Source: RBI Database on Indian Economy, MoC Press Release, 9 October 2013.

E.3 Composition of Exports

During 2012–13, India's merchandise exports consisted predominantly of manufactured goods (61.2%) followed by petroleum products (20 %), other commodities (20.0%), agricultural & allied products (13.5%), and ores & minerals (1.9%).[2] The growth pattern of exports during 2012–13 has remained mixed. Export of agriculture & allied products and petroleum products grew at 8.4 and 7.7 per cent, respectively. Agriculture exports have strengthened primarily due to sharp acceleration in exports of rice (1.2%) and guar gum meal (1.3%). Exports of ores and minerals recorded a sharp decline at (-) 34.2 per cent primarily

2 Figures in parenthesis refer to shares in corresponding total merchandise trade flows (exports or imports).

due to constraints on mining activity in certain states and rising freight costs. Exports of other commodities recorded negative growth at (-) 44.8 per cent. The exports of manufactured goods remained nearly stable with marginal growth slowdown at (-) 0.9 per cent.

Data on the structure of India's merchandise export is available for the period April-July 2013. Total exports over the period remained stable compared to the negative growth of (-) 6.1 per cent during the comparable period last year. Exports under two broad categories namely petroleum products and other commodities recorded positive growth at 12.9 and 3.1 per cent, respectively while exports of agriculture & allied products as well as ores & mineral declined at 5.7 per cent and 25.3 per cent respectively. Exports of manufactured goods declined by 1.6 per cent over the period. However, some items within these broad categories have exhibited smart acceleration.

These include basmati rice (1.9 per cent) exports that have grown at 57.9 per cent and have helped India become the lead global exporter of rice.

In addition, double digit growth is observed for exports of marine products and meat & preparation each of which account for 1.3 per cent share in total exports. Within manufactured goods, significant products with share exceeding one per cent that recorded a double digit growth include leather & leather manufactures (1.8%), inorganic, organic & agro chemicals (2.1%), primary & semi-finished iron & steel (1.6%, yarns, fabrics & made-ups (4.5%) and readymade garments of cotton including accessories (5%). Among the above mentioned items, exports of textile and engineering goods have benefited in particular from the widening of the interest subvention scheme. These sectors are further expected to benefit from the recent increase in rate of interest subvention in order to boost exports from small and medium labour-intensive enterprises. However, exports of certain other labour intensive sectors such as gems and jewellery and handicrafts have been hit. The government has announced initiatives to support these sectors. These include liberal finance assistance under the Market Access Initiative and Market Development Assistance scheme. Another policy attempt to support SEZ units has been through revival of the scheme to realize and repatriate full value of goods / software and services to Indian exporters within a period of up to 12 months from the date of export.

E.4 Destination of Merchandise Exports

Nearly half of India's exports are to Asia, with another one-fifth directed to Europe, closely followed by the Americas while another one-tenth goes to the African continent. During 2012–13, exports to most regions recorded negative growth with exports to America and Africa being the only exceptions.

During April-July 2013, exports to all regions other than Europe declined. The USA (13.6%), UAE (10.2%), Singapore (6.1%), Saudi Arab (4.3%) and Hong Kong (4.1%) are the top five export destinations. Other important destinations that recorded double digit growth include Japan, Iran, Italy, Malaysia and Vietnam. Each of these destinations has an export share in access of one per cent.

E.5 Composition of Imports

Imports of crude petroleum & products constituted the single largest commodity group of imports (34.5%) during 2012–13. Important non-oil imports include food & related items (3.2%), chemical & related products

(7.2%), capital goods (12.3%), gold (10.9%), electronic goods (6.4%). Despite the higher price of crude oil, imports grew at 9.1 per cent during 2012–13 whereas imports of the aforesaid categories declined.

Imports during April-July 2013 grew 2.8 per cent with oil as well as non-oil imports growing at a similar rate. The decline in import of capital goods is worrisome as it is an indicator of a slowdown in domestic investment activity. Similarly the decline in import of coal, coke & briquettes as well as iron & steel is indicative of a relatively low level of activity in the infrastructure sectors. Nevertheless, certain important imports have recorded positive growth. Import of chemicals & related products (7.2%) has grown at 5.7 per cent over the period while import of transport equipment (2.5%) increased 12 per cent. Gold imports (11.8%) have been rather price inelastic despite multiple and successive hikes in the import duty of gold. Likewise there is a double digit growth in imports of pearls precious & semiprecious stones.

E.6 Sources of Imports

Most merchandise imports were sourced from Asia (57.7%) in 2012–13, with Europe coming next (18.7%) followed by America (11.9%). At the country level, China remained India's top most importing partner, followed by the UAE, Saudi Arab, Switzerland and USA. Imports from 10 of the top 20 source countries declined during 2012–13.

During April-July 2013, imports from Asia declined marginally to 46.4 per cent, while imports from Europe and America increased 7.5 and 13.4 per cent, respectively. China remained the most significant source of imports for India with the highest share of 10.3 per cent. However, imports from China declined at (-) 6.2 per cent. Imports from eight other major source countries declined. These include UAE, USA, Nigeria, Germany, Australia, Japan and Malaysia. At the same time, imports from some countries like Switzerland, Iraq, Kuwait, Venezuela, South Africa, UK and Hong Kong recorded double digit growth.

India reduced its trade deficit by about 38.7 per cent in Q2 of 2013–14 (y-o-y basis)

This was on account of both sharp pick up in exports and some moderation in imports as per the Reserve Bank of India Macroeconomic and Monetary Development, October 2013. Exports of products such as rice, readymade garments, marine products and other chemicals have increased during the past quarter. On the import front, imports of gold declined due to a weaker rupee and the measures taken by the Government imports of fertiliser, project goods, coal, vegetable oil, iron and steel have also slowed down during this time.

E.7 Balance of Payments

A marginal decline in merchandise exports accompanied by a small increase in merchandise imports led to further widening of India's merchandise trade deficit by 3.1 per cent in 2012–13. In the past, the deficit on merchandised trade has been supported by the surplus on invisibles. However, during 2012–13, the surplus on invisibles declined (-) 3.7 per cent. This happened due to a slowdown in invisible exports to 2.2 per cent while invisible imports accelerated by 8.3 per cent. The slowdown in invisible exports is primarily on account of deceleration in software service exports that increased at only 5.9 per cent with a share of 29.4 per cent in gross invisibles outflows during 2012–13 compared to 17.2 per cent growth in the previous year. On the other

hand, inflows of business services have accelerated at 13.3 per cent with a 26 per cent share in total invisible inflows compared to a declined observed in the preceding year. A lower surplus on the invisibles front and a slightly higher deficit on the merchandise trade front resulted in wider current account deficit (CAD). The CAD increased to US$88.2 billion in 2012–13 as compared with US$78.2 billion in the previous year.

The net surplus on capital account recorded a smart increase (31.8%) due to a sharp decline in outflows under the current account. The capital account surplus increased to US$89.3 billion in 2012–13 as compared with US$67.8 billion in 2011–12. Outflows and inflows of FDI as well as portfolio investment declined during the period with the decline in inflows being relatively sharp. After accounting for errors and omission of US$2.7 billion, overall balance of payments was US$3.8 billion during 2012–13.

Developments during the Q1: 2013–14 show an increase of 27.5 % in the CAD primarily due to an increase in imports while exports have been nearly stagnant (Table E.2). The CAD has increased to US$21.8 billion compared to US$17.1 billion during Q1: 2012–13. The CAD to GDP ratio has increased from four per cent to 4.9 per cent over the period. Growth in surplus on the invisibles' front has been lower than the growth in merchandise deficit thus resulting in wider CAD.

Net inflows in the capital account increased 24.1per cent. Net FDI increased at a smart 70 per cent compared with the same period last year with about two-third of net FDI inflows being on account of equity and one-third due to reinvested earnings. However portfolio investment continued to shy away as net portfolio inflows declined by a staggering (-) 88.3 per cent. Considering the errors and omission of US$0.9 billion, the overall balance of payments shows a net deficit of US$ 0.3 billion as compared with an overall surplus of US$0.5 billion last year.

E.8 Prognosis

Growth in world output has slowed for the fourth consecutive year in 2013. The US could be a major driver of growth. A one per cent expansion in the US economy has a spill over in output growth of 0.2 per cent elsewhere with a lag of two years. A healthier US economy could trigger strong demand for developing country exports. However, the US CAD has shrunk considerably suggesting US domestic demand is, perhaps, being served by rising domestic production which means the opportunity for developing countries like India could be limited.

The turnaround in India's exports over the past quarter is expected to continue on account of improved demand from the US and EU.

Exports have also benefitted by a number of government policies including an increase in the rate of interest subvention for exporters of small and medium enterprises and labour intensive sectors such as handicrafts, handlooms, carpets, readymade garments, processed agricultural products, sports goods and toys (Box E1). Further, as many as 53 countries of Latin America and Africa have been included for market diversification in a bid to insulate export growth from a slowdown in the US and China. In addition, rupee depreciation is also expected to help exports.

While imports of oil are expected to be fuelled by rising demand for crude, a decline in international oil price would help limit the import bill. However non-oil imports, other than those of gold, are expected to slow down due to a likely decline in manufacturing activity.

Box E1: India Textiles Exports

The Indian textiles and clothing industry accounts for about 12 per cent of the manufacturing output, four per cent of GDP, 11 per cent of merchandise exports and employs about 45 million people. A large proportion of this sector operates in unorganised sector and hence lacks international competitiveness. The exports of textiles and clothing have been estimated at US$64.41 billion by the end of March, 2017. India has emerged as one of the major import sourcing country for many international buyers after the dismantling of the multi-fibre agreement.

India's exports of textiles increased from $6.9 billion in 2004 to $15 billion in 2011 posting a growth rate of 12.9 per cent per annum. The corresponding growth rate of clothing was 12 per cent. The value of clothing exports increased from $6.6 billion in 2004 to $14.4 billion in 2011. India lags behind Bangladesh in exports of clothing.

The total exports of textiles & clothing and textiles products (carpet, rugs etc.) in 2012–13 are estimated at US$31.7 billion registering a decline of about five per cent over last year and 22 per cent below the target of $39.6 billion (2012–13). However, in rupee terms, exports increased by 12 per cent (₹16,347 billion in 2012–13). The rupee depreciation is likely to help boost exports of textiles and textile products.

Source: 1) Twelfth Five Year Plan document; 2) Note on Textiles & Clothing Exports of India, International Trade Division; 3) Note from Apparel Export promotion council dated May 17, 2013; and 4) DGCI & S data.

Table E1. Growth of Global Output and Trade (%, y-o-y)

	2011	2012	Projections	
			2013	2014
World Output	3.9	3.2	2.9	3.6
Advanced Economies	1.7	1.5	1.2	2.0
United States	1.8	2.8	1.6	2.6
Euro Area	1.5	–0.6	–0.4	1.0
Germany	3.4	0.9	0.5	1.4
France	2.0	0.0	0.2	1.0
Italy	0.4	–2.4	–1.8	0.7
Spain	0.1	–1.6	–1.3	0.2
Japan	–0.6	2.0	2.0	1.2
Emerging Market and Developing Economies[4]	6.2	4.9	4.5	5.1
Central and Eastern Europe	5.4	1.4	2.3	2.7
Commonwealth of Independent States	4.8	3.4	2.1	3.4
Russia	4.3	3.4	1.5	3.0

(Contd...)

Table E1. Growth of Global Output and Trade (%, y-o-y) *(Contd...)*

	2011	2012	Projections	
			2013	2014
Developing Asia	7.8	6.4	6.3	6.5
China	9.3	7.7	7.6	7.3
India[1]	6.3	3.2	3.8	5.1
ASEAN-5[2]	4.5	6.2	5.0	5.4
Latin America and the Caribbean	4.6	2.9	2.7	3.1
Brazil	2.7	0.9	2.5	2.5
Mexico	4.0	3.6	1.2	3.0
World Growth Based on Market Exchange Rates	2.9	2.6	2.3	3.0
World Trade Volume (goods and services)	6.1	2.7	2.9	4.9
Imports				
Advanced Economies	4.7	1.0	1.5	4.0
Emerging Market and Developing Economies	8.8	5.5	5.0	5.9
Exports				
Advanced Economies	5.7	2.0	2.7	4.7
Emerging Market and Developing Economies	6.8	4.2	3.5	5.8
Commodity Prices (U.S. dollars)				
Oil	31.6	1.0	–0.5	–3.0
Nonfuel (average based on world commodity export weights)	17.9	–9.9	–1.5	–4.2

Source: World Economic Outlook, IMF, October 2013.

Notes: [1]data and forecasts are presented on a fiscal year basis.

[2]Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

Table E2: Overall Balance of Payment in India (US$ billion)

	April-June 2013 P			April-June 2012 PR		
	Credit	**Debit**	**Net**	**Credit**	**Debit**	**Net**
A. CURRENT ACCOUNT						
I. MERCHANDISE	**73,909**	**124,393**	**–50,484**	**75,001**	**118,850**	**–43,849**
II. INVISIBLES (a+b+c)	**57,049**	**28,354**	**28,695**	**55,403**	**28,647**	**26,756**
a) Services	**36,522**	**19,655**	**16,868**	**35,773**	**20,792**	**14,981**
i) Travel	3,825	2,999	826	3,506	3,101	405
ii) Transportation	4,134	3,696	438	4,250	3,656	594
iii) Insurance	503	263	240	532	249	283
iv) G.n.i.e.	130	300	–169	159	163	–5
v) Miscellaneous of which:	27,930	12,397	15,533	27,326	13,622	13,704
Software Services	16,484	350	16,134	15,631	632	14,999
Business Services	7,263	6,696	567	7,611	8,204	–593
Financial Services	1,799	2,390	–591	1,306	1,436	–130
Communication Services	635	426	209	419	104	316
b) Transfers	18,001	1,343	16,658	17,495	831	16,664
i) Official	131	265	–134	40	185	–144
ii) Private	17,870	1,078	16,792	17,455	647	16,808
c) Income	2,526	7,357	–4,830	2,135	7,024	–4,889
i) Investment Income	1,777	6,784	–5,007	1,436	6,540	–5,104
ii) Compensation of Employees	750	573	177	698	483	215
Total Current Account (I+II)	**130,958**	**152,747**	**–21,789**	**130,403**	**147,497**	**–17,093**
B. CAPITAL ACCOUNT						
1. Foreign Investment (a+b)	65,201	58,931	6,270	43,581	41,683	1,899
a) Foreign Direct Investment (i+ii)	10,486	3,991	6,495	8,168	4,347	3,821
i. In India	8,129	1,653	6,476	7,305	1,390	5,915
Equity	5,619	1,526	4,093	4,683	1,033	3,650
Reinvested Earnings	2,059		2,059	2,259		2,259
Other Capital	451	127	324	363	358	5
ii. Abroad	**2,357**	**2,339**	**18**	**863**	**2,957**	**–2,094**
Equity	2,357	1,084	1,273	863	1,382	–519
Reinvested Earnings		276	–276		297	–297
Other Capital		978	–978		1,278	–1,278

Contd...

Table E2: Overall Balance of Payment in India (US$ billion) (*Contd...*)

	April-June 2013 P			April-June 2012 PR		
	Credit	**Debit**	**Net**	**Credit**	**Debit**	**Net**
b) Portfolio Investment	**54,715**	**54,939**	**–225**	**35,413**	**37,335**	**–1,922**
In India	54,203	54,665	–462	35,175	36,787	–1,612
FIIs	54,183	54,665	–482	35,081	36,787	–1,706
ADRs/GDRs	20		20	94		94
Abroad	512	274	237	238	548	–310
2.Loans (a+b+c)	**37,578**	**33,935**	**3,643**	**36,777**	**30,817**	**5,960**
a) External Assistance	**1,044**	**756**	**288**	**945**	**891**	**54**
i) By India	12	66	–54	13	84	–72
ii) To India	1,031	689	342	932	807	125
b) Commercial Borrowings (ST,MT&LT)	36,534	33,179	3,355	35,832	29,926	5,906
3. Banking Capital (a+b)	**25,945**	**15,664**	**10,280**	**25,787**	**16,379**	**9,408**
4. Rupee Debt Service	**0**	**25**	**–25**	**0**	**26**	**–26**
5. Other Capital	**5,924**	**5,578**	**346**	**3,209**	**3,914**	**–705**
Total Capital Account (1 to 5)	**134,648**	**114,134**	**20,514**	**109,355**	**92,819**	**16,535**
C. Errors & Omissions	**929**	**0**	**929**	**1,080**	**0**	**1,080**
D. Overall Balance (A+B+C)	**266,535**	**266,881**	**–346**	**240,838**	**240,316**	**522**
E. Monetary Movements (i+ii)	**346**	**0**	**346**	**0**	**522**	**–522**
i) I.M.F.	0	0	0	0	0	0
ii) Foreign Exchange Reserves (Increase - / Decrease +)	346		346		522	–522

Source: Monthly Bulletin, RBI, October, 2013.

Notes: PR: Partially Revised. P: Preliminary.

1 The write-up in this sections draws upon the 1) Twelfth Five Year Plan document; 2)Note on Textiles & Clothing Exports of India, International Trade Division, Ministry of Textiles; 3) Note from Apparel Export Promotion Council, dated May 17, 2013; and 4) DGCI&S data.

Prices

Bornali Bhandari

Inflation has reared its ugly head again in the second quarter of the current fiscal driven by vegetables inflation and mineral oil inflation. Retail inflation is persisting in double digits and inflationary expectations have gone up. While food inflation may come down in the immediate future, uncertainties regarding currency fluctuations and energy pricing remain.

P.1 Overall Inflation Trends

Inflation continues its stranglehold on the Indian economy. Stickiness in retail inflation continues with the various measures of retail inflation either are in double digits or close to it. When one compares the half-year trends between 2012–13 and 2013–14, one is getting mixed signals. Inflation rates calculate from CPI Industrial Worker and Agricultural Labour show heighted inflation in the current fiscal year as opposed to the previous fiscal. In contrast, inflation rates calculated from CPI Rural, Urban and Combined showed moderated trends in the current fiscal year as opposed to the previous (Table P2). Delving in more disaggregated data, one finds that retail inflation was finally down in single digits in the first quarter of the current fiscal. However, the trends reversed significantly in the second quarter with retail inflation back in double digits. Monthly inflation rates only confirm the stickiness trends. The various measures of retail inflation rates are calculated on a year-on-year (y-o-y) basis from the following price indices: Consumer Price Index (CPI) of Industrial Worker (Base Year, 2001), Consumer Price Index of Agricultural Labour (Base Year 1986–87), Consumer Price Index Rural, Consumer Price Index Urban and Consumer Price Index Combined (Base Year 2010).

The headline inflation (WPIINFL) as measured by the Wholesale Price Index (WPI) with base year 2004–05 is definitely lower in 2013–14 as opposed to the previous fiscal year. It had fallen below five per cent (Table P2) on a y-o-y basis in the first quarter of the current fiscal. That has reversed and WPIINFL has increased to 6.1 per cent. The most significant reversal of trend is seen when WPIINFL is calculated on a quarter-on-quarter (q-o-q) basis after seasonally correcting for the data. It came down from 8.5 per cent in 2012–13:Q1 to 1.3 per cent in 2013–14:Q1 but rose to 12.9 per cent in the second quarter of the current fiscal year.

There is an increasing gap between indices of retail inflation and WPIINFL in 2012–13. While WPIINFL went down, retail inflation stayed up in double digits or close to it.

Core inflation has steadily fallen from 2011–12:Q3 (9.9%) to 3.7 per cent in 2013–14:Q1. This trend reversed in the 2013–14:Q2 but core inflation remained low at 4.1 per cent.

