India Macroscope

India in 2010 – Ten Trends for this Decade

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- **2010 Macro Outlook** — With headwinds to consumption, investment and outsourcing now easing, we believe India has the potential to revert to the 8-9% growth path. We expect the government's initiatives towards inclusive growth as well as other growth-enablers, such as innovation & land reforms, to further support a growth upturn. We expect these themes, coupled with global and macro issues outlined below, to be among the top trends for the decade.
- **Global Issues**: **(1) Defense & Security** — As the war against terrorism grows fiercer each day, defense and security budgets are being raised globally. This bodes well for companies in the defense space, but could have repercussions for fiscal consolidation. **(2) Climate Change**: With policy makers acknowledging the need to limit the rise in temperature, and India considering a voluntary reduction in carbon intensity by 20-25%, we expect CDM projects, and businesses exposed to the 'Clean Energy' theme, to be key beneficiaries.
- **Inclusive Growth: (3) Rural Employment** — Although there are leakages, these could be checked given that the NREGS operates in conjunction with the Right to Information Act. We see the scheme as positive for rural incomes. **(4) Urban Infrastructure**: focus areas are likely to be water supply and sanitation, urban transport, and affordable housing. **(5&6)** Social Infrastructure - **Education** and **Healthcare –** to further reap the benefits of India's demographic dividend.
- **Growth Enablers: (7) Innovation** — With India proving its prowess in sectors such as IT and bio-technology, we expect innovation to play an increasing role to enable a further move up the growth trajectory. **(8) Land Reforms**: In the recent past, Corporate India has been witness to a number of stalled or delayed investment projects due to land acquisition/Naxal issues, raising the need for reform on resettlement/re-habilitation policy.
- **Macro Issues: (9) Fiscal consolidation** — While many argue that deficits are likely to remain high, we think the worst on the fiscal front is probably over. In fact, the current tenure of the UPA government may well go down as one associated with far-reaching tax reforms. **(10) Capital Account** - Controls or liberalization?

Figure 1. 10 Themes for the Next Decade

Global Issues		Inclusive Growth	Growth Enablers		Macro	
1	Defense & Security: Countering Terrorism	3 Rural Employment, NREGA, and Social Audits	7	Innovation	9	A Return to Fiscal Consolidation
		4 Urban Infrastructure				
2	Climate Change	5 Health Care	8	Land Reforms and the Naxalite Threat	10	Management of Capital Flows
		6 Education				

Source: Citi Investment Research and Analysis

See Appendix A-1 for Analyst Certification and important disclosures.

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Macro Overview - 2010

Growth – Getting back to a higher trajectory

Contrary to earlier expectations of collateral damage from the global crisis and the drought taking a toll on domestic growth, FY10 GDP is likely to come at ~7% levels. While industry numbers have been aided largely by stimulus measures (both monetary and fiscal), the rising share of non-crops (i.e. horticulture, livestock, fisheries and forestry) in agri GDP and relatively healthy trends in the winter crop appear to have offset the 17% decline in summer output.

Is the 8-9% growth path still feasible? Yes ... growth drivers still in play

A look at the key drivers that enabled India to move to a higher growth trajectory indicate that India has the potential to move back again to the 8-9% growth path. We expect growth in FY11 to come in at ~8.4% levels.

Apart from Consumption, Investments and Outsourcing, we expect the government's initiatives on inclusive growth to help India move to the 9% path. Other growth-enablers include *innovation & land reforms*

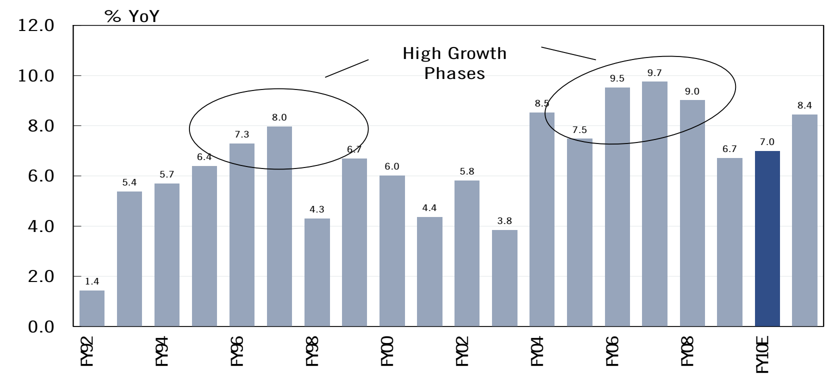
- **Investments** – The headwinds witnessed during 2008 and 2009, namely (i) higher cost of capital, (ii) slowing demand, (iii) limited fiscal maneuverability and (iv) election issues that impacted the investment cycle and resulted in single-digit investment growth, are all easing. This, coupled with the need to close the existing infrastructure deficit and high capacity utilization ratio in many key industries, bodes well for a recovery in the investment cycle.

- **Consumption** - Similar to the investment story, the headwinds that impacted the consumption story (particularly discretionary spending), including (i) credit availability and (ii) job losses/wage freezes across sectors, are again receding. This, coupled with the pay revision and the on-going NREGA scheme, will likely result in an uptick in consumption

- **Outsourcing** – The global recession, along with a focus on job creation in the home markets, took its toll on this growth driver – particularly in the information technology segment. However, recent data points are encouraging, with most sector participants suggesting that they expect IT budgets/spends to improve in the coming months.

- **Additional Growth Drivers –** Apart from the above, we expect the government's initiatives on inclusive growth (*Employment Guarantee Scheme, healthcare, education, and urban infrastructure – themes 3-6*) to be key over the next decade. Other growth-enablers include *innovation & land reforms (Themes 7, 8)*

Figure 2. Trends in Headline GDP (% YoY)



Source: CSO, CIRA

Inflation – Set to touch Double-Digits if Commodity Rally Continues

Inflation has made a 'U-Turn' from the negative trends seen in June-Sept, to 7% levels now, due to higher food and metals prices

Following a brief period of negative readings, headline WPI has risen from 1.3% YoY in October to 4.78% in November, and now 7.3% in December. With the base effect dropping out entirely, the rise in inflation was across the board, led by primary articles (+14.9%), manufactured products (+5.2%) and fuel (+4.3%).

What's driving prices?