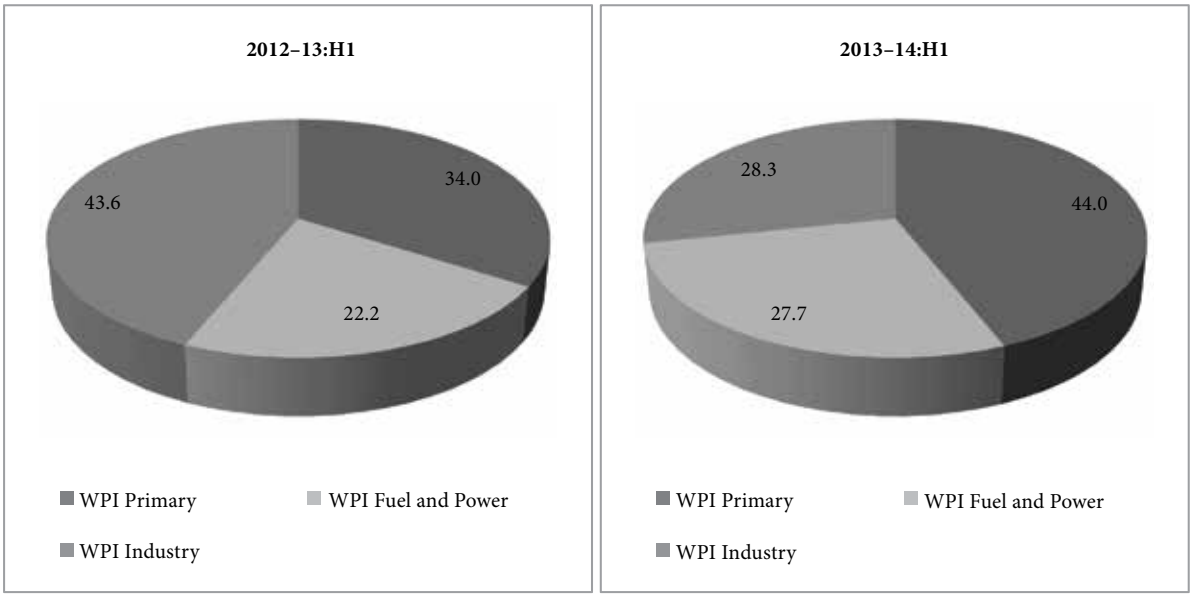
P.2 De-composition of Inflation

High inflation in primary articles (9.1%) and fuel and power (9.3%) have driven inflation in the first half of the current fiscal. This is lower than 10.1 and 10.8 per cent inflation in primary articles and fuel & power in the first half of the last fiscal, respectively. Manufacturing inflation has significantly slowed down from 2012–13:H1 to 2013–14:H1 with inflation rate come down from 5.8 per cent to 2.7 per cent, respectively

(Table P3). Figure P1 shows the drastic change in the contributors of inflation in the country between the first halves of the current and previous fiscal years. The contribution of primary inflation to overall WPIINFL has risen significantly and manufacturing inflation has come down.

Quarter-wise data shows that inflation has been mainly driven by primary articles which jumped from 6.5 per cent in the first quarter to 11.7 per cent in the second quarter of the current fiscal year. Fuel and power inflation also rose to 10.9 per cent in 2013–14:Q2 from 7.7 per cent in 2013–14:Q1.

Figure P1: De-composition of WPI Inflation (%y-o-y), 2012–13:H1 and 2013–14:H1



Source: Office of the Economic Advisor, Government of India.
Note: Base Year: 2004–05.

Quarterly data shows that primary articles inflation has been mainly driven by food inflation as minerals inflation experienced deceleration in prices (–2.2%) and non-food articles inflation continued its downward trend (4%) in the second quarter of the current fiscal year. The fall in metals and other minerals inflation is consistent with worldwide trends.

In contrast, food inflation just doubled and that also mainly because of fruits and vegetables (Table P3). Fruit and vegetable inflation went up from 2.7 per cent in 2013–14:Q1 to 37 per cent in 2013–14:Q2. Within this category, vegetables were the main driver. Fruit inflation went up from 0.7 per cent in 2013–14:Q1 to 5.5 per cent in 2013–14:Q2, vegetable inflation went up from 4.7 per cent in 2013–14:Q1 to 70.5 per cent in 2013–14:Q2, with onion causing maximum angst.

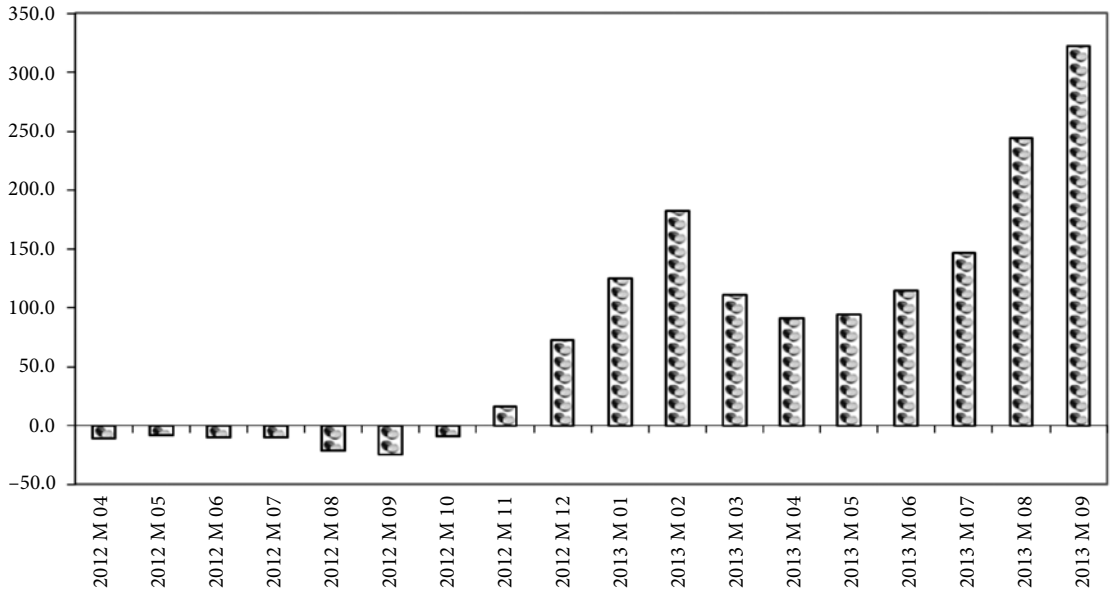
Price of onion has been increasing fairly rapidly since November 2011 on a y-o-y basis. Inflation had reached triple digits even in January to March, 2013. Onion inflation abated for two months. From June onwards, it started increasing and in September, it reached a whopping 323 per cent (Figure P.2)!

The rise in food inflation is not consistent with world wide trends especially in foodgrains. The Macroeconomic and Monetary Developments Second Quarter Review 2013–14 of RBI (MMDSQR 2013–14:Q2) shows that the inflation in manufactured food items is quite low especially in sugar and edible oils. World prices are also low for both these products as per the MMDSQR 2013–14:Q2.

Fuel and Power Inflation is mainly driven by inflation in mineral oil as indicated by quarterly data. Coal price continues to decelerate for the second quarter in the current fiscal year. Electricity inflation is in double digits but has fallen to 13 per cent in 2013–14:Q2 from 22.5 per cent in 2013–14:Q1.

Mineral Oil inflation increased from single digits (8.5%) in 2013–14:Q1 to 15.2 per cent in 2013–14:Q2.

Figure P2: Onion Inflation, (%y-o-y) April, 2012 to September, 2013



Source: Office of the Economic Advisor, Government of India.
Note: Base Year: 2004–05.

P.3 Factors Affecting Inflation

Vegetable inflation and mineral oil inflation are the major causes of inflation in India. There are two different causes for each. Heavy monsoon has affected vegetables production causing disruptions in the supply chain. Mineral oils inflation is mainly due to the depreciation of the rupee and increase in crude oil prices. Energy prices worldwide have arisen mildly by three per cent on a y-o-y basis. As the MMDSQR 2013–14:Q2 shows prices of freely priced products increased but administered products' prices also contributed to inflation. "Increase in administered prices did not keep pace with the rise in crude oil prices (in rupee terms) leading to greater suppressed inflation. Crude oil prices in the Indian basket's reached a record high of ₹7,263 per barrel in rupee terms during the first fortnight of September 2013, which was about 35 per cent higher than the low levels recorded the second fortnight of April 2013". The MMDSQR 2013–14:Q2 shows that

consumption of petrol products has fallen but given the still large under-recoveries, there is need for further upward adjustment in fuel prices which would reduce demand further and restrain the twin deficits-fiscal and external.

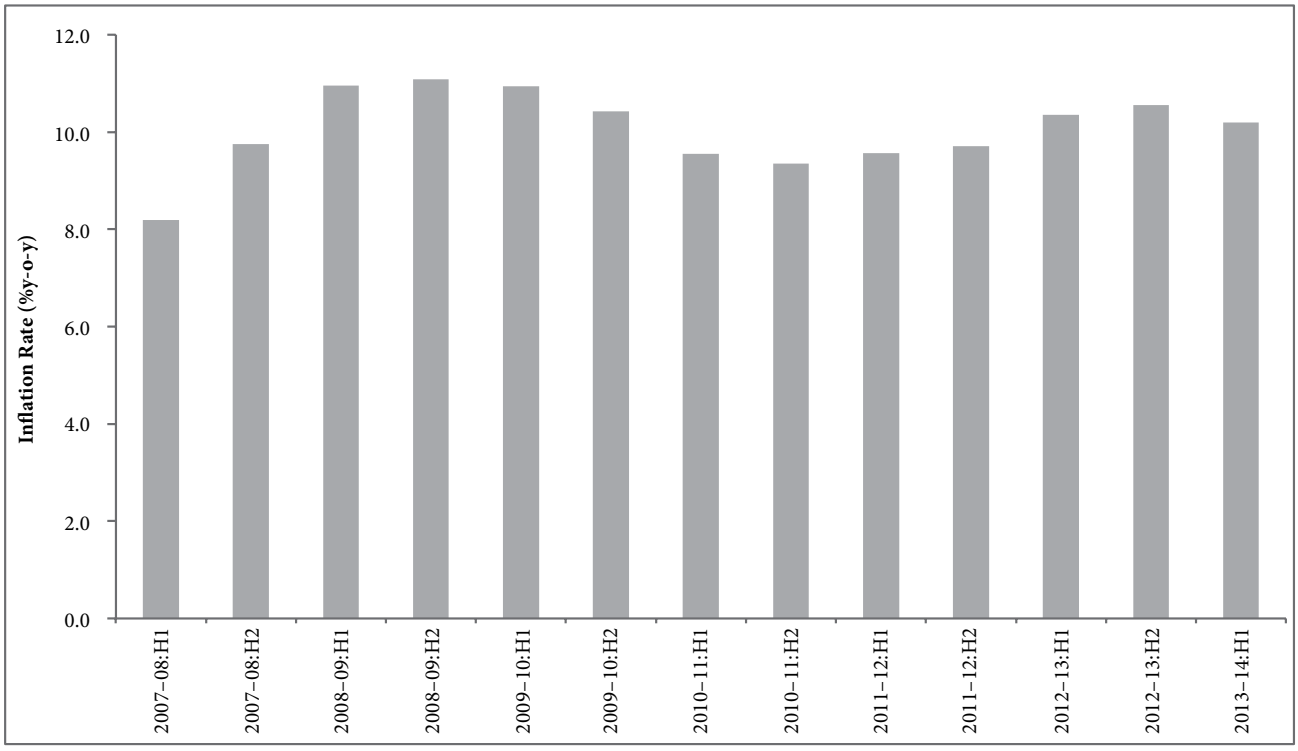
Protein inflation continues to be high and in double digits i.e. Eggs, Meat and fish inflation was 14.7 per cent in 2013–14:Q2 and continues to be in double digits. Cereal inflation has reduced but is still high at 9.2 per cent.

Overall, the second quarter inflation in the current fiscal is mainly due to supply side factors though demand side factors continue to play a role. These in turn affect inflation expectations adversely. Clearly, we need large scale investment in storing, transporting and managing perishable food items like fruits & vegetables, eggs, meat and fish i.e. developing adequate supply chain, good infrastructure like roads, cold storage, transport etc.

P.4 Persistence of Retail Inflation

Inflation based on CPI Industrial Worker (CPIIW) has averaged 9.5 per cent for the last six years and the headline WPI inflation has averaged 8.6 per cent during the last three years (MMDSQR 2013–14:Q2). Half-yearly (five halves) moving average, calculated for CPIIW shows that inflation has not been below 8 per cent since 2007–08 (Figure P3).

Figure P3: Half-yearly Moving Average (5 halves) CPI Industrial Worker (%y-o-y), 2007–08:H1 to 2013–14:H1



Source: Labour Bureau.

For the last three quarters, inflation has been above 10 per cent. This is matter of serious concern because it has a destabilising impact on inflation expectations (Box P.1). The MMDSQR 2013–14:Q2 states that "high persistent inflation is inimical to growth. Such high inflation eroded real consumption, lowered savings, caused financial disintermediation, widened the current account gap and placed additional pressures for subsidised safety nets for the vulnerable population".

Box P1: Inflationary Expectations

The Reserve Bank of India assesses inflationary expectations of households. The latest survey released in September, 2013 shows that inflationary expectations have increased (Table P1). The four rounds of data show that households' estimations of current inflation are closer to the retail inflation rate (in this case CPI combined) than WPIINFL. Further the households' estimates of inflation rates are equal or higher than either the CPI Industrial Worker or combined for the four quarters shown in Table P1.

Another interesting observation that comes out of Table P1 is that households are expecting higher inflation over 3-months and one year. Inflation expectations have gone up over time and it is consistently higher than the already over-estimated current rate.

Unfortunately, high double digit inflationary expectations can quickly result in a spiral that India probably should avoid. With higher expectations, households factor that into their decision making, making double digit inflation a self-fulfilling prophecy and a new normal.

It is clear that the policymaker needs to reduce inflation expectations down to single digits. The RBI seems to be recognising that consumer price indices may be a better measure of inflation as consumers make their decisions based off that rather than WPI. The new RBI governor has promised to issue inflation indexed saving certificates tied to CPI. However, for even that, inflationary expectations need to be brought down.

Table P1: Inflationary Expectations

Survey Round	Survey Quarter Ended	Current Inflation Rate	Three-month ahead	One-year ahead
30	December 2012	11	11.9	13.3
31	March 2013	10.7	11.3	12.5
32	June 2013	11	11.4	12.4
33	September 2013	11.8	14.5	13.5

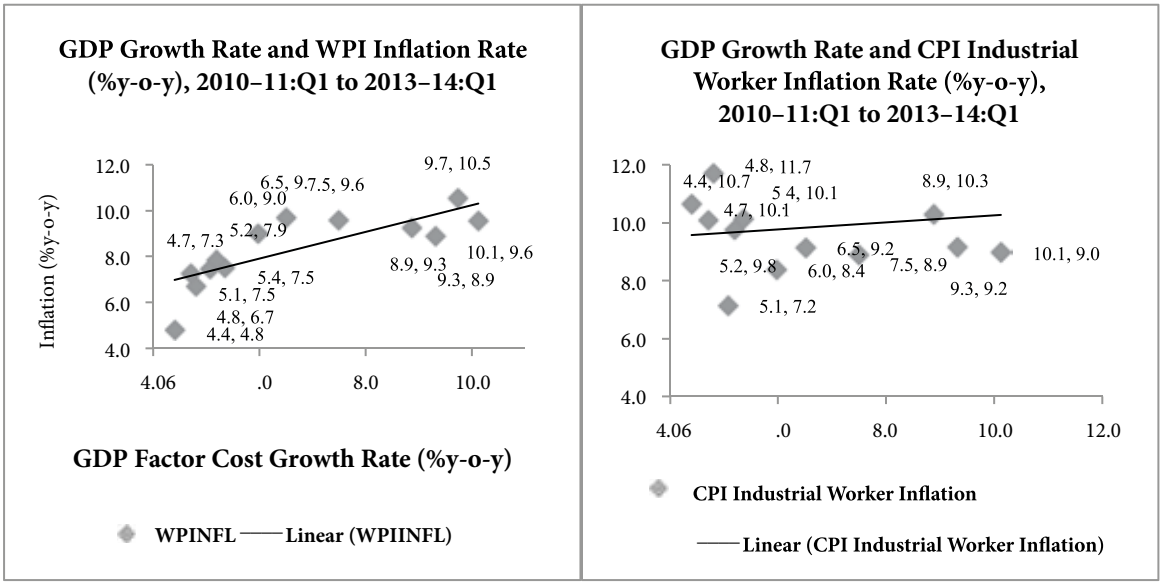
Source: Reserve Bank of India.

P.5 Inflation versus Growth

The relationship between inflation and economic growth (as measured by GDP Factor cost with 2004–05 as the base) is ambiguous in the last four years because it depends on the indicator being used (Figure P4). When one uses the WPIINFL, one finds a positive relationship between economic growth and inflation. When one uses the CPI, it is almost a horizontal line. If one uses the retail inflation as a yard-stick, India seems to be stuck in a stagflation like kind of situation with low economic growth and high inflation.

The correlation between WPIINFL and economic growth as 0.8 whereas the correlation between CPI Industrial Workers inflation rate and economic growth is 0.2. The nature of this relationship important to ascertain both in the short and long run as this has important implications for the policymaker.

Figure P4: Growth Rate versus Inflation



Sources: Office of the Economic Advisor, Labour Bureau and Central Statistical Organisation.

P.6 Global Inflation

India's retail inflation is the highest amongst the BRIC countries and United States, United Kingdom, France and Germany. High inflation affects India's competitiveness adversely.

The forecasts till 2018 show that India's inflation rate is going to remain the highest amongst the countries although the inflation rate will come down.

P.7 Inflation Outlook

Food inflation will come down as supply pressures ease especially of vegetables. With food inflation falling, one would expect WPIINFL to dampen. However, currency movements and global oil spikes especially due to political uncertainties in the Middle East may play out adversely. The goal of the policymaker should be to bring down inflationary expectations and generally bring down retail inflation.

Table P2: Major Indicators of Inflation, 2012–13 and 2013–14 (% y-o-y)

Frequency	Year: Month	WPIINFL	CPI Industrial Worker	CPI Agricultural Labour	CPI Rural	CPI Urban	CPI Combined
Half-Yearly	2012–13:H1	7.0	9.9	11.5	9.7	10.5	10.0
	2013–14:H1	5.5	10.2	12.8	9.3	10.0	9.6
Quarterly	2012–13:Q1	7.5	10.1	7.9	9.6	11.0	10.2
	2012–13:Q2	7.9	9.8	9.1	9.8	10.0	9.9
	2012–13:Q3	7.3	10.1	10.5	10.2	9.9	10.1
	2012–13:Q4	6.7	11.7	12.6	10.7	10.6	10.7
	2013–14:Q1	4.8	10.7	12.6	9.3	9.8	9.5
	2013–14:Q2	6.1	10.5	12.9	9.3	10.1	9.7
Monthly	2013: M4	4.8	10.2	12.3	9.16	9.7	9.4
	2013: M5	4.6	10.7	12.7	8.98	9.6	9.3
	2013: M6	5.2	11.1	12.8	9.63	10.1	9.9
	2013: M7	5.9	10.8	12.8	9.14	10.2	9.6
	2013: M8	6.1	10.7	13.2	8.93	10.3	9.5
	2013: M9	6.5	N.A.	12.8	9.71	9.9	9.8

***Sources*:** Office of the Economic Advisor, Labour Bureau and Central Statistical Organisation.
***Notes*:** 1. Base Year: 2004–05 for WPI, 2001 for CPI Industrial Worker, 1986–87 for CPI Agricultural Labour and 2010 for CPI Rural, Urban and Combined. 2. CPI Industrial Worker does not include the September data.

Table P3: Year-on-Year Inflation Rate of Major Categories in Food Articles in WPI, 2012–13 and 2013–14

Frequency	Year: Month	Food Articles	Food Grains (Cereals and Pulses)	Fruits and Vegetables	Milk	Eggs, Meat and Fish	Condiments and Spices	Other Food Articles
Half-Yearly	2012–13:H1	10.0	11.5	9.8	9.2	15.8	–15.4	12.6
	2013–14:H1	12.3	11.7	19.4	4.5	13.1	13.4	–1.8
Quarterly	2012–13:Q1	10.8	8.2	14.4	11.6	17.1	–18.2	10
	2012–13:Q2	9.2	14.8	5.3	7.1	14.6	–12.5	15.3
	2012–13:Q3	8.7	17.9	2.7	6.2	13.3	–15.9	10.7
	2012–13:Q4	11	17.4	11.3	4.5	11.7	0.8	11.6
	2013–14:Q1	8.2	14.3	2.7	4.2	11.5	14.8	2.9
	2013–14:Q2	16.3	9.2	37	4.8	14.7	12	–6.1
Monthly	2013: M4	6.1	14.6	–4.1	4.0	10.4	10.9	11.3
	2013: M5	8.2	13.9	2.9	4.5	11.4	16.6	0.3
	2013: M6	10.3	14.5	9.4	4.1	12.5	17.0	–2.5
	2013: M7	12.3	12.3	20.6	3.0	12.0	13.5	–0.5
	2013: M8	18.2	8.0	42.4	5.6	18.9	10.4	–8.4
	2013: M9	18.4	7.3	49.1	5.8	13.4	12.1	–9.0

***Source*:** Office of the Economic Advisor, Government of India.
***Note*:** Base Year: 2004–05.

Public Finance

Mythili Bhusnurmath

Public finances will continue to be under strain as slowdown in economic growth has meant lower growth in both tax and non-tax revenues. Expenditures have marginally slowed down from last fiscal year mainly driven by lower growth in plan expenditure. In the first five months of the current fiscal year, budget deficit has already reached 75 per cent of the budget.

PF.1 Budget 2013–14

Budget 2013–14 was presented against the backdrop of a slowdown in both global and domestic economic growth as well as worrying large fiscal and current account deficits. The main objective, therefore, was to spur economic growth and return to the path of fiscal rectitude especially since the high fiscal deficit was seen as a major factor contributing to the decline in private sector investment.

Hence, in a bid to signal the government's resolve to rein in the gross fiscal deficit (GFD), the finance minister, P Chidambaram, did two things. One, he contained the GFD/Gross Domestic Product (GDP) ratio for 2012–13 at 5.2 per cent in the revised estimates, just marginally higher than the budget estimate of 5.1 per cent. The final number, as per the provisional accounts released by the Controller General of Accounts (CGA), for 2012–13, is still lower at 4.9 per cent of GDP. Two, he pegged the GFD/GDP ratio for 2013–14 at 4.8 per cent of GDP.

Take them one by one. The improvement in the GFD despite the shortfall in tax revenues, receipts from spectrum auction and disinvestment proceeds was, prima facie, good news. However, there is a flip side as it was largely achieved by compressing plan and capital expenditure even as unproductive revenue expenditure soared much above the budget estimate. .

Inevitably, this had its fallout on the revenue deficit (RD) with the RD/GDP ratio rising to 3.9 per cent, above the budget estimate of 3.4 per cent of GDP; though here, too, the provisional estimates of the CGA place the RD/GDP ratio lower at 3.6 per cent of GDP.

As regards the lower GFD/GDP target for 2013–14, fiscal rectitude in the current fiscal is to be achieved mainly through improved revenue receipts and lower non-plan revenue expenditure, especially lower subsidies. As a result, the share of the revenue deficit in the GFD is also expected to decline from 75 per cent in 2012–13 to about 70 per cent in 2013–14.

Inevitably, Budget estimates for 2013–14 were criticised as being unduly optimistic. For one, Budget 2013–14 relies largely on revenue-led fiscal consolidation. Hence, its success will depend on the revival of the investment climate and growth. Thus budget estimates of gross tax revenue are based on estimated nominal GDP growth of 13.4 per cent. On the expenditure side, both capital and plan expenditure are budgeted to rise sharply, though there is a welcome re-prioritisation in favour of capital rather than non-plan expenditure.

While it is still a bit early to dismiss the promises made in Budget 2013–14 outright, the portents to date are not encouraging. With growth likely to be significantly lower than the 6–6.5 per cent projected in the Budget, it may be difficult to achieve the budgeted tax-GDP ratio of 10.9 per cent even with the budgeted

tax buoyancy of 1.4 per cent during 2013–14. Indeed gross tax revenue growth during the first quarter of 2013–14 was lower than a year ago due to deceleration/decline in major tax revenues. The other major items of government revenue such as disinvestment receipts of ₹400 billion are likely to be just as problematic given the volatile conditions in financial markets.

While the re-prioritisation of expenditure in favour of capital expenditure is a welcome sign - the capital outlay to GFD ratio is projected to increase from 28.1 per cent in 2012–13 (RE) to 38.5 per cent in 2013–14 - it remains to be seen whether the government will, in fact, adhere to these new priorities. Thus plan expenditure in 2013–14 is budgeted higher but the budgetary support extended to the central plan outlay during the first two years of the plan (i.e., 2012–13 and 2013–14) works out to only 27.2 per cent of the total budgetary support envisaged for the entire five year period of the Twelfth Plan.

A positive feature on the non-plan expenditure front is the envisaged containment of expenditure on subsidies at two per cent of GDP in 2013–14. Unfortunately, this too is likely to remain a non-starter despite efforts at phased deregulation in diesel prices thanks to the rise in international oil prices and sharp depreciation in the exchange rate of the rupee vis-à-vis the dollar. This is expected to put an upward pressure on fuel and fertiliser subsidies in 2013–14 even as under-recoveries of oil companies have risen dramatically. For now the impact of National Food Security Act on food subsidies is expected to be within manageable limits in 2013–14. But it is likely to add to fiscal pressures in the medium term.

PF.2 Performance 2013–14

If the first quarter of the current fiscal saw expenditure run ahead of revenues, the second quarter was no better. Public finances continued to be under strain. Part of the reason is structural - revenues usually flow with a lag. But the other is more fundamental and directly related to the assumptions underlying Budget 2013–14. This assumed a much more robust recovery with growth in the range of 6 – 6.5 per cent whereas the growth in reality has been much less. Inevitably, slow growth - GDP growth was just 4.4 per cent in the first quarter and the second quarter is not expected to be any better - has taken a toll on tax revenues while non-tax revenues have been equally anaemic as government has made slow progress on things like disinvestment and spectrum auction.

Despite the obvious flaws in the underlying assumptions of Budget 2103–14 (as borne out by subsequent developments as well), the Finance Minister, P Chidambaram has refuted all criticism on the grounds that the economy is showing signs of bottoming out and recovery is round the corner. His optimism has, however, been belied in the first six months of 2013–14 with revenues faltering on the back of slowing growth and expenditure spinning out of control.

As per the latest numbers released by the Controller General of Accounts the fiscal deficit has already reached 75 per cent of the BE during the first five months of the year as compared to 66 per cent in Apr–Aug 2012 period.

The cumulative fiscal deficit reached 3.7 per cent of GDP during April-August 2013 (vs. the budget estimate of 4.8 per cent of GDP for full year FY14) as shown in Figure PF1.

While government expenditure grew 17 per cent year-on-year (y-o-y) during April-August 2013, behind the BE of 18 per cent y-o-y largely driven by lower growth in plan expenditure, gross tax collections grew only nine per cent y-o-y during the same period well below the BE of 19 per cent.

Direct tax collections grew 16 per cent behind the BE of 19 per cent even as indirect tax collections actually declined one per cent y-o-y as against the BE of 13 per cent growth, thanks to the slowdown in domestic growth.

Going by the trends to date there are reasons to doubt whether the FM will be able to abide by the line he has drawn in the sand as far as the GFD is concerned. These include (a) the distinct likelihood of a shortfall in tax revenues target due to slowdown in growth, (b) increasing subsidy burden (a 10% rupee depreciation increases India's oil subsidy by 0.3–0.4 per cent of GDP), (c) difficulty in achieving divestment target on weak capital markets, (d) a rise in food subsidy burden under the National Food Security Act and (e) pre-election sops in the run-up to parliamentary elections in May 2014).

Figure PF1: Trend in Fiscal Deficit of Central Government (% of GDP at current prices), 2012–13: Q1 to 2013–14: Q1

Source: Controller General of Accounts.

Austerity measures announced by the government in September, including a 10 per cent cut on non-plan expenditure by all departments (excluding spending on interest and debt repayment, defence capital, salary, pension and on grants to states) and cap on spending are unlikely to have much impact. The FM, however, remains confident that he will be able to contain the final number for the year at 4.8 per cent as projected, saying he has drawn a red line under it and will not exceed it under any circumstances (Box PF1). The prospects of this look increasingly bleak as apart from runaway expenditure on populist schemes, even routine expenses like interest payments are likely to over-shoot budget estimates thanks to the sharp rise in bond yields.

Box PF.1: Is the Fiscal Deficit Target Attainable?

The jury might still be out on whether or not the finance minister will be able adhere to the fiscal deficit target for the year. But what is apparent from the data released by the Controller General of Accounts for the first half of the year is that he has an uphill task on hand during the next six months. The fiscal deficit during April - September 2013 has already touched 76 per cent of the Budget Estimate as against 65.6 per cent during the comparable period last year. What is even more discouraging is that the revenue deficit/ GDP ratio is close to 85 per cent of the BE as against 75 per cent during the same period last year. Thus, it would appear that even if the FM does manage to somehow deliver on his promise, it would once again be by compressing plan rather than non-plan expenditure. The quality of the fiscal adjustment therefore, leaves much to be desired.

The fiscal year began with yields in the range of 7.4– 7.5 per cent. However, the panic in the market during the period 22 May - 20 September saw bond yields rise sharply to over nine per cent. Yields have since come down to 8.4 – 8.5 per cent but they are one percentage point higher than in April and hence will impact interest payouts adversely. As deposit growth slows, more devolvements on primary dealers cannot be ruled out.

The hardening of yields resulted in banks incurring large mark-to-market losses in their investment portfolio. In order to help shore up their balance sheets and based on the belief that these losses were based on an aberration, the RBI provided some relaxations in its prudential guidelines. Thus the RBI relaxed the requirement of the minimum amount of Statutory Liquidity Ratios (SLR) securities to be held in the HTM (held-to-maturity) segment at 24.5 per cent as against 23 per cent earlier Banks were also allowed to transfer securities from the HTM category to the AFS/HFT (Available for sale/held for trading) category up to the limit of 24.5 per cent at the lower of the book value or the market value, whichever was lower as a one-time measure

Banks were also allowed to spread the net depreciation on account of MTM valuation of securities in the AFS/HFT category over the rest of the year in equal instalments.

PF.3 State Government Finances

As far as finances of state governments are concerned, the position is distinctly better. Several states have limited their deficit and debt in recent years within the targets set by the Thirteenth Finance Commission. However, finances of the states participating in the Financial Restructuring Plan of state power utilities is likely to be under pressure due to the additional debt and interest burden linked to issuance of bonds/special securities by state power distribution companies (discoms) under the scheme. It is imperative that the mandatory conditions and recommended suggestions of the FRP are implemented in the true spirit by the discoms and state governments if these utilities are to become financially viable. State governments must ensure that debt restructuring does not become a perpetual feature, endangering the stability of state finances.

PF.4 Trends in Receipts and Expenditure

The growth in tax receipts during the first half of the year has been lower than the Budget Estimate of 19 per cent, thanks to the slowdown in economic growth. Both direct and indirect tax collections have fallen far behind projections made in February 2013, with indirect tax collections showing a larger shortfall. Present

indications are that 2013–14 may also end with a revenue shortfall as in the previous year when both direct and indirect tax collections fell short of target.

Direct Taxes

According to data released by the government, gross collection from direct taxes including personal income tax and corporate taxes, increased by 10.66 per cent to ₹3,01,250 crore in the April-September period of this fiscal compared to ₹2,72,221 crore recorded in the same period last year.

Collections from personal income tax jumped by 16.15 per cent to ₹1,06,231 crore in the first half of the current financial year compared to ₹91,463 crore recorded in the same period last year.

However, growth in corporate taxes was sluggish due to a slowdown in overall economic growth.

Gross collections of corporate taxes increased by 7.93 per cent to ₹1,92,308 crore during the period under review. Net direct tax collection stood at ₹2,50,959 crore for the first six months of the current financial year as compared to ₹2,26,653 crore recorded in the same period last fiscal, registering an y-o-y increase of 10.72 per cent. The difference in gross and net tax collection is due to refunds.

Wealth tax collection increased by 5.27 per cent to ₹499 crore during the period under review, while the collection of Securities Transaction Tax (STT) dropped by 6.45 per cent to ₹2,210 crore.

The government has set a target of ₹6,68,109 crore for direct taxes this year, against the budget estimate (BE) of ₹570,257 crore last year and an RE of ₹5,65,835 crore.

Indirect Tax Collections

Indirect taxes collections have fared more poorly. Excise collections till August were 8.3 per cent down due to weak industrial growth, against the BE of 11.9 per cent growth for the year.

Service tax collections have improved but have also grown at a much slower pace of 14.3 per cent compared to the unabashedly ambitious asking rate of 36 per cent. Collections from customs duty during April-August recorded a growth of 9.6 per cent over the same period of last year. This is lower than the Budget projection of 13 per cent for 2013-14.

Some pick up is expected in September as industrial output grew by 2.7 per cent in July though it fell to 0.6 per cent in August (there is usually a lag of one to two months between industrial performance and tax collections). But going by present trends, fiscal 2013–14 is going to be a repeat of the previous year, with collections falling well short of Budget Estimates.

The government has set a target of ₹5,65,002 crore for indirect taxes in 2013–14, as against last year's BE of ₹5,05,044 crore and a Revised Estimate (RE) of ₹4,69,546 crore i.e. an increase of 20 per cent over the RE.

Government Borrowing Programme

Based on the GFD/GDP target of 4.8 per cent, the gross borrowing target for the current fiscal is pegged at ₹5,790 billion with an additional ₹500 billion being ear-marked for switching operations. This is only ₹210 billion higher than the amount of ₹5,580 billion raised during the previous fiscal. Incidentally, though the gross and net amounts raised through dated securities in 2012–13 were higher by around nine and seven percent compared to the previous year, barring a small amount of ₹18 billion that devolved on primary dealers, the borrowing programme was completed without any problem. On the contrary, the weighted average yield of dated securities fell to 8.36 per cent in 2012–13 as against 8.52 per cent in 2011–12.

The borrowing calendar for the first half of the year was announced in March 2013 and has likewise gone through without much problem. However, the turmoil witnessed on the bond markets following the uncertainty regarding US Fed tapering its ambitious quantitative programme saw yields rise dramatically to close to nine per cent on the benchmark 10 year government security before falling to 8.4–8.5 per cent early October.

According to the borrowing calendar announced by the government in March 2013 an amount of ₹3,490 billion is to be raised in the first half as against ₹3,700 billion in the corresponding period of the previous year. As mentioned in the previous paragraph, yields on Treasury Bills showed a declining trend till mid-June 2013, but started hardening subsequent to the Fed Chairman's statement on 22 May 2013. Yields on Treasury Bills went up significantly (by 273 bps and 209 bps for 91-day and 364-day treasury bills, respectively) subsequent to the RBI's liquidity tightening measures of July 2013. However, with the US Fed Chairman Ben Bernanke deferring the announcement of the tapering of his bond buying programme (under which in the Fed has been buying bonds to the tune of $85 billion every month) that was widely anticipated at the meeting of the Federal Open Market Committee in September, bond yields eased to 8.14 per cent mid September.

A novel feature in the Union Budget 2013–14 is the proposed to introduce inflation-indexed bonds to protect savings from inflation and wean retain investors away from investment in gold towards investment in financial instruments. Consequently, the first auction of Inflation Indexed Bonds (IIBs) was held on 4 June 2013. As expected, these did not elicit much interest from retail investors as the bonds were indexed to the WPI. The new governor, Raghuram Rajan, in his statement on taking over as governor on 4 September has promised to link inflation indexed bonds to the CPI wherein the response is expected to be better.

PF.5 Outlook

The finance minister has staked his reputation on adhering to the fiscal deficit target of 4.8 per cent of GDP as indicated in his budget estimates. Additionally, rating agencies also attach a great deal of importance to fiscal discipline; any breaching of the target risks a rating downgrade. Hence we do not expect the government to breach its target for the year. Since the government has already exceeded 75 per cent of the target for the year, what will happen, instead, is that as in 2012–13, the government will ruthlessly cut down on expenditure, especially plan expenditure, in the coming months in a bid to adhere to its target.

Forecast

Purna Chandra Parida

The quarterly and annual models predict GDP growth at 5.2 per cent and 5.3 per cent, respectively for 2013–14. Both forecasts have been revised downwards from the earlier estimates in July 2013.

F.1 Backdrop

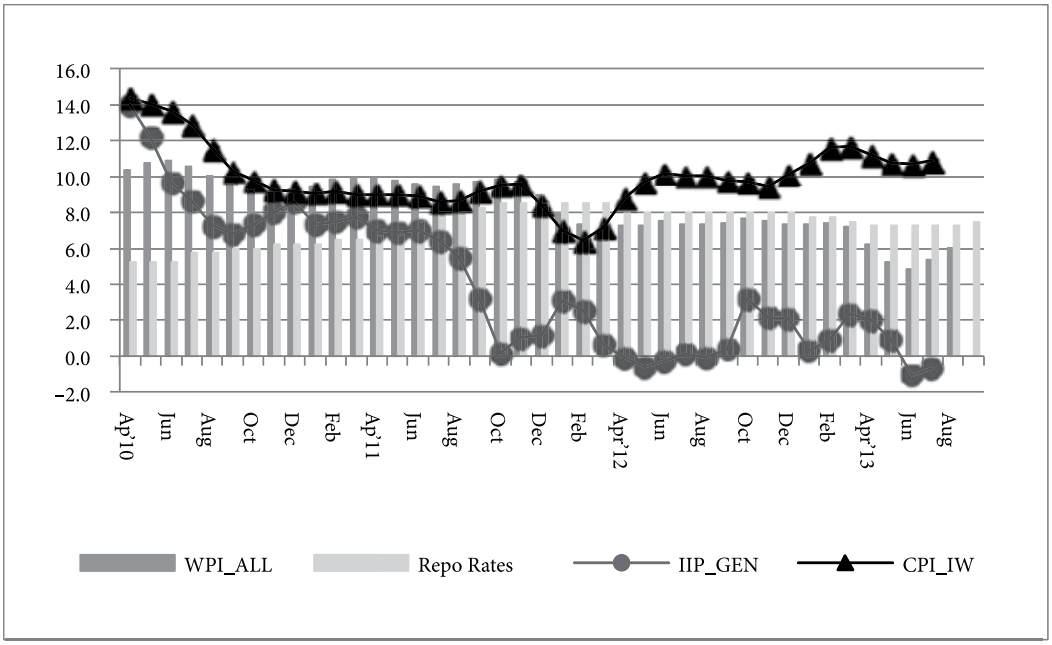
Official estimates of first quarter GDP at factor price show the economy grew at 4.43 per cent in the first quarter of the current fiscal, the slowest in 17 quarters (Table F1). In terms of market price, growth was even slower - just 2.4 per cent. At the sectoral level, the industrial sector performed the worst, showing virtually no growth due to contraction in manufacturing output by 1.2 per cent. In the short run, the sector faces numerous challenges such as rising input costs due to high interest rates, low external and internal demand and low productivity. Longer-term challenges such as lack of reform in factor markets, notably land and labour markets, continue to constrain growth in this sector.

The agriculture sector alone shows signs of improvement due to the bountiful monsoon. Overall, the poor performance of industry and services sectors is largely explained by unimpressive growth in private consumption and investment. (Table F2). Gross fixed capital formation registered negative growth during Q1 owing to policy logjam, an unfavourable business environment and slowdown in economic growth. Private consumption, on the other hand, was hampered by persistent food inflation and decline in real income. As these two components constitute more than 90 per cent of GDP at market price, the decline is bound to have a bigger long term impact on the economy. However, government consumption, which was low during the last two quarters of the previous fiscal year owing to large scale expenditure compression, grew 10.5 per cent in Q1:2013–14.

Higher government spending, especially higher current expenditure, provides a temporary answer to the growth slowdown. In the longer term, however, it may add to inflationary expectations especially if it is not spurring productivity and crowds out private investment in sectors like manufacturing and affects growth negatively.

WPI inflation remained low for a while during the first few months in 2013, but has picked up and moved beyond six per cent in August 2013. Driven mainly by food inflation. Prices of food articles, which were around six per cent at the beginning of the current fiscal, have increased nearly three-fold in August. The main contributory factor is skyrocketing vegetable prices. While prices of cereals and pulses have either stabilised or declined since April 2013, prices of seasonal commodities like fruits and vegetables have moved north. Vegetables, particularly onion, cabbage, tapioca, brinjal and ginger are now beyond the reach of the common man. Heavy rainfall and floods in different parts of the country have not only damaged crops but also disrupted the supply chain, leading to scarcity and price rise.

Figure F1: Trends of Repo rate (%), Inflation (%y-o-y, CPIIW, WPI) and IIP (%y-o-y), April 2010 to August 2013



Food inflation in India is driven by both structural and cyclical factors. Structural factors basically reflect rising rural incomes and infrastructure constraints, aggravating the demand-supply imbalance. On the other hand, cyclical factors reflect seasonal variations in production due to uneven monsoon - shortage or excess rainfall.

Fortunately, prices of international commodities and, therefore, domestic prices of manufactured items have either declined or remain stagnant due to subdued economic growth, domestic as well as global.

The policy response to high inflation and its subsequent impact on growth is seen in Figure F1. The figure shows the year-on-year (y-o-y) growth rates of the three-month moving averages of IIP, WPI and CPI-IW series. Though there was some improvement in manufacturing output, WPI inflation has again picked up in July and August forcing the central bank to reverse its earlier stance.