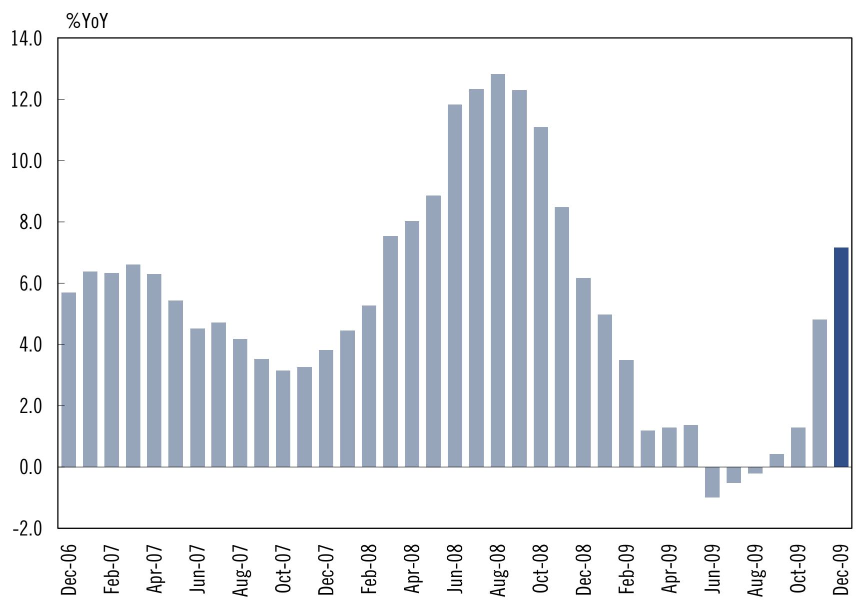
An analysis of the components indicates that, within primary articles, food (cereals, pulses) remain the key drivers, while in the manufactured index the upturn is driven by food products (sugar, oil cakes). The fuel index, which was in negative till last month, is now in positive territory due to the rise in market determined fuels (naphtha, furnace oil, ATF).

We expect WPI could cross double-digits although a successful winter harvest could mitigate trends

Hard commodities to determine future trends

While positive trends in rabi (winter) crop sowing could result in some price moderation of primary products, the rally in commodity prices (both oil and metals) could result in inflation breaching 10% levels. Assuming a normalization of prices, inflation is likely to start moderating by May-June. While policy makers so far have been stressing the importance of focusing more on asset price inflation rather commodity-induced inflation, if the uptrend seen in fuel and metals continues, inflation could enter the double-digit range in the coming months, possibly resulting in sterner monetary action.

Figure 3. Trends in Headline Inflation (% YoY)



Source: Office of the Economic Advisor

Monetary Policy – Likely to tilt from enabling growth to managing inflation

Mounting inflationary pressures in emerging markets will likely result in policy tightening beginning earlier than in the developed world

Responding to rising inflationary pressures is likely to become an issue in coming months. Here, a key differentiating factor between developed and EM markets is that advanced/developed economies have ample slack, so major Central Banks can afford to maintain ultra-loose policies until growth has been strong for several quarters.

However, the rebound in growth is sufficiently advanced to prompt policy tightening for some commodity producers (e.g. Australia, Norway) and growth leaders (e.g. Korea, India, Turkey, Chile, Israel).

We do not expect to see aggressive tightening given that inflation is supply-side driven and the growth recovery is nascent

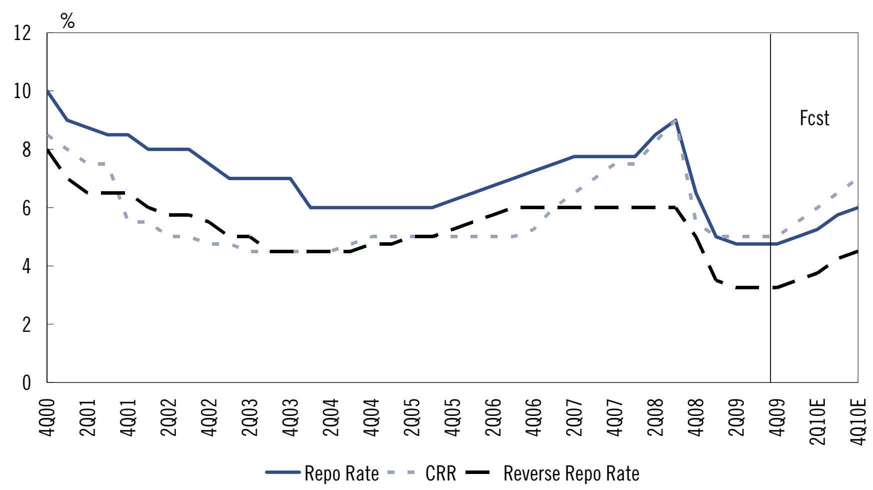
While loan growth remains anemic, better-than-expected IIP data and rising WPI will likely prompt steps towards normalizing rates by early 2010. We maintain our call for 125bps tightening in 2010 for now. However, excess tightening would have implications for the INR.

We estimate a 125bps increase in rates during 2010. This would take the:

Reverse Repo Rate to 6%

Repo Rate to 4.5%

Figure 4. Trends and Forecasts in Key Domestic Interest Rates (%)



Source: RBI, CIRA

Fiscal – some light at the end of the tunnel

The reversal in fiscal consolidation due to stimulus measures and one-off expenditures are likely to be temporary

Deficits are back at double-digit levels. The United Progressive Alliance's (UPA's) first budget in its new term was a disappointment, with the FY10 fiscal and revenue deficits pegged at 6.8% and 4.8% of GDP respectively. With expenditures crossing the Rs10trn mark, the headline deficit numbers are now back at levels last seen in 1991. Adding on the state fiscal deficits and off-balance sheet items, the deficit is now close to double-digit levels.

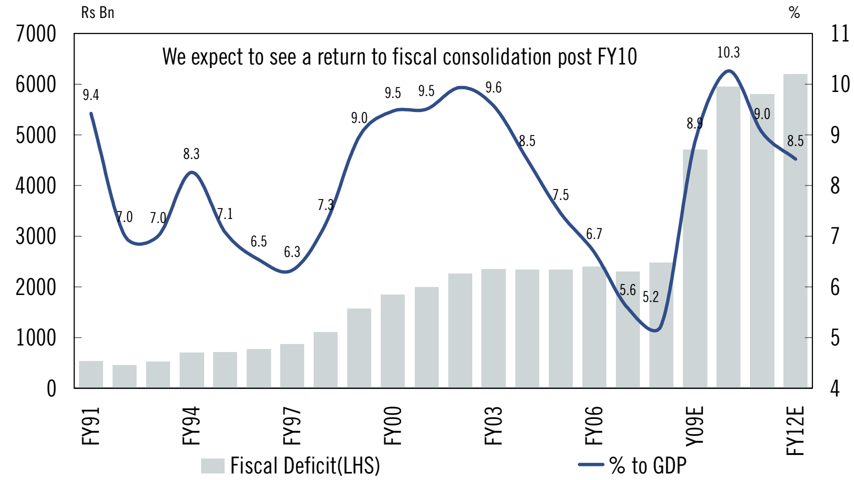
However, post this fiscal year, we see reasons to be hopeful.

On the revenue side key factors are (1) better growth, which would result in revenue buoyancy, (2) divestment proceeds, (3) a roll-back in some fiscal stimulus measures, such as lower excise duties, and (4) the introduction of a Goods and Service Tax (GST).

On the expenditure side, the leeway here appears to be in (1) the farm waiver, as most payments are likely to be done by FY10, and (2) arrears of the pay commission, which are likely to be paid out by FY10. An added bonus would be (3) phase-out of some subsidies, possibly in the fertiliser & oil space. We expect **Fiscal Consolidation** to be a key **Macro Theme** over the next decade *(please see p. 38 for details)*

We expect revenue buoyancy, divestment proceeds, a rollback in stimulus measures, and the introduction of GST to result in the fiscal deficit coming off from double-digit levels

Figure 5. Trends in the Combined Fiscal Deficit (Rs Bn. % GDP)



Source: Budget Documents, CIRA Estimates

External Sector – management of FX flows a key focus area

The CAD could narrow to 1.6% of GDP in FY10 vs. 2.5% in FY09; and post surpluses post FY11

Current account will likely turn to a surplus in FY11. While higher oil prices took their toll on the current account, resulting in the deficit widening to 2.5% of GDP in FY09, new hydrocarbon discoveries coupled with lower prices are likely to result in the CAD narrowing to 1.6% of GDP in FY10. This, along with continued buoyancy in invisibles (remittances and software exports), will likely result in current account surpluses from FY11 onwards.

This is on the back of hydrocarbon discoveries, which would likely result in savings to the net oil import bill to the tune of US$19bn in FY10

Figure 6. India's Net Oil Import Bill – Detailed Calculations

Year	FY08	FY09	FY10E	FY11E
A. Crude oil production (mn T)	34.1	34.2	38.4	43.3
B. Crude oil imports (mn T)	121.7	121.6	147.2	155.7
Crude oil requirements (A+B)	155.8	155.8	185.6	199.0
Natural Gas Production (bcm)	34.3	34.3	48.7	63.1
In Volume Terms (Mn Tonnes)				
Consmp of Petro products	129.2	133.1	129.6	129.0
Core consumption	129.2	133.1	139.1	146.7
Naphtha/Fuel oil substitution	0.0	0.0	-9.4	-14.1
Petrol/Diesel substitution	0.0	0.0	0.0	-3.6
Petroleum Product Exports	39.4	36.4	67.8	81.1
In Value Terms (US$bn)				
A. Petroleum Product Imports	84.9	94.3	87.3	102.2
B. Petroleum product exports	26.8	25.6	37.3	48.7
Net oil import bill (A-B)	58.1	68.7	50.0	53.4
Oil Price (Indian basket)	**80.2**	**89.0**	**70.0**	**78.0**

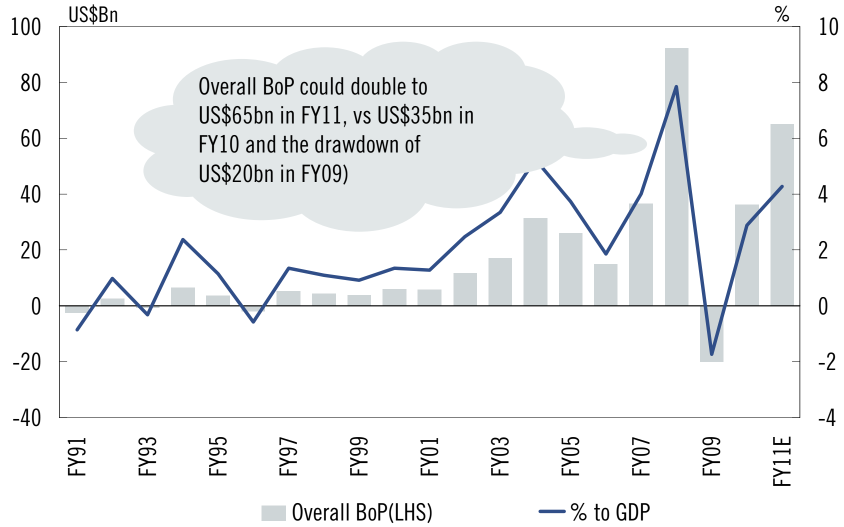
Source: CMIE, Citi Investment Research and Analysis estimates

In dealing with capital flows, we expect the RBI to: (1) Rebuild FX reserves; (2) Allow some INR appreciation; (3) Tighten some norms on capital flows and reverse relaxations undertaken last year

Managing capital flows will be a key challenge. Dollar weakness and relatively higher domestic growth coupled with monetary tightening sets the environment for a continuation of capital inflows. We believe that, similar to in FY08, the RBI could once again be caught in the trap of the '*impossible trinity*'.

In response to rising flows, we expect (1) the initial goal would be to **re-build reserves** that were run down during FY09, (2) some **INR appreciation** to offset inflationary pressures, and (3) although we do not expect that India will impose 'punitive controls', one could see a **reversal of some measures** taken last year. This could include tightening ECB and banking capital norms, reducing interest rates on NRI Deposits, and encouraging capital outflows. **Management of Capital Flows** is likely to be a **key macro theme** over the next decade *(please see page 42 for details)*.

Figure 7. Accretion to reserves should be higher due to a current account surplus and higher flows



Source: RBI, CIRA

Financial markets – higher yields; stronger Rupee

Our estimates factor in bond yields tightening to 7.75-8% levels ...

Yields could breach 8% levels if inflation surprises. While our base case is that of yields rising to 7.75%-8% levels, inflation breaching double digits could result in more aggressive monetary tightening and yields edging to 8.5% levels.

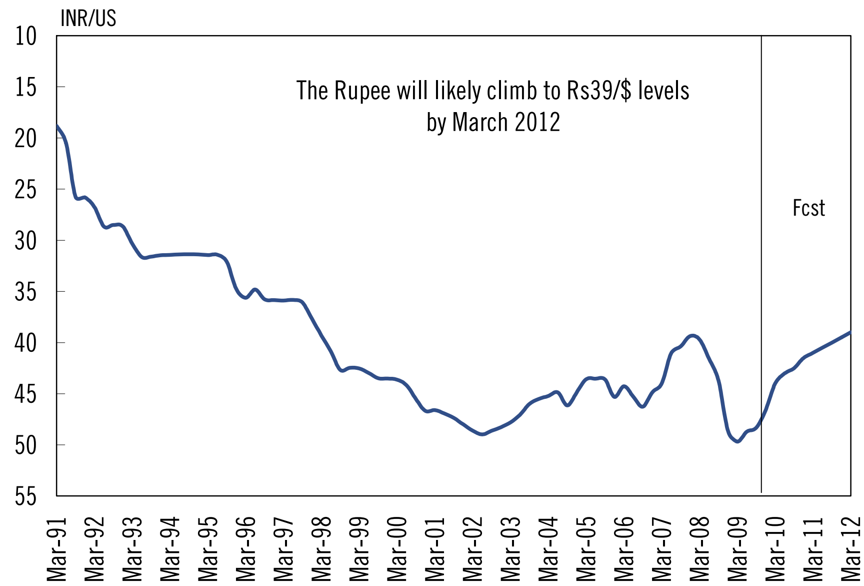
A few points that may prevent yields from spiking are: (1) the market is pricing in a tighter liquidity environment; (2) Although the cushion available via un-winding the MSS is no longer available (outstanding MSS at Rs188bn), this could change, depending on capital inflows; (3) Lastly, the RBI has enough levers available to make sure that there is enough captive demand for bonds.