The economy faces serious challenges on the external front as well. The Rupee plummeted to its historic low of 68.85 against the US dollar on August 28 2013. Both domestic and external factors contributed to Rupee depreciation.

Weak domestic growth, large oil imports, global factors like the Syria crisis and the likely tapering of quantitative easing in the US contributed to the rupee's alarming decline.

A depreciating rupee and rising international crude oil prices are like a double whammy on oil and gas companies as the cost of importing oil reached a historic high of ₹7,000 per barrel on August 27, 2013. This has put a huge pressure on India's current account deficit since the country imports nearly 80 per cent of its

oil requirement. The resultant rise in the oil subsidies bill will put an extra burden on Central government's finances and push the fiscal deficit beyond the Budget Estimate.

To sum up, while the risks factors to growth have got amplified, positive factors have weakened. The government and the central bank have taken a few policy initiatives to avert an external crisis; but that may not be good enough to reverse the present downturn.

F.2 Recent Trends in Selected Macroeconomic Indicators

Recently, trends in some high frequency data on industry and services sectors show improvement during July-August 2013. For instance, the capital goods sector had been consistently contracting since April 2013 but recorded a remarkable 15.6 per cent y-o-y growth in July 2013 resulting in Index of Industrial Production (IIP)- manufacturing and IIP - general recording positive growth overall. Interestingly, coal production shows positive growth in the first month of Q2: 2013–14 after registering negative growth during Q1. This has helped the electricity sector expand 5.2 per cent in July 2013.

In the case of the services sector, cargo handled at major ports recorded an average 3.7 per cent growth in July-August after a negative growth of 1.1 per cent in Q1: 2013–14. Production of two wheelers has also improved in August 2013 with a growth rate of 9.3 per cent as against a negative growth of 7.2 per cent in the corresponding month of the previous fiscal.

Current trends in the major macro indicators are given in Table F3. Some important patterns that emerge are:

- The IIP showed a dismal performance in the first quarter of the current fiscal mainly due to contraction in the manufacturing and mining and quarrying sectors. However, data for July shows IIP-general has registered a positive y-o-y growth of 2.6 per cent largely on account of three per cent growth of IIP-manufacturing during the month. The mining and quarrying sector continue to underperform due to various policy logjams and environment issues.
- Broader inflation, as measured by the WPI declined to a low of 4.8 per cent in Q1:2013–14. Since then, it has shown a rising trend. It increased to 6.4 per cent in July and further to 6.5 per cent in August 2013 mainly due to a spike in the price of primary articles and oil. The price of primary articles, which was below seven per cent in Q1:2013–14 rose to 9.1 per cent in July and further to double digits (12.9%) in August due to skyrocketing vegetable prices. Domestic fuel prices have also increased during July-August due to higher cost of imported oil on account of the sharp depreciation of the rupee. Consumer price inflation has remained above double digits since the beginning of current fiscal.
- Broad money supply (M3) growth continued to decline despite the RBI's easy monetary policy since January 2012. M3 recorded a growth of 12.8 per cent in Q1:2013–14 compared to 13.8 per cent in 2012–13. The latest data available for July and August shows it has declined to 12.5 and 12.2 per cent respectively. The capital market (BSE Sensex) shows improved performance in the first quarter in the current fiscal but declined thereafter. In July and August, the BES Sensex recorded 12.2 and 6.8 per cent growth respectively compared to 15.1 per cent in Q1:2013–14.

- After depreciating 13.7 per cent in the previous fiscal, the Rupee recovered well against the US dollar in the first quarter of the current fiscal, depreciating just 3.5 per cent. Since then, it has been under severe pressure against the US dollar due to weakening domestic growth and lower foreign capital inflows. The Rupee depreciated 7.8 per cent in July and again by a whopping 13.3 per cent in August 2013. The large depreciation of the rupee has partially helped merchandise exports (US$) improve in July and August 2013 with exports recording a growth of 15.1 and 17.0 per cent respectively. Large short-term capital outflows and sporadic efforts by the RBI to support the rupee have adversely affected our forex reserves. As a result, forex reserves contracted 3.5 per cent in Q1:2013–14 and another 2.8 per cent during July-August 2013.

F.3 Economic Prospects for 2013–14

Forecasting economic growth during crisis or recession periods is becoming difficult due to unusual structural shifts in some of the key macroeconomic parameters. A study by Potter (2011) for the US economy found the variation between the actual GDP growth rate and New York Fed's projections is significantly large during the recession period compared to the Fed's historical forecast performance[1]. In the Indian context, too, we also find wide variation between the actual and projected GDP growth rates.

Table F4 shows GDP growth projections made by various agencies for fiscal year 2013 (FY'13) and FY'14. In FY'13, for instance, actual GDP growth rate was five per cent whereas all the agencies had projected growth rates in the range of 6–7 per cent or more in their initial assessments.

For the current fiscal (FY'14), all agencies started with optimistic growth numbers of around 6.5 per cent in their preliminary assessment but have then steadily revised their estimates downward thereafter.

India's economic output contracted significantly during the first quarter of the current fiscal largely due to a steep fall in private investment as well as private consumption expenditure.

While industry and services sector growth rates declined in Q1: 2013–14 compared to the corresponding quarter of the previous fiscal, agricultural growth was relatively unchanged. Latest projections made by various agencies suggest better agricultural growth in the current fiscal compared to the previous due to good monsoon in most states. This will give a big push to food processing industries and check rising food inflation in the long run.

Overall, growth is expected to remain low in the current fiscal despite better performance in agriculture as the sector's share in total GDP is only about 14 per cent. It is therefore, essential to improve the performance of the manufacturing and services sectors. There is, thus, an urgent need to improve business sentiment and increase private investment. Unfortunately, investment data released by the Centre for Monitoring Indian Economy (CMIE) for the quarter ended June 2013 is not encouraging. New investment announcements during Q1:2013–14 at ₹784 billion were 32 per cent lower than the quarterly average of ₹1.1 trillion new proposals announced during 2012–13. New investment proposals in the manufacturing sector slipped

1Potter, S. 2011, The Failure to forcast the great recession. Federal Reserve Bank of New York, November 25.

47 per cent to ₹544 billion over its year ago level. Commissioning of new projects fell to ₹270 billion in Q1:2013–14, the lowest in the past 34 quarters. On a positive note, the quantum of stalled projects has improved 34 per cent to ₹940 billion during the June 2013 quarter compared to the year ago level.

Weakening private investment is also explained by the continuous decline in business confidence.

The NCAER-MasterCard Business Expectations Survey reveals that business confidence index has been declining continuously since April 2012 mainly due to weak overall economic conditions and an unfavourable business environment. The June 2013 quarter, however, shows a marginal improvement in business sentiment though questions regarding sustainability remain.

Unfavourable external conditions are also affecting business sentiment and investment negatively. The Rupee has depreciated by an average of 10.55 per cent against the US dollar during July-August 2013 compared to the corresponding period last year. While this helped exports during the first two months in the second quarter, it increased the oil import bill by a whopping 33 per cent in August 2013. This has increased the under recovery of oil marketing companies. It has also put upward pressure on domestic oil prices and inflation.

Against this backdrop, we have re-assessed the economic outlook for the current fiscal year using two approaches: (1) quarterly GDP growth assessment based on a quarterly model that incorporates some of the inter-sectoral relationships and the evolving pattern of variables over time and (2) annual GDP growth assessment based on a more detailed annual macro-econometric model. The results are presented below.

F.4 Quarterly GDP Estimates for 2013–14

Current estimates of quarterly GDP for 2013–14 are based on a number of assumptions relating to exogenous variables and latest high frequency data (i.e. till July/August 2013). This is the second revised estimate of our preliminary estimates made in April 2013. The first revised estimates were made in July 2013. Latest rainfall data published by the Meteorological department indicates that rainfall during the June 01–September 18 period has been around four per cent above normal. In current estimates, we assume rainfall of three per cent above normal compared to our earlier assumption of normal during the monsoon season (June-September).

We retain our earlier assumption of a marginally better capital market (BSE) in the current fiscal compared to the previous fiscal. As regards bank credit to the commercial sector, we assume a lower growth rate of 15 per cent compared to our earlier assumption of around 16 per cent in the current fiscal on account of the recent hike in policy rate. We retain our earlier assumption of 16.4 per cent y-o-y growth in central government expenditure in the current fiscal over the Revised Estimates of the previous fiscal. We have used the ARIMA model to project WPI inflation. Figure F2 depicts the estimates of monthly and quarterly WPI inflation from September 2013 onwards. Our estimates show WPI inflation at 6.5 per cent for the current fiscal, up by 0.4 percentage points over the previous estimate.

Based on the above assumptions regarding exogenous variables, we have revised our quarterly GDP estimates from Q2:2013–14 onwards. The estimates are illustrated in Figure F3.

Figure F2: Quarterly Inflation Forecast from Q2:2013–14 onwards

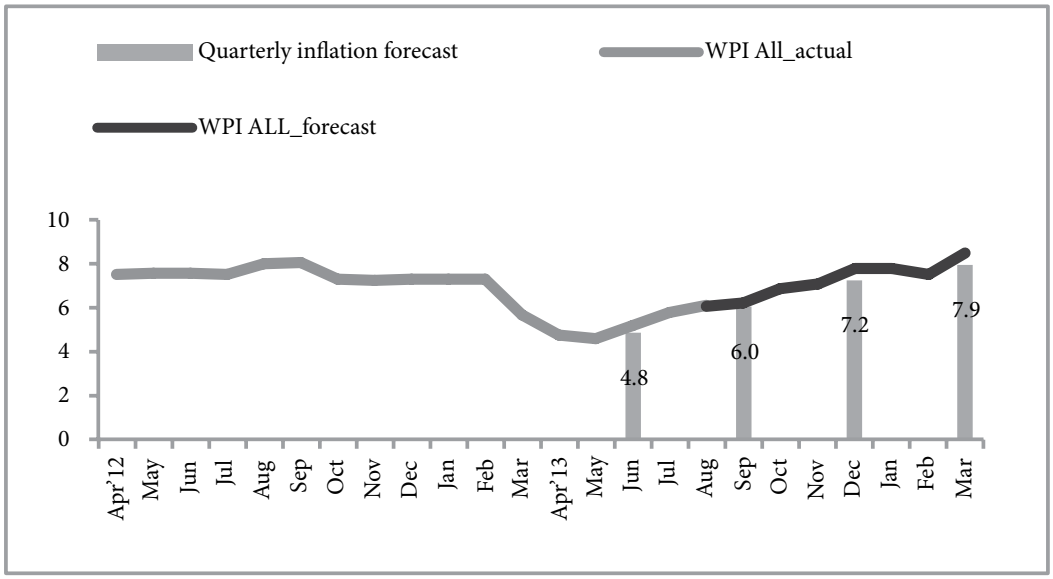
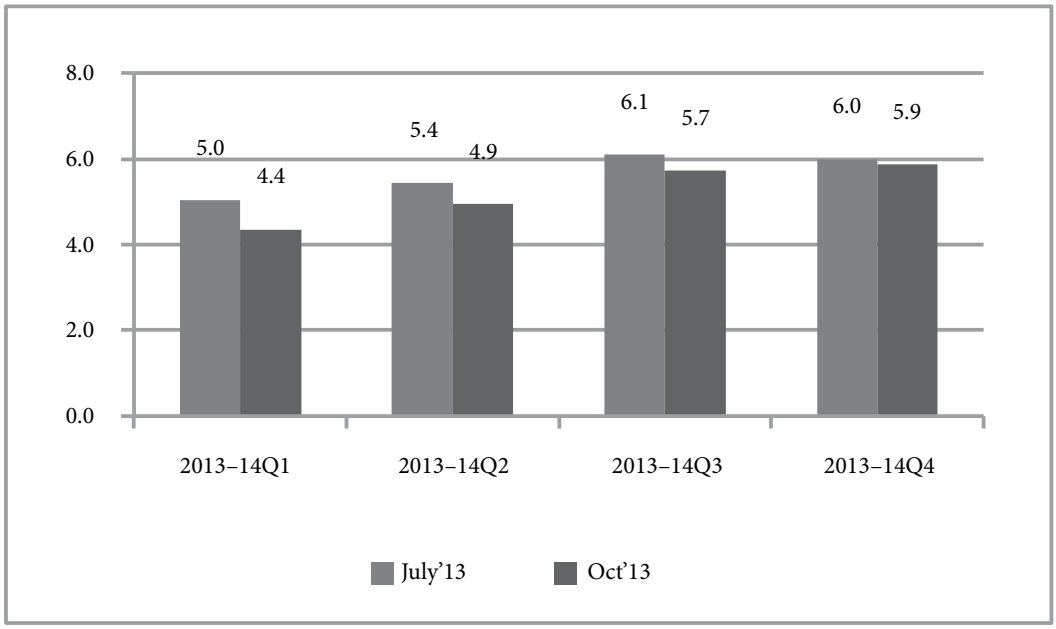


Figure F3: Quarterly GDP Growth Rate Estimates for 2013–14 (%, y-o-y)



GDP growth rate at 2004–05 constant prices is estimated at 5.3 per cent for 2013–14, a downward revision of 0.4 percentage points over our July 2013 estimate of 5.7 per cent. GDP growth in all three quarters has been revised downwards compared to our previous estimate in July 2013.

This is mainly due to contraction of output in industry and services sectors. While agricultural output is revised upwards from 3.3 per cent in July to 4.1 per cent in the current estimates on account of better

rainfall, industrial growth is revised downward to 2.9 per cent from earlier estimates of 4.5 per cent in July 2013. Services sector growth rate is also revised downward from 6.8 per cent in July 2013 to 6.6 per cent in the current estimates.

It is important to note here that the current quarterly model is unable to fully capture the impact of a few important factors such as investment, exchange rate, interest rate etc. on sectoral output. Therefore, the trend slowdown or policy impact of these variables on output at the sectoral levels is difficult to quantify accurately.

F.5 Annual Assessments for 2013–14

The current forecast is the third revision in GDP growth rate for 2013–14 after the first revision in July 2013 when we had projected real GDP growth at 5.9 per cent. The current forecast incorporates changes in key macroeconomic parameters during the past three months. The key assumptions on which the forecast is based are the following.

Rainfall: We assume rainfall to be three per cent above normal compared to our earlier assumption of 'normal' rainfall.

World GDP growth: We retain our earlier assumption regarding real world GDP growth at 3.1 per cent as per the IMF's July 2013 World Economic Outlook (WEO).

International crude oil price: We retain our earlier assumption of no y-o-y change in international crude oil prices on average.

Non-fuel commodity prices in the international markets: We retain our earlier assumption of no y-o-y change in international non-fuel prices on average.

FDI net inflows and net invisibles receipts: We retain our assumption of a y-o-y change in net invisible receipts and net FDI inflows at eight and ten per cent respectively.

Foreign institutional investment: We assume no improvement of net FII inflows in current fiscal over the previous fiscal year as compared to our earlier assumption of 10 per cent y-o-y increase.

Domestic energy price index (WPI for fuel, power, light and lubricants): Energy prices (WPI) are assumed to increase by 5.56 per cent in the current fiscal due to an increase in the price of oil imports as against an increase of four per cent assumed by us earlier.

BSE Sensex: We keep our earlier assumption of a five per cent increase in the BSE Sensex.

Interest and exchange rates: We maintain our earlier assumption of no further moderation of interest rate. We also retain our earlier assumption of LIBOR at 0.2 per cent. The Rupee has depreciated significantly in recent months. Therefore, we assume 9.5 per cent depreciation of the Rupee against US dollar in current estimates as compared to two per cent in July.

Central government finance: We retain our earlier assumptions on government finances i.e., disinvestment revenue of ₹40,000 crore, subsidies at 2.03 per cent of GDP. We also retain our assumption on tax collection rates i.e. a y-o-y increase in direct and indirect tax collection rates at two and one per cent, respectively. We

expect oil subsidies will exceed the Budget Estimates in the current fiscal as will total expenditure. But the government may try to neutralise the additional burden either by cutting down non-Plan expenditure or by shifting some/entire portion of additional oil subsidies repayment to the next fiscal.

In addition to the above assumptions, we have also made an intercept adjustment in the private investment function to capture the investment decline on account of rising under-recovery of oil marketing companies.

The revised assessment (baseline) of for 2013–14 is summarised in Table F.5.

The revised assessment (baseline) places overall GDP growth, in constant 2004–05 prices, at 5.2 per cent in 2013–14 which is 0.7 percentage points lower than our earlier estimate of 5.9 per cent in July 2013.

A substantial downward revision of growth is made in the case of the services sector followed by a marginal decline in the growth in industry. In case of agriculture, we estimate a higher growth rate of 3.9 per cent compared to our earlier estimate of 3.2 in 2013–14.

The services sector, which has been the main source of India's economic growth, has slowed down in recent years. Available indicators suggest services' sector growth will be lower than in the last year. We have revised the sector's growth from 7.1 per cent in July to 6.1 per cent in current estimates. The industrial sector continued to underperform due to sluggish growth in manufacturing and contraction of output in the mining and quarrying sectors. Our current estimates show a downward revision in industrial growth by 0.4 percentage point from 4.3 per cent in July.

In an alternative scenario, we assume disinvestment revenue would fall short of our baseline target of ₹40,000 crore and the exchange rate would depreciate more than what we have assumed in the baseline. In this scenario, the overall GDP growth, in constant 2004–05 prices, is estimated at 4.8 per cent. At the sectoral level, industry is expected to grow by 2.6 per cent and services by 6 per cent in 2013–14. Thus, the annual model gives a GDP growth range 4.8–5.2 per cent for the current fiscal.

WPI inflation declined to below five per cent in April 2013 but has picked up since then due to rising food and energy prices. Our revised estimates show 6.8 per cent WPI inflation in 2013–14, an upward revision of 0.9 percentage points over the earlier estimate. In the case of the quarterly model, based on ARIMA projection, we find WPI inflation at 6.5 per cent for the current fiscal. Therefore, our inflation estimate ranges between 6.5–6.8 per cent for the current fiscal.

A substantial decline in Rupee value and better performance of US and other developed countries is likely to improve the growth prospects of India's merchandise exports. The merchandise imports bill is also likely to go up due to the rising oil import bill. Current estimates show growth in merchandise exports (US$) at 11.9 per cent which is 2.5 percentage points higher than the earlier estimates. Merchandise imports growth (US$) is also revised upward by 0.6 percentage points to 13 per cent in current estimate.

As we expect a better performance of exports, the current account deficit as a ratio to GDP has been revised slightly downward to 4.5 per cent from earlier estimate of 4.6 per cent.

The fiscal deficit of the Central government has been kept unchanged at 5.1 per cent of GDP at current market prices for the current fiscal.

Table F1: Trends in GDP Growth at Factor Cost (%y-o-y change at 2004–05 constant prices)

	Q1	Q2	Q3	Q4	Q1
Agriculture	2.9	1.7	1.8	1.4	2.7
Industry	1.8	1.3	2.5	2.7	0.2
Manufacturing	–1.0	0.1	2.5	2.6	–1.2
Services	7.7	7.6	6.7	6.6	6.6
Total	**5.4**	**5.2**	**4.7**	**4.8**	**4.4**

Source: Central Statistical Organisation, Government of India.

Table F2: Trends in Expenditure Growth in GDP at Market Price (%y-o-y Change at 2004–05 Prices)

	Q1	Q2	Q3	Q4	Q1
PFCE	4.3	3.5	4.2	3.8	1.6
GFCE	7.2	6.9	2.2	0.6	10.5
GFCF	–4.6	1.1	4.5	3.4	–1.2
Total	3.4	2.5	4.1	3.0	2.4

Source: Central Statistical Organisation, Government of India.
Note: PFCE: Private final consumption expenditure, GFCE: Government final consumption expenditure, GFCF: Gross fixed capital formation.