... and rupee appreciation to Rs41/$ by Mar 2010

Rupee likely to continue along appreciation path. Our global strategists' views on FX are unchanged, with the core theme continuing to be that of structural dollar weakness. This is on account of the US current account deficit, reserve diversification and outflows of US investor capital to more strongly growing emerging asset markets. While most emerging economies have seen a sharp currency appreciation over recent months, going forward, further strengthening would depend on their export-dependence and inflationary/sterilisation costs associated with dollar inflows. In the context of the emergence of supply side inflation, we could see FX appreciation as a way (less painful than interest rate hikes) to mitigate supply-driven inflation shocks.

With the underlying theme of dollar weakness and relatively strong domestic growth, we see the INR trending to Rs44/US$ and Rs41/US$ in Mar 10 and Mar 11 respectively. However, similar to other EM assets, there would be a tussle between 'risk on' and 'risk off'.

Figure 8. Trends and Forecasts in the Rupee (INR/USD)



Source: RBI, CEIC, CIRA Estimates

Risks to the Outlook

Of the three risks to the benign environment, only one is primarily domestic, and that is delivery of electoral promises. The rest are global and will impact all economies, though the extent would vary depending on the economic structure.

1. Reforms falling short of expectations

Although reforms have a greater chance of delivery due to the monitoring mechanisms in place and the absence of coalition politics, progress so far has been disappointing

The current government's stunning victory in the parliamentary elections has brought with it rising expectations. With the Left now out of the equation, and PM Singh – a leading reformer – at the helm, expectations on the reform front are high. Taking stock of developments in the first six months of the new government, while progress on far reaching reforms have disappointed, there has been some headway in some segments in the infrastructure space as well as divestment. For instance, **Land Reforms** are a key area that need to be ironed out *(please see p35 for details)*.

Key reforms on the anvil include fiscal consolidation, and focus on infrastructure – particularly in the energy sector

Deepening and broadening financial markets, as well as unshackling the investment environment (pension fund reforms, liberalizing sectoral FDI norms) are also on the agenda

Figure 9. Policy Reforms on the Anvil in FY09

Sector	Reforms
Fiscal Sustainability	FRBM-2: Examine the possibility of a new target of zero fiscal deficit on a cyclically adjusted basis.
	Subsidy Reforms for food, fertilizer, and petroleum subsidies
	3G Spectrum Auctions
	Revitalize the divestment program to generate at least Rs250bn p.a(includes selling 5-10% equity in profit making PSUs)
	Implementation of GST
	Review and phasing out of surcharges, cesses, transaction taxes
	Implementation of a National ID card based on a UID number
Financial Markets	Passage of the Banking Regulations (Amendment) Bill, 2005
	Lifting Bans on Futures contracts
	Bring all financial market regulations under SEBI with a view to encourage integrated development.
	Liberalizing the investment norms of insurance and pension funds and development of credit enhancement institutions.
	Introduce/allow repos and derivatives in corporate debt
Energy Related Reforms	Decontrol petrol and diesel prices.
	Private entry into coal mining under a well regulated and competitive coal sector
	Encouraging competition from organized private bus companies; indirect taxes on buses can be eliminated to promote public transport.
	Sell old oil fields to private sector for application of improved/enhanced oil recovery techniques.
	Listing the two sick subsidiaries of CIL, namely ECL and BCCL,, 49% shares sold to public and management control transferred to a private party
Investment Environment	Passage of the Pension Fund Regulatory and Development Authority Bill, 2005; Forward Contracts (Regulation) Amendment Bill, 2006 and the Insurance Laws (Amendment) Bill, 2006.
	Raise foreign equity share in insurance to 49%
	FDI in multi-format retail, starting with food retailing.
	Raise FDI limit in defence industries to 49%
	Decontrol sugar and fertilizer industry,
	Set up a single regulatory body for the transport sector,
	Disaggregate telecom licences from spectrum allocation.
	New bankruptcy law to ensure speedy and effective bankruptcy

Source: Economic Survey FY09

Though one can argue that the government made similar promises during the start of its previous term, reform progress over the last five years crawled along at a snail's pace, and not entirely due to opposition by the Left. This time, we think there is a greater likelihood of delivery, given the pleasant surprise of a roadmap toward governance via the establishment of new monitoring mechanisms[1]. However, failure to do so could result in dampening of flows

2. Rising crude oil prices

Our forecasts now factor in crude at US$78/bbl in FY10 (vs. US$60 earlier) and US$80/bbl in FY11

Crude oil prices, which peaked at US$144/bbl in July 2008 and then troughed at US$39.5/bbl in Feb 2009, have now risen to US$80/bbl. While the debate continues on whether fundamental factors (better growth prospects, a cold winter) or financial conditions (dollar weakness, liquidity) are behind the rise, the point is that, as the tenth largest oil importing nation in the world, higher oil prices on balance will likely impact India more than most other economies.

[1] These include: (1) Setting up a **delivery monitoring unit** in the Prime Minister's Office to monitor flagship programs and report on their status publicly. (2) Ensuring transparency and **public accountability of the NREGS** via independent monitoring/re-dressal mechanisms at the district level. (3) **Strengthening Right to Information,** which would help citizens to challenge data and engage directly in governance reform. (4) Presenting **annual reports on** Education, Health, Employment, Infrastructure and Environment in the public domain. (5) Introducing **targeted identification cards** to avail of benefits under the NREGS and Food Security Act.

Higher oil prices would have implications for the BoP, public finances, and policy rates

Economic implications for India – a quick recap

(i) Impact on the BoP: Presently, India imports ~70% of its crude oil requirements, with oil comprising over 30% of its import bill. Taking into account petroleum product exports and the new hydro-carbon discoveries, a US$1/bbl increase in oil prices is likely to increase the trade deficit by US$700m. Our FY11 BoP estimates of an accretion in reserves to the tune of US$65.1bn and the rupee strengthening to Rs41/US$, factors in a current account surplus of US$3.5bn. We have assumed average prices for the Indian basket rising from US$70/bbl in FY10 to US$78/bbl in FY11.

(ii) Impact on the Fiscal: The government currently administers prices of petrol, diesel, kerosene and LPG. However, to compensate oil marketing companies for losses made, the government has been issuing oil bonds. Assuming no change in domestic prices, every USS$1/bbl increase in oil prices raises under-recoveries by ~US$1bn, resulting in a fiscal burden. While this should result in yields spiking, a favorable savings rate and the entry of private sector insurance companies have resulted in demand for additional paper, thus keeping yields range-bound.

(iii) Impact on Inflation and Policy Rates: India's current WPI basket has a 14% weighting for fuel. Within this, coal has a weighting of 1.7%, administered fuel prices have a weight of 5.4%, electricity of 5.5%, and market-determined fuels making up the balance of 1.6%. Thus, the proposed rise in electricity tariffs coupled with a continued rise in crude will have a material impact on inflation. In turn, this could result in monetary tightening being more than our current estimates of a 125bps increase.

3. Possibility of a double-dip "W" and the China factor

The fragile nature of the recovery raises concerns of a 'double-dip' recession

Both consensus and Citi's expectations on the growth outlook for 2010 are veering away from a "double-dip"(W) to sub-par growth. However those still in the double-dip camp have cautioned against complacency, largely due to (1) The widespread damage caused, which could potentially result in further write-downs of 'toxic assets' and have an impact on earnings; (2) Job losses and lower wages taking a toll on consumption; and (3) A possibility of growth in China not holding up.

A lack of sustainability for demand in China would have implications for growth across the region, including India

How would India be impacted?

Despite India being a relatively closed economy (exports including software at 17% of GDP), the financial crisis and resultant negative feedback loop of tightening financial conditions – weakening economy activity - and further tightening in credit, took its toll via lower flows. Combined with political uncertainty, these conditions resulted in investments falling to a seven-year low. While the political situation is much more stable as compared to 2008, the risk of a W dip could once again result in lower risk appetite which could then take its toll on external flows and the exchange rate.

Ten Trends for This Decade

GLOBAL ISSUES

Theme #1: Defense and Security – Countering Terrorism

Defense and security-related policies have witnessed a dramatic shift post 9/11. As the war against terrorism grows fiercer each day, defense and security budgets are being raised globally.

The recent Detroit plane bombing attempt has once again put security and terrorism issues high on the US radar and highlighted the need for better co-ordination between agencies

Closer home in India, P. Chidambaram, India's Home Minister, is proposing various initiatives aimed at better co-ordination between ministries and departments.

While the ramp-up in security-spending bodes well for companies in the defense space, it could have repercussions for fiscal consolidation due to higher defense expenditure, particularly on the capital side.

War against terrorism likely to scale up further

The battle against terrorism continues to grow fiercer

Defense and security related policies have witnessed a dramatic shift post 9/11. As the war against terrorism grows fiercer each day, defense and security budgets are being raised globally. But the battle is far from over with the recent Detroit bombing attempt[2] highlighting how '*human errors and series of systemic breakdowns'* continue to prevail in intelligence sharing systems.

The recent Detroit bombing attack highlights the need for coordination between intelligence agencies

Stating that the '*catastrophic breach of security'* was '*totally unacceptable'*, President Obama has since then taken a slew of corrective actions to prevent an occurrence of further such attacks. These include measures to strengthen the analytical process, both in terms of integrating and dissemination of intelligence received, and proposing an additional US$1bn in new systems and technologies needed to protect airports (more baggage/passenger screening, more advanced explosive detection capabilities).

Post 26/11, terrorism in India is also a more 'real' threat

India is no stranger to terrorism. The pain in Kashmir, attempts on the parliament, train bombings, attacks in Mumbai in 2008 on 26/11 have brought the issue of national security to the forefront. Added to this is India's precarious geographical location, given that it shares its borders with Pakistan, Bangladesh, Sri Lanka and Nepal – countries where the internal political situation presents challenges. There is an urgent need to revamp security systems to counter these, very real, threats. As recently stated by the Home Minister:

"*India in the twenty-first century has turned out to be the confluence of every kind of violence: insurrection or insurgency in order to carve out sovereign States; armed liberation struggle motivated by a rejected ideology; and terrorism driven by religious fanaticism. Never before has the Indian State faced such a formidable challenge. Never before have the Indian people been asked to prepare themselves for such fundamental changes in the manner in which the country will be secured and protected.*" (P Chidambaram)

Indian security structure could see a revamp

There are a plethora of intelligence agencies in India, and little coordination between these

Under the current structure, India's security lies in the hands of a plethora of agencies. While the Cabinet Committee on Security looks at the **political** aspects, **administration** is handled by Ministry of Home Affairs, the Prime Minister's Office, and the Cabinet Secretariat. In addition, as seen in the table below, there are a number of intelligence agencies which report to various ministries.

[2] On Dec 25, 2009, a Nigerian national – Umar Abdulmutallab attempted to detonate an explosive device whilst onboard a flight from Amsterdam to Detroit. Although the attempt was thwarted, the incident has raised concerns on US intelligence sharing, since it was later learnt that the US had information to potentially uncover the plot, but failed to '*connect the dots'*.

Figure 10. Intelligence Agencies in India

Agency	Reporting To
Intelligence Bureau	Ministry of Home Affairs
Research and Analysis Wing (RAW)	Cabinet Secretariat → Prime Minister's Office
Joint Intelligence Committee, National Technical Research Organization, Aviation Research Centre	National Security Adviser →National Security Council
Army, Navy, Air Force Intelligence agencies	Armed Forces → Defense Intelligence Agencies
Directorates of Income Tax, Customs, Central Excise Dept, Financial Intelligence Unit	Agencies for Financial Intelligence →Ministry of Finance
CRPF, BSF, CISF, ITBP, Assam Rifles, SSB, NSG	Enforcement Directorate →Ministry of Finance

Source: P Chidambaram, Intelligence Bureau Centenary Endowment Lecture, Dec 23, 2009

The Home Minister seeks to introduce important reforms, including bifurcating the Home Ministry so as to exercise full control over security and creating an NCTC – similar to the US, that would deal with all kinds of terrorist violence, investigation and intelligence

In his capacity as Home Minister, Mr. Chidambaram has taken a number of steps. These include putting into operation the **Multi-Agency Centre (MAC)** in Dec 2008 both at the Centre and State level, which puts together and shares all intelligence material by the participating agencies. In addition, in a bid to revamp the structure of various agencies reporting to different ministries, in a speech made to the Intelligence Bureau, he has proposed the following:

- **To strengthen the Home Ministry**, such that it has full control over the intelligence agencies and is exclusively responsible for the professional management of internal security. Functions other than internal security, such as center-state relations, disaster management, census taking, currently under the Home Minister, would be dealt with by a separate ministry or a department under the Home Ministry.