Table F3: Recent Trends in Selected Economic Indicators

% change y-o-y	2012–13	2012–13	2012–13	2012–13	2013–14	2013–14	2013–14
	Q1	Q2	Q3	Q4	Q1	July	Aug
I. Growth environment: IIP							
Manufacturing	–0.8	0.2	2.5	3.2	–1.2	3.0	–
Mining and Quarrying	–1.5	–0.7	–2.9	–4.0	–4.6	–2.3	–
Electricity	6.4	2.8	4.4	2.3	3.5	5.2	–
General	–0.3	0.4	2.1	2.4	–1.1	2.6	–
II. Price environment							
WPI(New Base)							
Primary articles	9.9	9.7	9.3	10.0	6.5	9.1	12.9
Fuel, power etc.	11.9	8.7	10.4	11.3	7.7	13.8	11.8
Manufacturing	5.3	6.0	5.6	4.8	3.3	3.1	2.1
Rice or paddy	6.1	11.0	15.8	17.7	18.7	21.1	20.1
Wheat	6.5	12.7	21.9	21.0	13.3	13.4	7.6
Edible oils	10.3	10.8	9.4	6.0	1.0	–2.2	–3.9
All commodities	7.5	7.4	7.3	7.2	4.8	6.4	6.5
CPI							
Industrial workers	10.1	9.8	10.1	11.7	10.7	10.8	–
Agricultural labour	7.9	9.1	10.5	12.6	12.6	12.8	–
III. Monetary/Capital market variables							
Sensex	–9.8	4.1	16.2	10.0	15.1	12.2	6.8
M3	14.5	14.2	13.0	13.0	12.8	12.5	12.2
Reserve Money	7.3	5.2	4.1	–1.7	6.9	6.8	7.5
Bank credit to commercial sector	18.6	17.7	17.2	15.3	14.1	14.3	16.3
LIBOR (3 months, end period rate %)*	0.47	0.42	0.32	0.29	0.28	0.27	0.26
IV. External account							
Exports (merchandise)	–4.8	–15.4	22.4	0.2	–3.7	15.1	17.0
Imports (merchandise)	4.2	–4.6	9.3	–5.2	6.4	0.4	–2.4
Exchange rate ₹/US$ (+ depreciation/- appreciation	19.9	20.4	6.5	8.0	3.5	7.8	13.3
Brent $/barrel*	108.9	110.0	110.4	112.9	103.0	107.7	111.0
Forex Currency Assets (US$)	–7.6	–8.7	–4.3	4.0	–3.5	–1.7	–4.0

Source: Official statistics accessed from a number of sources.
Note: * These are actual values and not y-o-y changes.

Table F4: Forecast vs. Actual Growth Rate of GDP for India

For: Fiscal Year 2013	Initial round (%)	1st revision (%)	2nd revision (%)	3rd revision (%)	Latest (%)
World Bank (GDPfc)	–	7–7.5 (March'12)	6.5 (July'12)	6.0 (October'12)	5.4 (January'13)
IMF (GDPmp)	7.0 (January'12)	6.9 (Apr)	6.2 (July'12)	4.9 (October'12)	–
ADB (GDPfc)	–	7.0 (April'12)	6.5 (July'12)	5.6 (October'12)	5.4 (December '13)
RBI (GDPfc)	–	7.2 (April'12)	6.5 (July)	5.7 (October'12)	5.5 (January'13)
PEAC (GDPfc)	7.6 (February'12)	–	6.7% (August'12)	6.0 (October'12)	–
Ministry of Finance	7.6 (Mar'12)	–	–	5.7–5.9 (December'12)	–
For: Fiscal Year 2014	**Initial round (%)**	**1st revision (%)**	**2nd revision (%)**	**3rd revision (%)**	**Latest (%)**
World Bank (GDPfc)	6.1 (December'12)	6.1 (April'13)	5.7 (June'13)	–	
IMF (GDPmp)	5.9 (January'13)	5.7 (April'13)	5.6 (July'13)	3.8 (October'13)	
ADB (GDPfc)	6.5 (December'12)	6.0 (April'13)	5.8 (July'13)	4.7 (October'13)	
RBI (GDPfc)	6.6 (January'13)	5.7 (March'13)	5.5 (July'13)	5–5.5 (October'13)	
PEAC (GDPfc)	6.7 (January'13)	6.4 (April'13)	–	5.3 (September'13)	
Ministry of Finance	6.1–6.7 (February'13)	–	–	5.5 (October'13)	

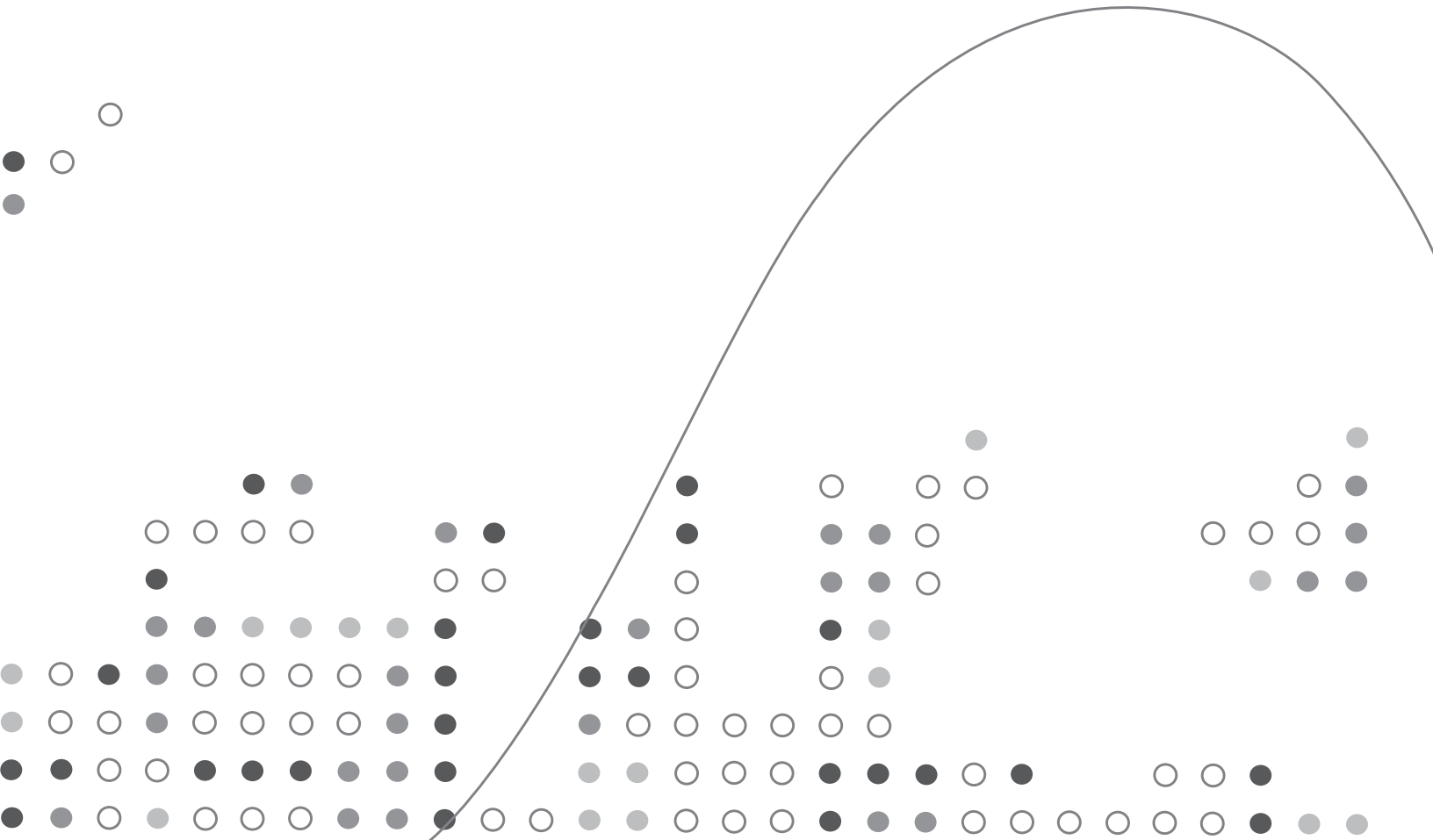
Table F5: GDP Forecasts for 2013-14

Item	2011–12(RE)	2012–13(AE)	NCAER forecast for 2013–14 July 2013	NCAER forecast for 2013–14 October 2013
% Change y-o-y				
Real GDP				
- Agriculture	3.6	1.9	3.2	3.9
- Industry	3.5	2.1	4.3	3.9
- Services	8.2	7.1	7.1	6.1
Total	**6.2**	**5.0**	**5.9**	**5.2**
Exports ($ value)	21.8	–1.8	9.4	11.9
Imports ($ value)	32.3	0.4	12.4	13.0
Inflation (WPI)	8.8	7.2	5.9	6.8
% of GDP at market prices				
Current account balance*	–4.2	–4.8	–4.6	–4.5
Fiscal Deficit (Centre)	5.7	5.2	5.1	5.1

Notes: Forecast Based on Annual Model.
AE: Advance Estimates RE: Revised Estimates * Surplus (+)/deficit (-)

Mid-Year Review of the Indian Economy 2013–14

PART III: Selected Themes



Working Draft

Revival of Mining Sector in India: Analysing Legislations and Royalty Regime

Lekha Chakraborty

There is a growing recognition to the significance of public policies in both enhancing and undermining the competitiveness of mining sector. It is all the more relevant when the mining regulatory mechanisms and the fiscal systems - taxation and royalty regime - related to it have undergone changes in India recently. This paper on mining sector in India is attempted against the backdrop of Planning Commissions' High-level Committee Report on National Mineral Policy 2006, and the subsequent Mines and Minerals (Development and Regulation) Bill, 2011. Repealing the Mines and Minerals (Development and Regulation) Act, 1957, the new MMDR Bill, 2011, focuses to create an enabling legislative environment for attracting investment and technology into the mining sector.

Yet another major transition in the mining policy of India is towards recognising the negative externalities of mining sector in India on human development and environment and measures to address these issues. The new mining policy of India has been successful to a great extent in redefining the mining code incorporating these issues. However, the methodology suggested to address these issues by generating a Development Fund through *profit sharing formula* - 26 per cent of profits from the coal miners and 100 per cent royalty equivalent money from other miners- became controversial. This point will be revisited in the paper.

The paper is divided into six sections. Section 1 explains the mining sector of India and its contribution to GDP as well as the gross capital formation of the sector. Section 2 deals with the State wise analysis of mining sector to examine the contribution of mining sector to the regional development in India. Section 3 deals with the public policy transition in the mining sector of India, with regard to legislations. Section 4 deals with the fiscal policy regime related to mining sector. Section 5 concludes.

MS.1 Mining Sector in India

Interestingly, the countries with large mining sector are the ones which belong to the pre-historic land mass referred to as Godwanaland. India is one among these countries, along with Australia, South and Central Africa, and South America. Mining sector contribute to the wealth of nations, the finite and non-renewable resources and to economic growth of the country. Mining is a significant sector of the Indian economy, endowed with metallic and non-metallic minerals. India produces 89 minerals including four fuel minerals, 48 non-metallic minerals, 10 metallic minerals, three atomic minerals and 24 minor minerals (Government of India, 2013). However, the public expenditure on exploration in India is negligible when compared to other countries.

Table MS1: Global Public Spending on Exploration: 2012

Country	% of Total World Expenditure on Exploration
Latin America	25
Canada	18
Europe/FSU/Asia	16
Africa	15
Australia	13
United States	8
Pacific Islands	5

Source: Metals Economics Group, 2012.

The public spending for nonferrous exploration across globe reveals that Latin America spent highest on exploration (25%) followed by Canada (18%) (Table MS1). However, the public spending by Asia is within 16 %; the reported 16 per cent is the combined figure for Asia, Europe and Former Soviet Union (FSU) (Metals Economics Group, 2012). Within Asia, India on mining exploration is less than one per cent of the total world expenditure (Planning Commission, 2005). Lack of adequate public spending on exploration may be one of many factors that affecting the growth of mining sector in India.

The recent trends in index of mineral production (with base 2004–05=100) showed a negative growth rate of 5.09 per cent, to 121.91 in 2012–13 as compared to 128.45 for 2011–12. The total value of mineral production (excluding atomic minerals) during 2012–13 has been estimated at ₹2,34,612.66 crores, which shows decrease of about 0.12 per cent over that of the 2011–12. While disaggregating the total value of mineral production into fuel minerals, metallic and non-metallic minerals, it is revealed that in 2012–13, value for fuel minerals account for 66.85 per cent of the total and the metallic and non-metallic (including minor mineral) shares are significantly lower at 18.49 per cent and 14.66 per cent respectively.

The advance estimates of GDP (at 2004–05 prices) by CSO indicated that the mining (and quarrying) sector constitute 1.86 per cent of GDP in India in the Q1 of FY 12–13. For the same period, the mining and quarrying sector accounts for 2.6 per cent of GDP at current prices, which is estimated at ₹50,144 crores. The components of GDP (quarterly estimates) including the mining sector, at constant prices are given in Table MS2. It is often observed that the crucial factors for the stagnation of mining sector to around 2 per cent of GDP are procedural delays, obsolete technology of mine firms, exorbitant royalty and taxation regime and the infrastructural bottlenecks which thwarted the growth of mine industry.

Table MS2: Mining and other Components of GDP: Quarterly Estimates (Q1), 2013–14 (at 2004–2005 prices)

Sector	APRIL-JUNE (Q1)				
	(₹crore) GDP for Q1 of			Percentage change Over previous year Q1	
	2011–12	2012–13	2013–14	2012–13	2013–14
Agriculture, forestry & fishing	13.78	13.46	13.25	2.9	2.7
Mining & quarrying	2.10	2.00	1.86	0.4	–2.8
Manufacturing	16.30	15.31	14.50	–1	–1.2
Electricity, gas & water supply	1.96	1.98	1.97	6.2	3.7
Construction	7.89	8.02	7.89	7	2.8
Trade, hotels, transport & communication	27.97	28.17	28.04	6.1	3.9
Financing, insurance, real estate & business services	18.41	19.09	19.93	9.3	8.9
Community, social & personal services	11.58	11.97	12.55	8.9	9.4
GDP at factor cost	100	100	100	5.4	4.4

Source: CSO (2013).

However, the mining sector's contribution to the GDP in India appears to be lower than selected countries with relatively significant mining sectors like Chile (6.0%), South Africa (5.3%) and Australia (5.9%) (Table MS3).

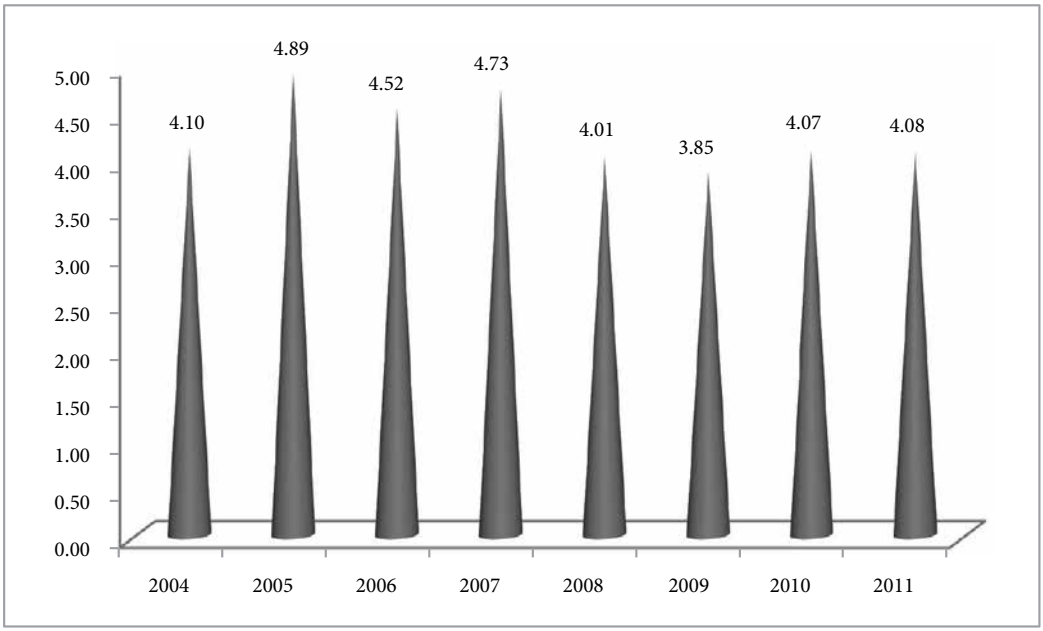
Table MS3: Global Comparison of Size of Mine Economy (%)

Country	Mining Sector-GDP ratio (%)
Chile	6.0
South Africa	5.3
Australia	5.9
Brazil	2.0
India	2.6

Source: Strategy Paper, Government of India (2011).
Note: figures relates to 2010.

The relative share of mining in gross fixed capital formation (GFCF) has declined over the period since 2007–08, though over the years the ratio stagnated around four per cent. The latest estimate showed that mining sector constitutes 4.08 per cent of total GFCF (Figure MS1).

Figure MS1: Mining in Gross Fixed Capital Formation (GFCF)



Source: CSO (2012).

MS.2 Mining Sector: State-wise Analysis

Mining sector of India is characterised by a large number of small operational mines. In 2012–13, the number of mines which reported mineral production (excluding atomic, petroleum (crude), natural gas and minor minerals) was 3,108, out of which 573 were coal mines (including lignite), 559 were metallic and 1,976 were non-metallic mines. The state-wise distribution of mines is given in Table MS4. These eleven states together accounted for 93.92 per cent of total number of mines in the India in the year 2012–13.

Table MS4: State-wise Distribution of Mines in India, 2012–13

States	Number of Mines, 2012–13
Andhra Pradesh	583
Rajasthan	374
Gujarat	350
Madhya Pradesh	300
Tamil Nadu	281
Jharkhand	280
Odisha	175
Chhattisgarh	165
Karnataka	160
Maharashtra	139
West Bengal	121

Source: Government of India (2013).

Offshore constitute the single most significant area in terms of value of mineral production in the country and had the share of around 21.62 per cent of total national mineral production (Table MS5). Among the States, the mineral production in Orissa is the highest in the year 2012–13 at 11.56%.

Table MS5: Distribution (%) of Value of Mineral Production, 2012–13

State	2012–13
Orissa	11.56%
Rajasthan	9.58%
Andhra Pradesh	7.98%
Jharkhand	8.88%
Chhattisgarh	6.91%
Gujarat	5.95%
Madhya Pradesh	5.27%
Assam	4.45%
Goa	3.09%
Uttarakhand	2.72%
Offshore	21.62%

Source: Government of India (2013).

With proper public policy and infrastructure, the strategy paper suggested that the contribution of mining to state GDP in mineral rich states like Chhattisgarh could grow to 20 per cent in 2025, and Jharkhand to 14.1 per cent (Table MS6).

Table MS6: Forecasts of Mining Sector to State GDP, 2025 (%)

State	2009	2025
Orissa	9	22.1
Rajasthan	2.1	3.1
Andhra Pradesh	2.9	3.8
Jharkhand	9.1	14.1
Chhattisgarh	13.1	20.0
Karnataka	1.1	2.7
Goa	9.5	14.2

Source: Government of India (2011).

The state-wise forecasts reveals that Goa occupies the top position in job forecasts in mining sector for 2025 at 16.6 per cent of total work force, followed by Jharkhand (4.6%) (Table MS7). The strategy paper forecasts suggested that mining sector creates 2–2.5 million direct jobs by 2025, contributing three per cent to total employment.

Table MS7: Forecasts of Employment in Mining Sector, Selected States, 2025 (₹ in lakh)

State	2009	2025	% share of working population
Orissa	1	2.5	1.3
Rajasthan	0.7	1.3	0.5
Andhra Pradesh	1.5	2.6	2.0
Jharkhand	3.2	5.6	4.6
Chhattisgarh	1.0	1.7	1.2
Karnataka	0.3	0.7	0.4
Goa	0.3	0.5	16.6

Source: Government of India (2011).

The strategy paper also highlighted that mining sector contributes to royalty revenue, as high as 20 per cent forecasted for Orissa by 2025, 10.9 per cent for Chattisgarh (Table MS8).

Table MS8: Forecasts of Royalty Revenue, Selected States, 2025

State	2009	2025	% of current revenue receipts
Orissa	2.7	19.2	71.0
Rajasthan	1.5	7.1	20.6
Andhra Pradesh	2.0	9.5	15.0
Jharkhand	1.8	8.8	57.1
Chhattisgarh	2.3	10.9	49.3
Karnataka	0.5	3.7	8.2
Goa	0.3	1.5	39.3

Source: Government of India (2011).

MS.3 Policy Transition in the Mining Sector of India

Indian mining sector is an alluring case for several reasons. Till early nineties, the mining industry in India remained completely under the unitary control of government with the state ownership of mining firms and restriction on private investment. The genesis of this policy determination can be traced back to the Industrial Policy Resolution, 1956 (IPR), which put major minerals such as coal, lignite, mineral oils, iron ore, copper, zinc, atomic minerals, etc. in Schedule A, which was reserved exclusively for the public sector, and minor minerals in Schedule B, in which the private sector was allowed to participate in mining activities along with the public sector. However with the advent of liberalization policy since early 1990s in India, a comprehensive National Mineral Policy was announced in 1993.

Till early 1990s, Foreign Direct Investment (FDI) was not allowed in the mining sector. Mineral concessions were restricted to firms with less than 40 per cent foreign holding, as in other sectors. With the formulation of the National Mineral Policy in 1993 there was a slight easing up and FDI was allowed up to 50 per cent with no limit on captive mines. Additional FDI could also be allowed on a case-by-case basis. All FDI

proposals required clearance by the Foreign Investment Promotion Board (FIPB). In 1997, FDI up to 50 per cent was taken out of the purview of the FIPB and put on automatic approval route. For exploration and mining of diamonds and precious stones FDI was allowed up to 74 per cent under automatic route in February 2000. In February 2006, the mining sector was opened up to 100 per cent FDI. FDI upto 100 per cent is permitted in non-fuel and non-atomic minerals.

The effect of liberalisation on the mining sector can be observed from the steady rise in the share of private sector in the aggregate value of minerals produced in India. The share of public sector in the total value of mineral production has declined from 91.19 percent in the 1988–89 to 74.61 percent in the year 2004–05 (Indian Bureau of Mines, 2007).

Legal framework

The legal framework for the regulation of mines and minerals (except petroleum and natural gas) was first put up in 1957 - the Mines and Minerals (Regulation and Development) Act 1957 ('MMRD'). MMRD 1957 constituted the basic laws governing the mining sector in India including the regulations related to prospecting fee, royalties, and dead rent in respect of the prospecting and mining leases for minerals other than minor minerals, payable to the State Government. The holder of the prospecting license is required to pay annually, in advance. The holder of the Mining Lease for minerals other than minor minerals is liable to pay a Dead Rent to the State Government till any mineral is removed or consumed, from which time, the holder has to pay royalty or dead rent whichever is higher. These provisions of MMRD can only be amended by the Central Government through a notification in the official Gazette. The royalty and the dead rent has been revised in order to make them more favorable to the private sector. The dead rent for the first year of the lease has been removed for all categories. The royalty rates and the dead rent for minor minerals are fixed by the respective State Governments.

Consequently, Mines and Minerals (Development and Regulation) (MMDR) Act 1957 was amended in January 1994 and Mineral Concession Rules 1960 (MCR) and Mineral Conservation and Development Rules 1958 (MCDR) soon after to incorporate these changes and simplify the procedure for grant of mineral Concessions to attract large private investments. MMDR Act was further amended in December 1999 and MCR and MCDR were amended in the year 2000. It brought a number of changes in procedures of Prospecting License, Reconnaissance Permit and Mining Leases and delegated more powers from central government to State governments. However, government control over mining sector continued through administrative pricing regime.

The Mines and Minerals (Development and Regulation) Act, 1957, ('MMDR Act') is the legislation governing the mining sector in India. The legislations are set for the regulation of mines and the development of mineral endowments based on MMDR Act. The legal fiat is set under MMDR Act (such as the Mineral Concession Rules, 1960 and Mineral Conservation and Development Rules 1988) to regulate the grant of prospecting licenses and mineral licenses for minerals and also focus on conservation and systematic development of minerals.

Broadly the mining operation can be trichotamised into the following phases; (i) prospecting, (ii) development and (iii) operation. Further the prospecting phase can be dichotomized into (i) reconnaissance and (ii) detailed exploration. There is an interface between legal and fiscal fiat at each stages of mining. For instance,

specific licenses/ permits are granted to the prospector at each stage of mining and the grant of the licenses/ permits is subject to payment of royalties and fees which are intended to be used for the conservation and systematic development of mineral endowments.

Under the legal fiat based on MMDR Act, there are (i) reconnaissance permit fee, (ii) prospecting fee, (iii) dead rent, (iv) royalties and some other levies are levied at the different stages of a mining operation.

Reconnaissance Permit is required to undertake reconnaissance activity. The prospector is required to obtain it, which is granted for a period of three years. The prospector holding the Reconnaissance Permit is required to pay an annual permit fee at a rate as may be fixed by the State Government for the land allotted to him for reconnaissance activity. This is referred to as reconnaissance permit fee. The reconnaissance permit fee is ₹5 per square kilometre (sq km) annually. Additionally the permit holder is also required to pay a security deposit of ₹20 per sq km of land allotted to him.

Ex-post to the reconnaissance activity, a prospector would undertake a detailed exploration of the land. For detailed exploration, a prospector is required to obtain a Prospecting License, which is granted for a period of three years, and extendable for another two years. The prospector is required to pay annually, in advance, a prospecting fee as may be fixed by the State Government for the land allotted to him for prospecting. This is termed as prospecting fee. The prospecting fee is levied at a rate of ₹50 for the first sq. km. and ₹10 per sq. km. for subsequent area. Additionally, the license holder is also required to pay a security deposit of Rs 500 per sq km of land allotted to him.

Dead rent is in the nature of a minimum royalty payment and is generally payable when no production is undertaken in the mine. Thus, where a holder of a mining lease becomes liable to pay royalty, he would be liable to pay royalty, or the dead rent (in respect of that area), whichever is higher. The holder of a Mining Lease is required to pay to the State Government an annual dead rent at the specified rates for all areas included in the Mining Lease. The rate varies from ₹100/- to ₹400/- per hectare per annum depending on the mineral produced, value of minerals and area of lease.

Royalty is the revenue required to be paid by the holder of Mining Lease for any mineral removed or consumed from the leased area at the rate specified in the MMDR Act. Once the regional exploration and the detailed exploration is concluded, the prospector undertakes the development and operation of the mine. For this activity, the prospector is required to obtain a Mining Lease which is generally granted for a period of thirty years, and extendable for a further period of twenty years.

In addition to the levies under the MMDR Act, a mine operator is also required to pay other fees and levies with regard to the use of forest land for mining operations under the Forest Conservation Act 1980 and the Indian Forest Act 1927. Such other levies are (i). Forest Tax: Forest tax is levied on forest produce removed from forest areas. The rate varies from State to State; (ii) Compensatory Afforestation Charges: these charges are levied in order to undertake afforestation. The charges vary from State to State and (iii) other charges such as charges for clearing of jungle, development of land, replantation etc.

In mentioned above components, royalty which is the most significant component of revenue, is required to be paid to the government when the prospector obtains the Mining Lease. In so far as policy changes with

respect to the rates of dead rent are concerned, there had been no revision since 1987 and after a gap of about 10 years the revised rates for the same were notified on 11th April, 1997.

Policy sequencing of mining royalty regime

Every three years, a Royalty Study Group is also constituted by the Government of India to suggest the revisions in the rates of royalty across minerals. The upward revision in the royalty rates in India is also a matter of grave concern as it can affect the competitiveness of mine firms. Mining royalty causes controversial debates the mine firms raise concerns over the upward revisions in royalty rates as the royalty expenses constitute a significant component of the mining firms. Moreover, the public policies relates to the mining sector is unique as it deals with the natural resources sector.

Historical analysis suggests that till 1966, the royalty rates were modified as and when necessary for different minerals at different rates (Table MS9). The rates of royalty for 21 minerals were levied on the basis of unit of production (tonnage basis) and those for other minerals were levied on the basis of pit's mouth value of mineral (ad valorem basis). However, even the rates for the 21 minerals, which were on tonnage basis, were subject to a ceiling of 20 per cent of the pit's mouth value of the mineral. Thus the royalty rates were directly or indirectly linked to the pit's mouth value of the mineral.

Subsequently in 1966, the Government of India set up a Study Group for the first time to undertake a comprehensive review of the royalty rates on all minerals keeping in view the impact of royalty on production in mineral based industries, exports and the inflow to the State revenues. The Study Group gave its report in 1968 and suggested de-linking of royalty rates from the pit's mouth value for most of the minerals and recommended royalty rates on unit of production basis (tonnage basis).

The next significant policy transition of royalty regime was in 1992 when notified royalty rates were in most of the cases (except diamond and other precious and semi-precious stones excluding agate) at flat rates, arrived at by the Study Group by giving due weightage to the unit value of the minerals at the pit's mouth.

Prior to 1990, some of the State Governments were separately levying cess on mineral production under various State Acts, usually linked to royalty. However, these levies were struck down by the Supreme Court in December, 1989, and consequently; there was pressure on Union Government from the States to compensate them for the loss of cess/revenue from tax on mineral rights. Under the circumstances the Government of India took into account the revenue losses sustained by the States and fixed the royalty rates in February, 1992 in such a manner that the overall revenue including the amount lost due to the abolition of cess on minerals and mineral rights tax were protected. As a result, there was, in general, steep increase in the royalty rates in the revision effected in February, 1992.

Following the adoption of the policy of economic liberalisation and also as a sequel to the International Round Table Conference held in New Delhi in April, 1994, under the aegis of the UNDP and the Ministry of Mines, Ministry of Mines constituted a Study Group in January, 1995, with a view to rationalise the rates of royalty to make them comparable with the international rates, and at the same time ensure rapid development of mining industry and augmentation of revenue earnings of State Governments. Based on the recommendations of this Study Group, the total number of rates pertaining to major minerals (excluding coal, lignite and sand for stowing) was brought down from 86 to 65 while at the same time, the scope of ad

Table MS9: An Illustration of Hike in Royalty Rates: Three Distinct Phases of Mining Royalty Regime in India (Zn-Pb)

Period	Royalty Base	Zn Royalty Rates (Period)	Pb Royalty rates (Period)
1949–1968	PIT MOUTH VALUE: Royalty calculated as the per cent of the sale price at pit mouth.	5% (1949–1963) 7% (1963–1968)	6.25% (1949–1963) 7.00% (1963–1968)
1968–1997	UNIT-BASED: Royalty calculated as amount per unit of metal per tonne of ore and on pro-rata basis.	₹1 per unit (1969–1975) ₹3 per unit (1975–1981) ₹4 per unit (1981–1987) ₹6 per unit (1987–1992) ₹16 per unit (1992–1997)	₹ 0.75 per unit (1969–1975) ₹1.50 per unit (1975–1981) ₹3.00 per unit (1981–1987) ₹3.00 per unit (1987–1992) ₹8.00 per unit (1992–1997)
1997–2009 2009–2011 2012 -present (recommended)	AD-VALOREM: Royalty calculated as percent of LME metal price on ad valorem basis chargeable on contained metal in ore produced/concentrate produced. AD-VALOREM AD_VALOREM	3.5% of LME (1997–2000) 6.6% of LME (2000–2009) 8% of LME on ore (2009–2011) 8.4% of LME on concentrate (2009–2011) 9.5% of LME on ore (2012 May - present) 10% of LME on concentrate (2012 May-present)	4.7% of LME (1997–2000) 5% of LME (2000–2009) 7% of LME on ore (2009 Aug - present) 12.7% of LME on concentrate (2009–2011) 8.5% of LME on ore (2012 May - present) 14.5% of LME on concentrate (2012 May-present)

Source: Collated from the policy documents of the Study Groups on Royalty Rates, Ministry of Mines, Government of India (various years) and IBM Publications (various years).

valorem system was enlarged to seventeen rates covering as many minerals besides the group of "all other minerals". The Study Group 1995 also expressed the hope that "in future a complete switch over to ad valorem system will be possible". These rates were notified with effect from 11th April, 1997.

Consistent with the past experience, the Department of Mines, Ministry of Mines constituted a Study Group in October, 1998. The objectives were the same as that of the earlier Study Group constituted in 1995, i.e. to rationalize the rates of royalty to make them comparable with international rates and at the same time, ensuring rapid development of mining industry and augmentation of revenue earnings of State Governments. As per the recommendations of this Study Group, the total number of rates pertaining to major minerals (excluding coal, lignite and sand for stowing) was brought down from 65 to 40 rates, while at the same time, the scope of ad valorem system was enlarged to twenty one rates covering as many as 39 minerals along with a separate group of "other minerals" which were not mentioned separately in the Second schedule to the MMDR Act. This Study Group also expressed the hope that "in future a complete switch over to ad valorem system will be possible". These rates were notified with effect from 12th September, 2000.

The Study Group of 1998 also recommended different rates of dead rent for high value, medium value and low value minerals, which were notified on 11th September, 2000 along with the royalty rates. In accordance with Section 9(3) of the amended MMDR Act, 1957, which provided that the Central Government may, by notification in the Official Gazette, amend the Second Schedule to the Act, so as to enhance the rates of royalty payable on minerals, not more than once in three years and consistent with the past practice, the Department of Mines, Ministry of Mines constituted a Study Group on the Revision of Royalty on Major Minerals (other than coal, lignite and sand for stowing) to study the question of royalty and dead rent in all its aspects and make appropriate recommendations to the Government in May, 2002. This Study Group suggested 39 royalty rates for major minerals (excluding coal, lignite and sand for stowing). These rates included 18 royalty rates on unit of production basis applicable to 21 minerals, and 21 ad valorem royalty rates covering 39 specified minerals and a group of unspecified minerals. These rates were notified on 14th October, 2004.

While the new royalty rates were being notified in 2004, two parallel developments were taking place in the mineral sector. First, China suddenly grew up as a major consumer of iron ore requiring the ore for its steel plants, fueling a spurt in the prices of iron ore. The increased demand led to a visible growth in the profits of mining companies, particularly those in export of iron ore. Secondly, there was a global increase in the prices of base metals (lead, zinc, copper and nickel) and aluminium, which combined with the industrial growth in the country to give healthy profits in mineral production. As a result, the amount of royalty accruing to the States vis-a-vis the margin to the miner decreased substantially per tonne of mineral produced. Thus within a year of the notification of the royalty rates on 14th October 2004, the chief mineral producing States started demanding a review of the royalty rates providing for adequate compensation for the minerals mined in the State. However, since the law provides that enhancement of royalty rates could be done only once in three years, any further enhancement in the royalty rates was not possible till 13th October 2007.

Policy inputs for mining royalty regime: Planning Commission High Power Committee, 2006

Although the National Mineral Policy, 1993 aimed at liberalisation of mineral sector by encouraging the flow of private investment and introduction of state-of-the-art technology in exploration and mining, the

results have not been encouraging. In the Mid-Term Appraisal of the Tenth Five-Year Plan, it was observed that the main factors responsible for this were procedural delays in the processing of applications for mineral concessions and the absence of adequate infrastructure in the mining areas. The Planning Commission had set up a High level Committee in 2005 (Hoda Committee) to analyse the issues relating to the development of the mineral sector and suggest measures for improving the investment climate; and to suggest policy recommendations for encouraging investment in public and private sector in exploration and exploitation of minerals.

1. Mining policy would have to provide for the mining laws and practices to evolve in order to adapt to international best practice.

2. Ad valorem is comparatively the better system of royalty as it is linked to prices viz., LME price as in the case of Zinc and Lead, but in case of some other minerals, it is difficult to benchmark the price.

3. Each state government with major mining activity should set up a Mining Development Fund (MDF) by earmarking 15 per cent of the annual royalty collections for the Fund. The GOI should also make matching contribution to the MDF of each state of an equal amount from the Plan funds, every year for the duration of the Eleventh Plan.

4. It is recommended in the report that base and rates of royalty to be revised as per the study Group on Royalty set up by Ministry of Mines in October 2007. The Committee recommended that the fixation of rates of royalty should move forward decisively on the basis of *ad valorem* rates.

5. The Hoda Committee also recommended that in considering raising the *ad valorem* rates, the rates prevailing in Western Australia would be taken into consideration as a point of reference as the Committee feels that the rates prevailing in Western Australia are a good benchmark for determining the competitiveness of royalty rates.

6. If the Western Australian rates are higher than the rates applicable in India the royalty rates should be raised to that level, unless special factors are brought forward such as the cost of mining operations. If the *ad valorem* rates work out to higher rates than those obtaining in Western Australia, the existing rates should continue for the next three- year period as well. In such cases, a lowering of rates could be considered only in those cases in which there is evidence to show that the royalty rates are inhibiting mining operations and mineral production is registering a downward trend.

7. The rates that are already on *ad valorem* basis should be also revised on the basis of the same yardsticks—i.e. as a norm, consider raising the rates to the level in Western Australia unless there are factors justifying a lower rate in India, and leave the rates unchanged if the rates are higher than those in Western Australia unless there are indications that the existing rates are inhibiting mining operations.

8. The Hoda Committee also advised that the Study Group that the royalties on base metals, noble metals, and precious stones need to be at low levels as an incentive for exploration in these minerals in which the country is grossly deficient.

9. The Committee recommended that the valuation of the mineral for the purposes of royalty should be based on the transaction value and should include the profit element over and above the unit cost of production. For export consignments the system is quite appropriate as the FOB price is taken as the basis and the transport cost from the pithead to the port as well as the loading and unloading charges

and the port charges are deducted therefrom. For domestic sales also, the sale price rather than the pit mouth value should be taken into consideration. Thus the profit element must be added to the cost of production. The ideal would be to use the sale price to the end-user as opposed to the middleman as the basis for determining the valuation. From the sale price the element of transport and loading and unloading costs must be deducted as in the case of FOB price for export consignments.

10. Hoda Committee suggested that in the absence of the sale price, the present system of 20 per cent mark-up on the pit mouth value could continue on an ad hoc basis.

11. For captive mines, the reported price is suspect and should not be used as the basis for calculating the average monthly value. It should be ensured that the IBM takes into account only arm's- length transactions in recording the monthly state-wise and mineral-wise prices.

12. The constitutionality of the issue of whether the states can impose a cess on any mineral for which a royalty has been prescribed is currently under judicial scrutiny. The Hoda Committee observed that in considering the imposition of such a cess in future, state governments should bear in mind the adverse impact on the investment environment in the state.

13. To encourage exploration, which is a pre-mining activity, the Committee recommended that the current restriction of four years for allowing deduction of expenditure on exploration and development from the income tax should be eliminated. All expenditure on exploration and development in the preceding ten years before the commencement of commercial production should be allowed for deduction in mining operations. Further, the mining companies should be given the option to claim deduction either in the first ten years of commercial production or during the useful life of the mine.

14. A conscious decision needs to be taken to encourage physical value addition which improves ore quality and usage at pit mouth such as concentration, beneficiation, calibration, blending, etc. Wherever the miner adds value through these processes the royalty may be charged on the ore at pit mouth on the cost of extraction before processing. Alternatively, the *ad valorem* rate for beneficiated or concentrated ore should be proportionately lower, as in the case of beneficiated iron ore in Western Australia.

15. The penalty for non-payment of royalty is cancellation of the concession. A moratorium or a suitable structure for deferment of royalty payment to support investment in deserving cases, to be spelt out clearly in the MCR, could also be permitted in deserving cases.

16. Rates of dead rent should be rationalised so that they act as an effective deterrent against a mine owner who does not undertake mining as per the approved mining plan and prefers to keep large areas idle and keeps the mineral resources undeveloped. In other words, an escalating scale of dead rent should be worked out. This should be stringently applied to captive miners and PSUs as well.

17. The state governments would get revenues from the disposal of the ore bodies that have been explored earlier at public expense by an open tender/auction system.

18. Transfer fees should be levied on PLs and MLs sought to be transferred. The unbundling of prospecting from mining is likely to bring in investment in the form of FDI into prospecting along with advanced technology. When the PL or ML of a prospected area is transferred for a premium by a prospecting firm in favour of a mining firm or if the firm itself is taken over or acquired by a mining firm for a consideration, a transfer fee as a percentage of the premium or consideration may be levied. Such a step would be in line with international practice.

Policy inputs for rates of royalty: Recommendations of 'The Study Group on Royalty Rates', 2008

The Ministry of Mines constituted a Study Group on Royalty Rates on 24th August 2006 to review the existing rates of royalty on minerals (other than coal, lignite and sand for stowing) given in Second Schedule to the Mines and Minerals (Development and Regulation) Act, 1957 and to recommend revision of rates keeping in view the recommendations of the High Level (Hoda) Committee set up in the Planning Commission.

The objective of the study group was to move decisively towards method of fixation of rates of royalty on the basis of ad valorem rates based on the prevailing best practices of international royalty rates, especially those in Western Australia. The study group was framed to review the guidelines for calculation of ad valorem rates of royalty based on experience of administering the same based on

(i) Valuation of mineral for the purpose of royalty on the basis of transaction value/sale price, including the profit element over and above the unit cost of production and deducting transportation and handling charges.

(ii) FOB price of minerals for export deducting transportation and handling charges.