- **The creation of a National Counter-Terrorism Centre (NCTC)** or transforming the **MAC into the NCTC** - which would come under the Home Ministry. This would have the broad mandate to deal with all kinds of terrorist violence, performing functions related to intelligence, investigation, and operations (as a result, a number of existing agencies such as the National Intelligence Agency, National Security Group, etc would be subsumed within the NCTC). This would help to create a unified command that could issue directions.

Other measures include revamping immigration, sharing information, and stepping up the police force

Other Measures on the Anvil

- **Revamping immigration control apparatus**. Two projects in this regard include (i) the Business Process Re-engineering of the Foreigners Division, being set up at a cost of Rs0.2bn, and (ii) a Mission Mode Project on Immigration, Visa, and Foreigners Registration and Tracking, estimated at Rs10bn, to be implemented over 4.5 years.

- **Data Networks and Sharing**. Under the Crime and Criminal Tracking Network System (CCTNS), the government has already begun to facilitate data sharing, storage, and collection of data between various police stations. However, in order to enable sharing of databases across agencies, the government is now setting up NATGRID, which will link 21 sets of databases.

- **Stepping up the Police Force.** Although India has a sanctioned strength of 1.7m policemen, there are currently only 1.4m on the rolls. These are spread across 13,057 police stations and 7,535 posts across the country; the ratio of available police per 100,000 people is just 130. This is in comparison with the international average of 270. According to the Home Minister, states would need to recruit over 400,000 constables in a transparent and corruption-free process over the next two years to bring the system up to par.

Defense budgets are likely to rise

These measures will likely result in a significant ramp-up in defense spending

With current expenditure on defense projected at Rs1,417bn, or 2.4% of GDP, additional measures as detailed above would entail a significant step-up in expenditure. Reports[3] suggest that, since the Kargil conflict in 1999, India has inked deals to the tune of US$50bn to acquire defense equipment, and is likely to spend over US$30bn more over the next 4-5 years to import military hardware.

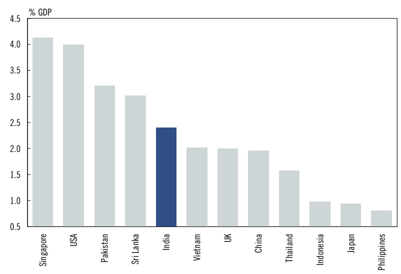
Defense procurement policy – who has exposure

Given the offset clause, this would result in benefits for indigenous producers of military equipment

Given that India imports 70% of its military equipment, the *Defence Procurement Policy* is an attempt to establish a formalized set of guidelines for capital acquisition processes. The latest Defense Procurement Policy, effective since April 2009, is an attempt to boost indigenous production by reversing this. To this end, the offset clause[4], which ensures that foreign vendors source a portion of their investment/equipment from within the country, is a step in the right direction.

As has been mentioned in our earlier notes, companies that could benefit include Ashok Leyland, Astra Micro-wave, Mahindra & Mahindra, BEL, L&T in the domestic space and Raytheon, Lockheed Martin, Pratt and Whitney, and Boeing from the US, Israel Aerospace Industries and Fincantieri from Italy in the international space. Another area where we could see some reform is FDI, where the proposal to liberalize FDI in defense to 49% is still on the anvil.

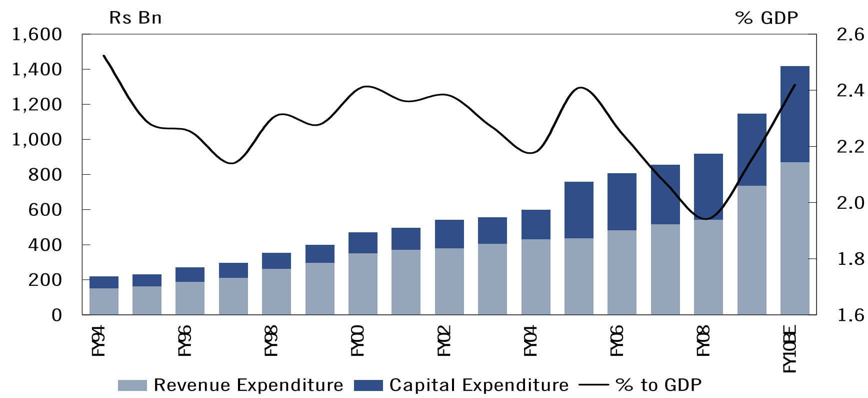
Figure 11. Military Expenditure (% GDP)



Source: World Development Indicators

Defense capital expenditure will likely see an uptick

Figure 12. Trends in Defense Expenditure (Rs Bn, % GDP)



Source: Budget Documents

[3] '*US$50bn defense deals since Kargil*', Times of India, 1 Jan 2010

[4] **The offset clause** specifies that at least 30% of the value of a defense purchase from a foreign vendor for a contract exceeding Rs3bn must be ploughed back into the country via a defense offset obligation. This can be fulfilled either via (1) purchase/exports of products from Indian defense industries (2) FDI into defense or R&D.

Theme #2: Climate Change and Energy Policy

GLOBAL ISSUES

With the Kyoto Protocol expiring in 2012, policy makers across the globe have acknowledged the need to limit temperature rises to 2 degrees centigrade …

… but the debate between developed and developing nations continues – (1) should emission cuts be based on *emission intensity* (per unit of GDP) or on *absolute levels*; and (2) compensating developing nations for emission cuts.

With total carbon dioxide emissions at 4% of global emissions, India simultaneously ranks as (1) the world's fourth-largest emitter of GHGs on an absolute basis and (2) one of the lowest in the world on a per capita basis.

While not committing to emission reduction targets, India has said that it would consider voluntarily reducing its carbon intensity by 20-25%. In addition to initiatives, such as CDM projects and energy labeling, this bodes well for businesses with exposure to the 'Clean Energy' theme.

Climate Change and the 450 Scenario; Copenhagen Summit

The recently-concluded Copenhagen Summit signifies the return of climate change to the forefront.

With visible instances of the impact of global warming growing more frequent and the cost of inaction even more apparent, the issue of climate change will likely assume increasing importance as we head into 2010. Growing world-wide concerns on the issue are only underscored by the recently-concluded Copenhagen Summit on climate change.

The Summit was essentially aimed at framing an agreement before the Kyoto Protocol expires in 2012[5] and sought to resolve two issues: (1) the debate between developed and developing nations – on whether emission cuts should be based on *emission intensity* (per unit of GDP) or on *absolute levels*; and how should reductions be distributed? And (2) Compensating developing nations for emission cuts. While the Copenhagen Summit has not culminated in any final agreement, it does lay the ground for further reform in 2010.