The study group was also required to suggest incentivised royalty rates on ad valorem basis for beneficiated or concentrated ore. In addition to these tasks, the study group was asked to review and suggest penal action for failure to pay royalty on minerals extracted with special exceptions for allowing moratorium or suitable structure for deferment of royalty payment to support investment in deserving cases. Appropriate revision in the existing rates of dead rent on an escalating scale was also the task of the study group, taking into consideration measures for effective deterrence against idle mines.

The approach of the Study Group was in more favour of ad valorem system of royalty rather than tonnage system, as the former takes into account the dynamics of markets and provides buoyancy in revenues without interference of Government. With respect of lead and zinc, the Study Group considered the request of the Zn-Pb firms to provide for levy of royalty on metal in concentrate. The Study Group observed that in so far as beneficiation of ore takes place in the leasehold area, there is a case for levy of royalty on concentrate since concentrate, like ore, is a form of mineral. Further the Study Group noted that as per the provisions of Rule 64 B of MCR, 1960, if the run-of mine mineral is processed within the lease area, then the royalty shall be chargeable on the processed mineral (here it would be concentrate).

New mines and minerals (development and regulation) Act, 2011

The Cabinet approved the Mines and Minerals (Development and Regulation) Bill, 2011, prepared by the Ministry to replace the existing Mines and Minerals (Development and Regulation) Act,1957 and the Bill has been introduced in Lok Sabha on 12th December, 2011. The Bill aims at reforming the mining sector towards sustainable mining and local area development, benefit sharing mechanism to the people affected by the mining operations. The Bill, also, aims to ensure transparency, equity, elimination of discretions, effective redressal and regulatory mechanisms along with incentives encouraging good mining practices, which will also lead to technology absorption and exploitation of deep seated minerals (Ministry of Mines, Government of India, 2011–2012).

The MMDR 2011 also proposed "a sum equal to the amount of royalty paid to the State Government in the preceding year. The amount shall be payable by the lessee annually to the State Mineral Foundation (SMF) that shall be used for payment of timely benefits as compensation to the affected people of different categories. This apart, lessee of mines are required to submit progressive mine closure plan, final closure plan and also to specify the steps lessee proposes to take to mitigate the sufferings of the people directly affected by the mining operation. A corporate social responsibility scheme (CSR) is also to be submitted by the lessees to the state government. State can impose cess on minerals not exceeding 10 per cent of the royalty payment as may be notified by it from time to time". However, as the royalty rates are disproportionately high in India when compared to ad valorem royalty rates across globe, imposing cess on minerals could further affect the competitiveness of mine firms.

Imposing central cess and state cess, in addition to royalty could affect the new investments by the mine firms. As per MMDR 2011, the purpose of cess is set up of Mineral Funds at National and State Level for capacity creation and also for the purpose of sharing the benefits of mining with persons or families having occupation, usufruct or traditional rights in mining areas, and for local area infrastructure. It is also proposed in MMDR 2011 about creation of an amount equal to royalty in case of mineral other than coal, and 26 per cent of net profits, in the case of coal, each year to district Level Mineral Foundation, which further impinge on the competitiveness of the firm.

MS.4 Fiscal Regime : Mining Taxation/Royalty

Economic rent is the basic rationale for mineral royalties across globe. In other words, worldwide the most common form of economic rent is in the form of a royalty. Broadly speaking, systems of royalty can be categorized into threefold:

(i) **Gross royalty**, where the royalty is determined with reference to the volume of production, or is determined with reference to gross revenues. It is also referred to as tonnage-based royalty or unit-based royalty.

(ii) **Ad valorem royalty**, where the royalty is calculated by applying a percentage rate to the gross sale value. It is also referred to as value-based royalty (Table MS10). This is usually 'ex- mine' or pithead value (sale realization) less allowable expenditure[1]. **Net smelter return (NSR) royalty** is one of the most recurrent systems of ad valorem royalty, where the royalty is expressed as a percentage of the enterprise's NSR. NSR is generally defined to be gross revenues, minus shipping, smelting, refining, and marketing costs.

(iii) **Profit-based royalty**, where the royalty is calculated as a percentage of gross/net profit. It can be calculated in two ways, as shown in Table MS11. Profit-based royalty is also referred to as net profit royalty, net proceeds royalty, and so forth.

1 Ex-mine or pit head value is mineral value once mined and brought to the surface minus treatment costs.

Table MS10: Types of ad valorem Royalty: Various Royalty Bases

	Royalty tax basis
1	Ad valorem -NSR times percentage
2	Ad valorem - metal contained in ore at mine mouth, valued at international price times percentage
3	Ad valorem - metal contained in concentrate at the mill, valued at international reference price times percentage.
4	Ad valorem- metal contained in smelter product, valued at international reference times percentage.
5	Ad valorem - gross sales, les transportation, handling, and freight, times percentage
6	Ad valorem - sliding scale percentages of NSR

Source: World Bank (2006), Stermole Franke and John Stermole (2006).

Harries (1996) noted that net profit royalty is complex and often difficult to understand or confirm, requiring a lot of information and often the services of an accounting professional to calculate and confirm it; it is also open to abuse and is often best avoided.

Table MS11: Types of Profit-based Royalty: Various Royalty Bases

	Royalty tax basis
1	Profit-based - percentage of gross sales, less operating costs, transportation, handling and freight
2	Profit-based - percentage of gross sales, less capitalized costs, operating costs, transportation, handling and freight

Source: World Bank (2006), Stermole Franke and John Stermole (2006).

Government and investors have conflicting objectives. While government prefers the methods of mining royalty that are stable, transparent, equitable and generates revenue in continuum, easy to administer; mining firms prefer the royalty approaches which are stable and predictable and are based on the ability to pay, respond to downturns in price cycles, do not distort production decisions such as cut off grade or mine life and do not add significantly to operating costs.

From a government perspective, unit-based and ad valorem-type royalties are preferred as it can satisfy the objective of revenue in continuum, while profit based royalties will be paid only in the years with profits for the firm. While private sector mining prefer zero royalty regime, and if imposed, having it based on profit or ad valorem. Two important options in the design of a profit based royalty are as follows: (i) Brown Tax and (ii) Resource Rent Tax.

(i) Brown Tax: Under the Brown tax, the government collects a constant percentage of a project's net cash flow in years in which profits are earned and provides cash rebates to private investors in years of negative net cash flow.

(ii) Resource Rent Tax: RRT is a profit based royalty that provides governments with an approximation to the Brown tax but avoids cash rebates in years in which losses are incurred. Under a resource rent tax,

the government collects a constant percentage of a project's net cash flow where losses (negative net cash flow) are accumulated at a threshold rate and offset against future profit.

However, these two options are not relevant in the context of developing countries like India as no country in Asia Pacific has profit-based mining royalty taxation regime.

Global mining regime

Broadly, the global mining royalty arrangements may be trichotamised into profit based, ad-valorem based or unit based.

(i) **profit based royalty** is levied on the net cash flow or some measure of the profit of a mining project

(ii) ***ad valorem* royalty** is an output based royalty that is levied as a percentage of the value of production of a mining project.

(iii) **unit based, royalty** is an output based royalty that is levied as a set charge per physical unit of production of a mining project (gross royalty).

Mining royalty regime varies widely between countries and minerals. Minerals include coal, metallic minerals and non-metallic minerals. Globally, specific royalties tend to apply to low value high volume non-metallic minerals. In the context of developed countries like Australia, Canada and USA, mining royalty regime are mainly profit based or ad valorem royalties — the most consistent application of profit based royalties is in Canada. In the context of countries in Africa, Latin America and Asia Pacific, mining royalty regime are not profit-based. On the contrary, the royalty regime is mainly ad valorem in Africa and Latin America, while some combination of unit-based and ad valorem royalties in Asia and Pacific countries. None of countries in Asia Pacific, Africa and Latin America has adopted a profit based royalty to date.

It is also interesting to note that there is a correlation between the royalty rate and the system of royalty. Gross royalty rates (unit-based royalty rates) tend to be in the two per cent to five per cent range, while *ad valorem* royalty rates tend to be somewhat higher, and the profit-based royalty rates are higher still. The logical reason for it may be as follows. In the case of the profit-based royalty, the government is less certain of collecting a royalty, because the royalty base (profit) is less predictable. The government will seek a higher royalty rate to compensate for this risk. At the other extreme, in the case of a gross royalty, the government is at less risk, because the costs of mining, milling, smelting, and refining do not affect the royalty base (revenues or production). Therefore, the government will seek a reduced royalty rate. Ad valorem, particularly Net Smelter Return royalties fall between gross royalties and profit-based royalties on the risk and rate scale.

In the regime of profit based royalties, the measures of profit vary, the royalty rate is sometimes applied as a sliding scale and, in some cases, and no tax applies if the income from mines falls below some threshold level. In the royalty regime of ad valorem, the basis of mineral valuation may be market price or some specified reference price.

Within African countries, only South Africa is moving towards profit based royalty regime. Indonesia, China, The Philippines and India are the examples of prevalence of specific unit based royalties and ad valorem royalties. Argentina offers an example of an NSR royalty, and a number of Canadian provinces offer

examples of profit based royalties. The royalty systems in some jurisdictions are hybrid systems. In Canada, for example, the annual royalty paid in the Province of New Brunswick is the greater of 2 per cent of NSR and 16 per cent of net profit. As a policy matter, the purpose of the 2 per cent NSR is to ensure that a royalty is paid by the mining enterprise in years when there is no profit. Not every country imposes a mineral royalty or collects an economic rent. Mining operations in Mexico and Chile, for example, are not subject to such charges.

For instance, an unprofitable mine in the Canada would not have to pay provincial mining tax/ royalty, because that jurisdiction's economic rent/royalty is computed on the basis of profit of the firms. On the other hand, the unprofitable mines in Brazil or Argentina would have to pay an economic rent/royalty, because royalty in these countries are not based on profit. Brazil imposes a royalty based on gross revenues, and Argentina charges a royalty is ad valorem, based on net smelter return. In Australia, each of the seven states has its own royalty rates, where the High-level Committee (Hoda Committee) highlighted that Western Australia has internationally competitive royalty rates and one of their policy recommendations has been to use Western Australia royalty rates as the benchmark for the royalty rates in India.

The Province wise analysis showed that most of the Provinces in Australia have ad valorem royalty system. It is also to be noted that ad valorem royalty rate differs across minerals and within minerals, across types of mines. The analysis of mineral wise royalty rates for Western Australia revealed that ad valorem royalty rates for minerals ranged from 1.25 per cent to 7.5 per cent. The minerals with royalty rates at the lower end of the spectrum are Cobalt, Copper, Platinoids, Silver, Tin Metal, Zinc and Lead (metallic) at 2.5 per cent. On the contrary, the ad valorem royalty on minerals like bauxite, coal (export), diamond, gems and precious stones, iron ore, manganese, semi-precious stones are levied at 7.5 per cent. The point to be noted is that the range of royalty rates in Western Australia are much below that that of the rates in India, which ranges between 0.4–20.0 per cent. The rest of the minerals are either levied at 5 per cent rate of royalty or negotiated and formula-linked.

The royalty rates as per the recent notification in August 13, 2009 denotes a dual rate system, which levy royalty for ore as well as royalty for concentrates at different rates for most of the minerals, with rates for the latter at relatively higher than the former. Though the transition of system of royalty from unit-based to advalorem based is better as the latter system is not price neutral, the burgeoning of royalty rates from 3.5 per cent of LME to 10 per cent in case of Zinc (concentrate) and 4.7 per cent to 14.5 per cent in case of Lead (concentrate) is a matter of concern. The analysis of base and rates of royalty with regard to Zinc and Lead would be taken up in the subsequent chapters. Broadly these three phases of mining royalty regimes are closely correlated to the formulation of various Study Groups on Royalty rates and their recommendations.

Factors affecting mining competitiveness

Despite the growing recognition of competitiveness of mining sector on economic growth of a country, the literature is scare on the topic. A few related studies could be identified for Australia, US and Canada, where the mining sector is relatively significant. Since competitiveness is closed linked with productivity, the factors which affect the productivity will also affect the competitiveness. Mining is more prone to experience diminishing returns and increasing cost conditions. For example, the cost of production increases substantially as the depth of mines increases. Similarly, geological characteristics play important role in determining the productivity of mining. Therefore, the orthodox view was that the productivity in the mining industry is largely determined by the quality of mine endowments, geological characteristics and production cycle.

However, a plethora of studies have countered this view and emphasized the role of public policy as well as technology and innovation for attaining higher productivity. In the context of Canada, the study by the Centre for the Study of Living Standards (2009) found that the factors responsible for falling mining productivity growth in Canada were declining capital intensity, high prices for energy and minerals, deterioration of the average quality of the workforce and greater environment regulation. While Smith (2004) showed that coal mining industry in Canada experienced the above average growth in the productivity during 1961–2002, where the major drivers of the productivity growth appeared to be technological advancement, R&D within sectors and availability of skilled labours.

The Committee on Competitiveness in US minerals and metals industry (1990) found that technology is the major determinant of the long term competitiveness in the US. The Report of Australian Academy of Technological Science and Engineering (1997) identifies the following factors, which affect the competitiveness in the mineral industry- labour, energy, power and fuel, transportation, shipping, communications, total infrastructure, availability of, technology, environmental matters, regulatory issues, taxation and tariffs, availability of capital. A technology-based strategy can improve the long-term competitiveness of the minerals and metals industry. Technology can contribute to competitiveness by increasing productivity or product quality, by addressing circumstances unique to a process, company or country, or by assisting producers to adapt to changing consumer demand.

The study on competitiveness of minerals and mining industry in the context of India is almost nil. A few studies could be identified where competitiveness of small scale industries and the sector-specific competitiveness of automobile industry were analysed. While analyzing the determinants of competitiveness in small scale industries, studies showed the importance of infrastructure facilities and business environment for competitiveness in small-scale industries. Using the data on small scale industries from Department of Industries and Commerce and primary data, he found that poor quality and high cost infrastructure in regard to transport, power, road, and credit and telecom affected competitiveness. Delay in getting credit sanctioned from banks, tax and duty-drawbacks, temporary and permanent registration, clearances for exports, permission for expansion and diversification, power and water connections, and clearance from pollution control board reduce the competitiveness by adding cost. Using Feasible Generalized Least Squares (FGLS) for panel data, with heteroskedastic panels, Narayana and Vashisht (2008) revealed that the major determinants of the competitiveness in automobile industries in India were share of emoluments and taxes in total costs, maintenance cost share, inventory cost share, borrowing investment ratio and interest payment's share in total cost, share of imported know how expenses. Out of these, all except maintenance cost share and share of imported know how expenses has negative impact on the competitiveness.

Summarising based on the brief literature review, there are various factors which can affect the competitiveness of the mining industries. These can be firm or industry specific. The significant determinants of the competitiveness, drawn from theoretical and empirical literature are fivefold: (i). Government policy (taxation and royalty); (ii) Cost of production (infrastructure costs and raw material costs etc); (iii) Firm financing (debt financing); (iv) Capacity utilization and (v) Market uncertainty (sales realization). An illustrative analysis for the Zn-Pb sector revealed that government policy, especially royalty regime affects competitiveness more than firm related variables. Analysis regarding the determinants of the competitiveness of mining industries and the role of public policies is an impending area of research.

Existing mining royalty methodology: an illustration

The existing methodology of calculating royalty is the product of total contained metal in the ore produced (as reported in the statutory returns under Mineral Conservation and Development Rules, 1988 or recorded in the books of mine owners), multiplied by the average metal prices in the London Metal Exchange (LME Price), further multiplied by the prevailing rate of royalty for Zn and Pb.

Symbolically,

$R = [\lambda\ ROM] * [€ * P_{LME}] * \Upsilon$

Where

R	= Royalty revenue
λ	= Grade percent of Metal in the ore
ROM	= Run of Mine (ROM) Ore Treated
€	= exchange rate
P_{LME}	= London Metal Exchange Price
Υ	= Prevailing Royalty Rate

Since August 13th 2009, Government of India has notified dual royalty rates for ROM (ore) and concentrates respectively. The methodology remained the same, only the differentials appeared in terms of the 'Υ' and the base of calculating royalty is disaggregated into ROM and concentrates, which could be symbolically as follows.

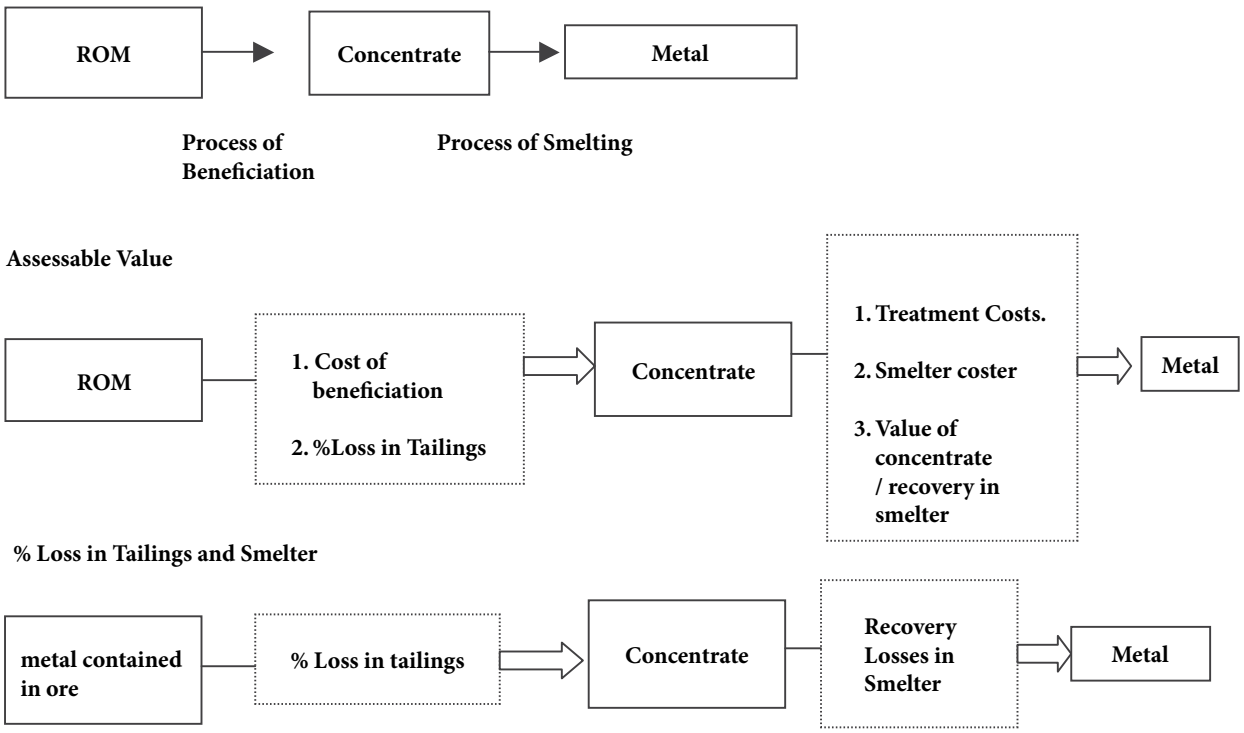
$R_{ROM} = [\lambda\ ROM] * [€ * P_{LME}] * \Upsilon_{ore}$
$R_{CONC} = [\lambda\ CONC] * [€ * P_{LME}] * \Upsilon_{conc}$
where,

R_{ROM}	= Royalty revenue from metal contained in the ore
R_{CONC}	= Royalty revenue from metal contained in the concentrate
λ	= Grade percent of Metal in the ore
ROM	= Run of Mine (ROM) Ore Treated
CONC	= Concentrate
Υ_{ore}	= Prevailing Royalty Rate on the ore
Υ_{conc}	= Prevailing Royalty Rate on the concentrate
P_{LME}	= London Metal Exchange Price

Estimating royalty within mine value chain analysis: the approach

The royalty estimation at ore, as practiced in India when the realm was switched over to ad valorem needs to be discontinued. Instead, the royalty estimation should take care of value chain and estimate royalty on the basis of concentrate, and in plausible cases on metal at the end of the value chain. A value chain can be illustrated as follows.