With C02 emissions are projected to rise to 40.2GT from 20.9GT currently, there is an urgent need to contain the impact of global warming

Under the '450 scenario', policy makers are striving to contain emissions to 450 parts per million of C02 equivalent in order to limit temperature rises to 2 degrees centigrade

On a global basis, C02 emissions have risen from 20.9 Giga Tonnes (GT) in 1990 to 28.8 GT in 2007. In its latest World Energy Outlook, the International Energy Agency (IEA) has estimated that if primary energy demand continues to increase by 1.5% p.a., which is **its reference scenario**, C02 emissions would rise further to 40.2 GT by 2030. However, world-wide, policymakers are now acknowledging the need to limit global temperature rises to 2 degrees centigrade, which would entail C02 emissions to be stabilized at 450 parts per million of C02 equivalent (***the '450 scenario')***. Under this 450 scenario, C02 emissions are targeted to decline to 26.4GT by 2030.

Where India Stands, and What's Next

India's emissions are low on a per-capita basis

Although India's emissions are amongst the lowest in the world on a per capita basis …

… India is the fourth largest emitter of Greenhouse Gases on an absolute basis

With total carbon dioxide emissions at 4% of global emissions, India simultaneously ranks as (1) **the world's fourth-largest emitter of GHGs** (2) **one of the lowest in the world on a per-capita basis. As per the IEA's reference period,** China and India together are expected to account for 53% of increase in C02 emissions during 2007-2030. *(of the 11 GT growth in global emissions, China accounts for 6 Gt, India for 2 Gt and the Middle East for 1 Gt).*

[5] **Kyoto Protocol**, requires Annex I countries (developed countries and economies in transition) to reduce their overall GHG emissions by 5.2% below their 1990 levels via market mechanisms. It became legally binding in February 2005

While there is pressure on China and India to commit to emission reductions, we believe that comparisons with China are somewhat unwarranted, given that emission levels of China are *four* times India's in per-capita terms and *five* times in aggregate terms.

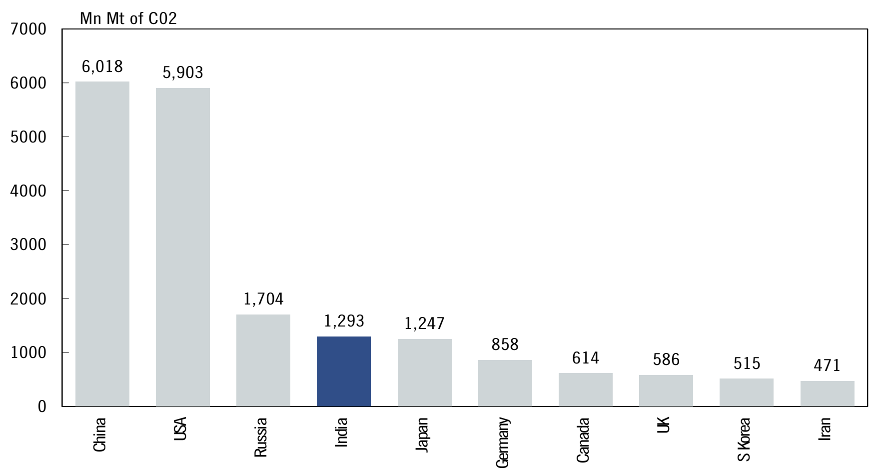
…But this does not make India any less vulnerable to climate change

The impact of climate change is already visible in India

Given its long coastline and varying temperatures, India is particularly susceptible to climate change. Indeed, the impact of climate change is already visible, with the Himalayan glaciers receding over the last century, a consistent rise in sea levels, and extreme weather events.

High dependence on fossil fuels makes the outlook more dire. An interesting report by World Watch highlights the fact that the concern on India's high dependence on fossil fuels (these account for 83% of total emissions). Coupled with higher energy needs, this could result in India becoming amongst the largest emitters in the world, if its energy policy remains unchanged.

Figure 13. Carbon Dioxide Emissions – Top Ten Countries (Mn Metric Tonnes of Co2)



Source: IEA

Policy reforms: what's been done …

India aims to <u>voluntarily</u> reduce its carbon intensity by 20-25%, although these targets are not subject to a peaking year and have not been officially ratified

Although India has not adhered to any quantitative target of emission reductions per unit of GDP, there is pressure given that the US now aims to reduce emission levels by 17% from 2005 levels, while China has said that it plans to reduce Co2 intensity by 40-45% from a 2005 baseline. Thus, prior to the Copenhagen Summit, the Minister of State for Environment and Forests, Mr Jairam Ramesh, announced that India would consider voluntarily reducing carbon intensity by 20-25%: however, these have not been officially ratified.

India is a major host for CDM projects – the 2nd largest in the world, after China

Over the past, key policy efforts include:

1. Hosting projects under the **Clean Development Mechanism** to reduce emissions *(these include implementation of projects in areas such as renewable energy, fuel switching, waste management, and energy efficiency)*. India now plays the second-largest host to CDM projects – 474 projects have been registered, or 24% of the world total.

2. India has the world's fourth largest installed **wind power capacity** (10,242MW) ;

3. It has introduced an **energy labeling program** for appliances since 2006, which includes lighting, refrigerators, and air conditioners.

4. In Jun 08, India also released a **National Action Plan on Climate Change**[6], which focuses on eight areas for climate change mitigation including the launch of a **solar energy** mission aimed at 20000MW by 2022. The govt has also deployed **solar photovoltaic lighting systems** for provision of basic energy needs in rural households.

The government has several items on its agenda, including the introduction of fuel efficiency standards, energy ratings, etc

.... And what's on the anvil

Going forward, the government plans to implement domestic legislation under the **Energy Conservation Act** that sets informal targets for energy efficiency. Reports[7] suggest that **mandatory fuel efficiency** standards will likely be on the anvil in the transport sector; while **energy ratings** could become compulsory on appliances such as refrigerators, air conditioners, tube lights and transformers, televisions and stoves.

The Cost of Climate Change: Financing Emission Reductions

Given that emission reductions would entail cutbacks in development spending, implementing green technology initiatives clearly comes with costs, which is the crux of the debate between developed and developing economies. Apart from the widely-accepted 'cap-and-trade' system, options to finance emission reductions could include:

Apart from the 'cap and trade' system, other methods to finance reductions could include carbon taxes, the creation of a green fund, and compensatory aid from developed countries

- **Energy Efficient Trading System**: Under this mechanism, energy efficiency certificates could be issued to companies per tonne of carbon avoided that can be traded (firms can buy or sell certificates depending on whether they fall short/exceed pre-determined targets).

- **Carbon Taxes.** Similar to a pollution tax, a carbon tax imposes a fee on the production, distribution or use of fossil fuels based on how much carbon their combustion emits. The government sets a price per ton on carbon, then translates it into a tax on electricity, natural gas or oil.

- **Green Funds**. This is a mutual fund/investment vehicle that invests in companies that directly promote environmental responsibility. An instance is the initiative by CII- Godrej ('New Ventures India') that aims to invest Rs4bn over three years to support green entrepreneurs. This could also include '**green stimulus'** measures, which have been implemented in many economies over the last year to create new jobs, support clean technology, and increase energy efficiency as part of fiscal stimulus packages.