Figure MS2: An Illustration of Royalty Estimation within the Mine Value Chain



Porter's (1995) value chain is broadly utilised as a method to construct value to improve competitiveness of the firm and in turn to improve the overall profitability of the firm. Competitiveness of the firm improves either through cost deduction or through increasing market share. Competitiveness is based on the global and local environment in which a firm operates and identifying the possible challenges and opportunities involved to improve the profitability. Within the Porter framework, government policy is identified as one of the elements of the entry barriers, along with cost disadvantages and other financial and market uncertainties. If we integrate the mine value chain in the calculation of royalty, we need to alter the methodology in two ways. One, royalty should be calculating only at concentrate (or on metal, wherever plausible) and not on ores. Two, the base of royalty computation should deduct the treatment costs. In India, the current estimation of royalty has not considered the mine value chain in the estimation as we continue to impart royalty on the ore along with concentrate as per the current methodology; and the assessable value of royalty is not based on deducting the treatment costs or the percentage loss at the tailings.

The calculation of royalty by deducting the treatment cost is derived is as follows. The assessable value is derived by deducting the treatment charges per dry metric tonne on the Concentrate from the metal contained in the concentrate adjusted for the grade metal content, multiplied by the London Metal Price (LME) at the appropriate exchange rates. The treatment charges applied are also mine specific.

Symbolically,

$$\mathbf{AV = [\{(\lambda\ CONC * P_{LME}) - (\lambda\ CONC * TC)\} * \Upsilon_{conc}] * €}$$

where

AV	= the Assessable Value
λ	= Grade percent of Metal in the concentrate
CONC	= Concentrate
Υ_{conc}	= Prevailing Royalty Rate on the concentrate
P_{LME}	= London Metal Exchange Price
TC	= Treatment Costs
€	= exchange rate

Buoyancy estimates for royalty

Buoyancy of revenue refers to the responsiveness of revenue to a change in GDP/GSDP. Technically, intertemporal revenue buoyancy estimates are obtained by regressing the log of revenue on the log of GDP/ GSDP. The coefficient on the log of the GDP/GSDP is a measure of the revenue buoyancy. It can be shown as follows in the equation form.

$$L(r) = \alpha + \beta L(g) + \mu$$

where L (r) = log of revenue
L (g) = log of GSDP
α = intercept
β = buoyancy estimate
μ = surrogate of omitted explanatory variables.

The buoyancy rates of revenue receipts and expenditure, of all States in India for the entire period (Table 9), it is revealed that like the State of Rajasthan, the other mineral rich States, viz., Andhra Pradesh, Chattisgarh, Orissa, Karnataka and Maharashtra also have the buoyancy of revenue receipts greater than that of revenue expenditure, though marginally in some of these States. However, the buoyancy estimates of other mineral rich States such as Jharkhand and Madhya Pradesh revealed an unsustainable trend of buoyancy of expenditure greater than that of revenue receipts (Table MS12). It is to be noted that buoyancy estimates for own revenue receipts and expenditure is equal to or above unity in case of all the eight mineral rich States.

Table MS12: Aggregate Buoyancy of Revenue and Expenditure: State-wise Analysis

	Own revenue receipts		Revenue Expenditure	
	β coefficient	**t stats**	β coefficient	**t stats**
Andhra Pradesh	1.08	11.76	0.98	46.92
Chattisgarh	1.86	4.80	1.62	3.22
Goa	1.04	5.50	0.05	0.10
Jharkhand	1.49	3.48	2.12	2.65
Karnataka	1.03	13.01	0.99	57.72
Kerala	0.95	74.17	0.98	46.31
Madhya Pradesh	1.09	24.36	1.18	27.59
Maharashtra	0.97	26.12	0.95	12.25
Orissa	1.07	12.95	1.01	38.14
Rajasthan	1.02	31.25	1.06	22.19
Uttarakhand	2.46	4.86	2.12	3.48

Source: (Basic Data), Finance Accounts, (Various issues).

Table MS13: Buoyancy Estimates of Royalty: State-wise Analysis

States	β coefficient	t stats
Andhra Pradesh	1.43	3.36
Karnataka	1.59	11.35
Kerala	1.29	10.44
Maharashtra	1.78	4.86
Punjab	1.82	6.63
Rajasthan	1.41	10.21
Uttar Pradesh	0.69	0.89

Source: (Basic Data), Finance Accounts, all States (Various issues).

The buoyancy of both own tax and non tax remained above unity only for a few States like Chattisgarh, Jharkhand, Orissa and Uttarakhand. The aggregate buoyancy of own non tax revenue revealed that β coefficient is above unity only for Chattisgarh, Jharkhand and Orissa (Table MS13). At the disaggregated levels, the buoyancy for royalty charges within non-tax revenue revealed that almost all States have above unity buoyancy except for Uttar Pradesh (Table MS14). However, high buoyancy for royalty is noted for mineral rich States.

Table MS14: Disaggregate Buoyancy Estimates for Own Tax and Non Tax revenue: State-wise Analysis

	Own tax revenue		Own non tax revenue	
	β coefficient	**t stats**	β coefficient	**t stats**
Andhra Pradesh	1.10	9.41	0.90	10.00
Chattisgarh	1.93	4.45	1.56	3.41
Jharkhand	1.63	4.00	1.23	2.29
Karnataka	1.06	18.24	0.99	6.10
Kerala	0.99	62.35	0.68	11.36
Madhya Pradesh	1.23	12.63	0.77	7.88
Maharashtra	1.01	23.10	0.67	14.15
Orissa	1.10	13.87	1.03	6.57
Punjab	0.97	14.09	1.54	10.53
Rajasthan	1.14	21.14	0.73	4.82
Uttar Pradesh	1.16	27.99	0.89	2.65

Source: (Basic Data), Finance Accounts, all States (Various issues).

MS.5 Conclusion

The impact of public policy - especially fiscal - on the mining firms and its competitiveness is a rare gamut of study. Against the backdrop of Planning Commissions' High-level Committee Report on National Mineral Policy 2006, and the subsequent Mines and Minerals (Development and Regulation) Bill, 2011, the paper analysed the legal and fiscal policy transition in the mining sector of India. Though the legal framework of mining sector has incorporated the environmental and human developmental aspects in its recent policy, the fiscal regime related to mining is in a state of flux. An illustrative analysis of the mining regime of non-ferrous non-atomic minerals, revealed that royalty regime is onerous in India and needs revisions in the methodology incorporating the value chain. As the profit sharing formula suggested by MMDR 2011 is based on royalty, a relook into the royalty methodology is imminent in the context of India.

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Natural Gas Pricing and India's Energy Security

Soma Banerjee

NG.1 The Lost Decade

Vijay Kelkar and C Rangarajan are veteran technocrats, go-to men for governments caught in a bind and seeking the expertise and shelter of independent decision-makers. It was Kelkar who drew up the blueprint to unshackle the oil and gas sector in the mid-nineties and it was Rangarajan who fixed the price of natural gas in 2007. It's 2013, and the two are still doing the same thing for the government of the day. This constancy is not a knock on these two gentlemen. It is, though, on the government's handling of a fuel source that was being universally recognised as the fuel of the 21st century typifies how the natural gas sector in India has moved in the last 15 years - and still not moved.

A volatile political leadership, inconsistent gas policies, the rise and fall of gas companies and the marginal changes in the gas price have dominated India's gas game.

Natural gas prices, around this period, gained currency the world over, turning import dependent economies like the United States (US) into a net exporter. Shale gas, a non-conventional form, became a mainstream form of energy as US turned importing LNG terminals into ones that could export gas. Qatar, Oman and Australia, largely gas exporting hubs that feared a glut in the market in 2005–06 have now turned the tide as Japan rushed in with new demand, as it turned away from nuclear after the Fukushima disaster.

India, all this while, continued playing the fiddle oblivious to the changing global trends. While the first part of the decade was spent basking on the euphoria of the KG gas find in 2002, the following years were spent in complacency and neglect failing to tap other sources like LNG or gas through transnational pipelines. Policy makers and political leaders woke up only when production from the KG basin began sinking, leaving a huge gas gap in the economy.

Earlier this year the government fixed a formula to price traded domestic gas in the country till 2019. The decision has shown how the methane compound has traversed over the years as the government tweaked old policies and sold older ones as new initiatives. India began the last decade on a high, with the world's largest gas discovery in 2002, to India's largest oil discovery by Cairn in Barmer to the first shipment of liquefied gas reaching India shores.

With big government now becoming a norm in the gas sector, companies tread carefully, wary and apprehensive of what may come next.

A look through the old policies drafted and approved in the late nineties bears testimony to how India missed the gas bus in the first leg of this century. The petroleum ministry website says that the government offered blocks under the new exploration licensing policy public and private sector companies 'with the right to market gas at market prices.' This year's decision defeated that very policy. The government

had rolled back every reform in the oil and gas sector rewriting old contracts in complete violation of the contractual sanctity.

The political leadership of this crucial sector over the last few years has been as volatile as the nature of the fuel. The evolution of the natural gas sector in the country has had more to do with politics than ground economic realities. The euphoria of the gas finds in 2002, led the political leadership to slip on domestic policies be it on pipeline infrastructure or LNG.

While National Democratic Alliance (NDA) stuck with one minister- Ram Naik (1999–2004), the only petroleum minister in the last fifty years to have lasted a full term, United Progressive Alliance (UPA) has fielded four men for the job so far, each one distinctly different from the other in their vision and their notions of how energy policies are to be shaped. The government today is a victim of liabilities it has created for itself by deferring decisions time and again.

The period (2004–06) saw a renewed effort in securing India's position on the global stage through energy diplomacy with ambitious plans for several transnational pipelines that would ferry gas to India. These decisions were aimed at addressing India's energy security as it tried forging new ties with hydrocarbon rich countries. Mani Shankar Aiyar the then petroleum minister embarked on an ambitious mission of connecting Turkmenistan, Azarbaijan, Russia China, Pakistan India through a gigantic pipeline and engaging with Iran as a strategic energy partner. All this came to a abrupt halt when the Congress leadership decided to replace him with a new minister in Murli Deora roughly around the time India began the civil nuclear deal with the US. Engagement with Iran was put on the backburner and plans to ship 20 million tones of LNG from Iran and the Iran-Pakistan-India pipeline were given a quiet burial without writing a formal epitaph. Most of the other plans of ferrying gas through long winding pipelines too remain only in paper.

Unlike North America and Europe where pipeline imports across national and regional boundaries have been a fact of life since the 1970s, Asia has not had sizeable pipeline imports. That changed with the establishment of Chinese pipeline imports from Turkmenistan which some expect to grow over time to 65 billion cubic metres per annum (bcma), in the near future.

Progress on this front has been marred by distrust, stalled negotiations in large part driven by the realities of the price level necessary to underpin such investments. The alternative to a reliable supply is the even more expensive LNG in the near term.

The 2007 Supreme Court decision that was seen as a victory for the government and Reliance Industries Ltd. (RIL) was perhaps the biggest blow to the evolution of the gas sector. While India spent months on a court battle, gas producers around the world invested time and resources in finding new sources. The uncertainty of policies impacted investor interest with big oil companies deserting India's exploration sector even as the government auctioned more acreages.

Worse followed when questions were raised on gas production from RIL's KG basin began declining as questions were raised on the company's commitments. The crisis over the 2G battles had already begun and questions over the government's role in the gas sector only added to the headache. Year 2010 saw a new petroleum minister in Jaipal Reddy, marking a new nadir in India's gas sector. While gas production

plummeted from RIL's gas basins, there was complete absence of any new find or discovery.

Investments in exploration and production fell sharply to a meager $1.8 billion in 2011–12, tumbling from $6 billion in 2007–08. Indian promoters invested $27 billion outside in last 10 years. But lessons had not been learnt. The decision on gas pricing is fraught with uncertainties, as the government has continued with its policy of a mis-match between consumer and producer industries. LNG terminals that were supposed to dot the east coast of the country were never built and sanctioned pipelines never constructed because true prices could not be passed on.

It has taken ten years to ramp up capacity at the sole LNG capacity from 5 million to 12 million tones at Dahej, and set up the planned LNG terminal at Kochi. The renewed plan for Dabhol power plant included creation of a LNG hub as there were enough infrastructures to ramp up capacity to 10 million tones. It required, pipelines to be connected and some work on the breakwater as the plant was not suited for all weather supplies. But it got delayed over time with the plant not even using its full capacity as the power market remained controlled and it was difficult to find takers for the gas. The Dabhol LNG terminal that was supposed to feed gas to the west and northern markets remains sub-optimally used as there are no takers for expensive gas even though more than 15,000 mw of power capacity sits idle for want of gas.

It is estimated that by 2025, India will produce only 30 per cent of our natural gas requirements in India and import the rest. The country simply does not have money to import anything like 300–400 mmscmd at whatever price. It is a compelling case and there is an urgent need to increase domestic production.

Forget realising true demand that can only be attained through a web of pipeline network, even the current latent demand remains starved as the total supplies range at about 63 mmscmd as against the raised demand of 118 million metric standard cubic meter per day (mmscmd) as per data put out at the government website.

India faulted on all three counts- increasing production through stable conducive exploration policies, sourcing either through pipelines of LNG and finally in building the pipeline gas grid - that could evolve the gas market.

NG.2 The Way Forward

Now that you have fixed the price of traded gas for the next five years in the country, how about getting down to the business of evolving the market, failing which you may need to set prices yet again. Prices fixed artificially behind closed doors instead of the market place will always come with a stink. It's time to let go.

Stick to the policy: The first thing that any investor looks for is stability and consistency in the policy regime. Exploration is a risky and capital-intensive business where the investor puts in hard equity money upfront, as debtors do not fund exploration activities. Geological surprises are a given, but the investor needs the comfort of a consistent policy framework to put in the capital for the development of the field that will ultimately bring the oil/gas out. The production sharing, the Holy Grail, in India's exploration and production (E&P) sector has been changed several times, each time, giving a new interpretation to existing clauses. What is worse is that the changed nuances have come with retrospective effect, throwing business and risk calculations out of gear. Be it the government's decision to withdraw the tax holiday

for gas by distinguishing between oil and gas and giving a new definition to mineral oil, or disallowing pricing or marketing freedom for gas while continuing the same for oil. An exploration company gets into the business of drilling with little idea of what lies beneath and to have policies change mid way through the game can create havoc pushing investors to then look for other ways of protecting the returns.

NG.3 Scale-up Sourcing

While pushing for expanding domestic production of natural gas is fine to begin with, a need to increase external sourcing of natural gas is almost imperative for India that is largely energy starved. There are two primary ways of importing gas from other gas rich countries, transnational pipelines and liquefied natural gas that is ferried in ships. You have done little in this regard. The track record so far has yielded little for India's energy security. More gas will turn the contours of the market and will help grow competition. While the fall in domestic production can be attributed to lack of investors, the blame for failing to use energy diplomacy to secure news sources lies squarely with you.

Having started well in the nineties when negotiations took place for importing frozen gas, known as liquefied natural gas (LNG) in industrial jargon, from Qatar, you have lagged behind by miles while competing nations like China, Korea and Japan have gone about contracting new shipments of gas. This, even though, India is geographically well positioned with several gas rich nations in and around the region. While foreign policy on energy diplomacy dithered every now and then, occasionally dictated by the changing geo-political equations with the West (read our engagements with Iran), China used every trick in the book to leverage its position, offering grants and infrastructure support coupled with pure-play bidding tactics to win energy resources across the world.

Take the case of LNG- While it has taken ten years to ramp up capacity at Dahej, the first LNG terminal built by Petronet, a similar capacity at Dabhol, built by Enron in nineties lies underutilised as related infrastructure is not in place. India lost out its chance in mid 2000 when the LNG market crashed with new supplies coming on stream. While countries like Korea and China made the best of a buyers' market freezing long-term contracts, India failed to make use of the opportunity for lack of infrastructure and vision. The world order on LNG has changed since then, after the Fukushima nuclear disaster that led Japan to switch more to LNG leading to a huge surge in demand and price.

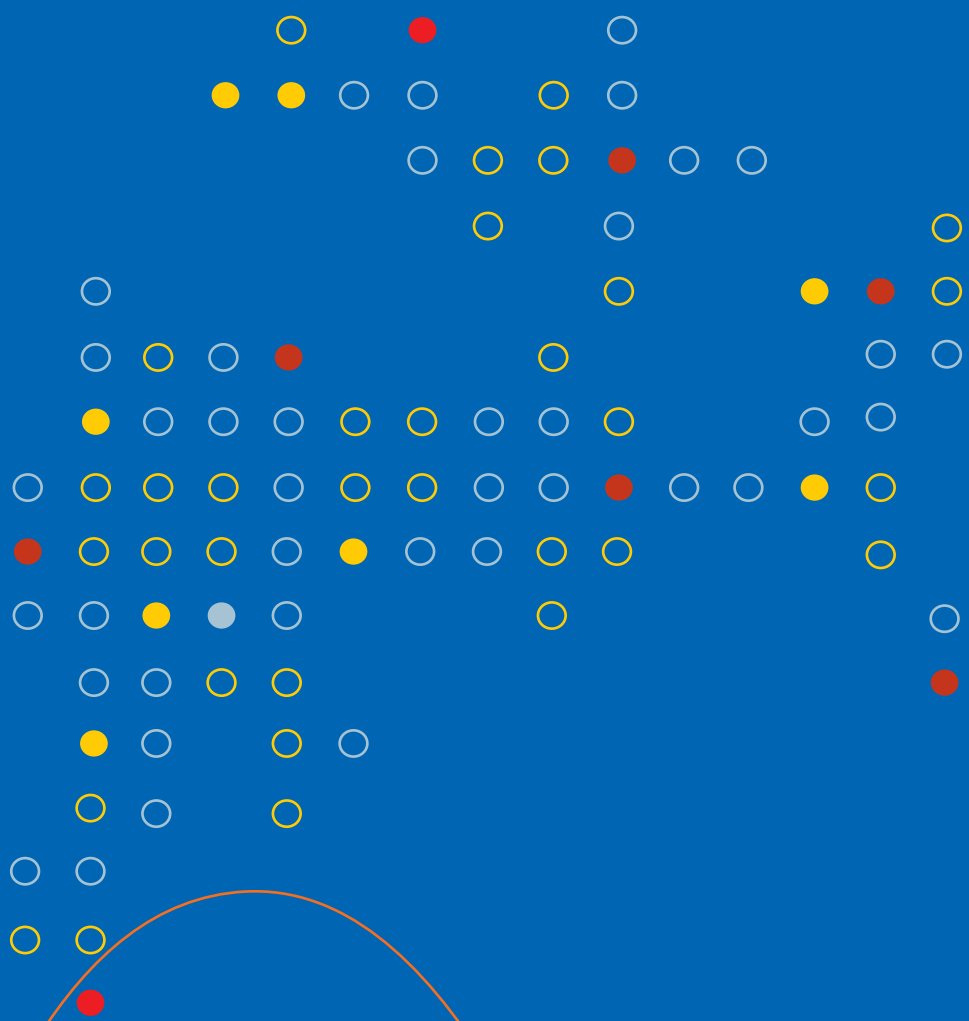
On paper, as mentioned on the official website, India is still negotiating on three transnational pipelines. Iran-Pakistan-India pipeline, (IPI) Turkmenistan Afghanistan Pakistan India Pipeline (TAPI) and the Myanmar Bangladesh India (MBI) gas pipeline. While Iran and Pakistan have already completed its first leg of the pipeline and is aiming at gas flows to begin in December 2014, India that still remains undecided on its relations with Iran needs to take a call. The public posture of Iran as a strategic neighbor wears thin as energy relations with Iran has only receded as crude imports have come down over the years. India has moved on relatively better on TAPI, even to the point of discussing ballpark figures of the cost of gas. But it has to move beyond dialogue if we are to get the gas. The US troop withdrawal from Afghanistan will come with its own share of geo-political implications. India will need to use diplomacy and strategy to take positions in the energy game.

NG.4 Build the Infrastructure

Pipelines, that alone can ferry gas to consumers across the country are far and few. The two cross-country pipelines, the HBJ and RIL's East West pipeline are about the only ones that are built to scale. The onus of building the gas grid lies largely with GAIL Authority, a government owned company that now has to build pipelines almost on charity. While private players with licenses have withdrawn, GAIL is left holding responsibility, building tracks even though there is no source of gas. Consumers of gas are left starved with stranded capacity, idle power plants, for want of gas leading to a distorted market.

NG.5 Get the Page Right

The biggest distortion in the making of the market lies in the lopsided way in which producer and consumer industries function, each on a different page and direction. While moves are being made to get closer to market prices in gas, largely an input industry, the output or consumption sectors power and fertiliser continue to be controlled heavily subsidized. This is unsustainable. If fuel is moving towards market, the same has to happen for power and fertiliser. If imported coal costs can be passed on power tariffs, there is no reason to shield gas based power tariffs. This needs political conviction and grit as insulation from reality can lead to demand distortions where consumers continue to live in a fool's paradise buying cheap power and fertiliser made from expensive gas.



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