- **Aid**. At the Copenhagen Summit, the EU pledged US$9bn in aid over 3 years to help poorer countries adapt to climate change, while the U.S. has offered to back up renewable energy programs in developing countries through a US$85mn fund over a five-year period. In another instance, George Soros

[6] **NAPCC** – Released in Jun 08, the NAPCC established 8 core areas for climate change, including the National Solar Mission, Mission for Enhanced Energy Efficiency, Sustainable Habitat, Water Mission, Mission for Sustaining the Himalayan Ecosystem, Mission for a Green India, Sustainable Agri and Strategic Knowledge for Climate Change

[7] *India to launch Energy Efficiency Trading*, Financial Times, Sept 27 2009.

suggested that rich countries divert a part of their IMF special drawing rights (SDR) to a global green fund, which developing countries will use to finance climate change policies. According to his proposal, developed countries should pool a "fast-start" fund of US$10bn a year and pledge US$100bn of SDRs for 25 years to a special green fund

Who Has Exposure?

A recent KPMG study indicates that, as per the EU estimates, the global market for low carbon technologies is estimated to amount to US$3 trillion per year by 2050. The OECD estimates that industries in the space of renewable energy, waste management and water treatment could generate investment opportunities to the tune of US$700bn globally in 2010.

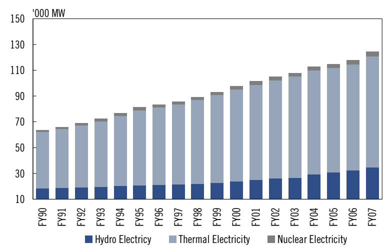
Closer to home, many Indian corporates have already been investing in green energy initiatives – these include Mahindra & Mahindra, ITC, Infosys Technologies, and Tata BT Solar.

Natural Gas and Alternative Energy

Natural Gas investment would give exposure to the climate change theme, as would investment in alternative energy (solar, wind, nuclear power), electric cars, and waste management techniques

Given the high carbon content of coal and oil, alternative energy sources are likely to continue to grow popular. A report on India's Integrated Energy Policy under the chairmanship of Dr.Kirit Parikh indicates that, given India's resource endowment and the level of development, energy requirements will increase three fold to maintain a growth of 8-9% over the next few decades. The study estimates that, by 2030, the per annum total energy requirement will be 1.8bn tonnes of oil equivalent, with natural gas increasing its share from 6% currently to 10%. This is positive, as compared with petroleum products, natural gas would emit 25-30% less CO2 when compared with coal per unit of heat generated. This in itself would be a compelling reason to substitute natural gas in place of petroleum products/coal.

Figure 14. Breakdown of Installed Generating Capacity ('000MW)



Source: CMIE

Looking ahead, companies on the clean energy theme would include those that are involved in:

- **Power**: This includes wind, solar, and other renewable energy companies. There is particular scope in the nuclear space, given that nuclear energy accounts for less than 3% of India's electricity generation. The Indo-US Nuclear Deal would help make available much needed raw material and enhance capacity utilization of India's nuclear reactors, which are currently operating at ~50-60% levels. This would bring into focus not only foreign companies already engaged in the nuclear space such as Areva, GE and Westinghouse, but also domestic engineering companies such as L&T, BHEL, HCC and utilities such as NPCIL.
- **Cars**: Hybrid/electric vehicles, railways, and related industries (e.g. copper, batteries).
- **Infrastructure**: Particularly public transportation, pipelines, construction and building materials companies and those that provide water solutions, waste management techniques.

Theme #3: Rural Employment; NREGA; Social Audits

INCLUSIVE GROWTH

Although the government's Rural Employment Guarantee Scheme has its critics, given that it operates in conjunction with the Right to Information Act, it raises the level of monitoring tremendously and imposes internal checks and balances

Social audits have culminated in accused government officials returning the funds embezzled, and charges leveled against them

Other monitoring mechanisms include the Professional Institutional Network and the likelihood of digitization of records under the UID

In sum, we see the NREGA as positive for rural incomes, raising risk-taking abilities for the rural segment and the empowerment of women

Employment in India – A quick overview

Given its large working population, India has commonly been acknowledged as amongst the few countries that enjoyed a 'demographic dividend'. However, the key to this would be generating sufficient employment opportunities.

Labor-related data in India emerges with a long lag, but there appears to be little change in labor market trends. Some observations: (1) While India's unemployment rate is 8.3%, similar to most developing economies there is the concept of disguised unemployment; (2) The organized sector accounts for less than 10% of total employment; (3) On a sectoral basis, more than half the workforce continues to depend on agriculture, although it accounts for just 18% of GDP.

Figure 15. Employment by Sector

	FY07 Sectoral Share	
	(%)	(Mns)
Agriculture	**50.2**	**201.9**
Industry	**20.4**	**81.9**
Mining and Quarrying	0.6	2.5
Manufacturing	13.3	53.6
Electricity, water, etc	0.3	1.3
Construction	6.1	24.5
Services	**29.4**	**118.4**
Trade, hotels and restaurants	13.2	53.0
Transport, communication	5.1	20.4
Fin, insurance, real estate,	2.2	8.9
Community, social services	9.0	36.1
Total	**100.0**	**402.2**

Source: Plan Documents

Figure 16. India — Employment Snapshot (Mns)

	FY83	FY94	FY00	FY05	FY07P	FY12E
Population	718.1	893.7	1005.1	1092.8	1128.3	1208.0
Labor force	263.8	334.2	364.9	419.7	438.9	483.7
Workforce	**239.5**	**313.9**	**338.2**	**384.9**	**402.2**	**460.3**
Rural	*187.9*	*238.8*	*251.2*	*278.1*	-	-
Urban	*51.6*	*75.2*	*87.0*	*106.8*	-	-
Organized Sector	**24.0**	**27.4**	**28.1**	**26.5**	**-**	**-**
Public	*16.5*	*19.4*	*19.4*	*18.0*	-	-
Private	*7.5*	*7.9*	*8.7*	*8.4*	-	-
Unemployment Rate (%)	**9.2**	**6.1**	**7.3**	**8.3**	**8.4**	**4.8**
No. of unemployed	24.3	20.3	26.7	34.7	36.7	23.3

Source: CSO, Plan Documents, using CDS definition

NREGA is a key feature of the government's inclusive growth mantra

NREGA – progress so far, a step towards inclusive growth

As seen above, more than half the work-force depends on agriculture for its livelihood and, with "inclusive growth" being one of the mantras of the government, the government launched the National Rural Employment Guarantee Scheme (NREGS)[8] in 2006.

[8] **NREGA** is one of the flagship programs of the government being implemented by the Ministry of Rural Development. While its primary objective is augmenting wage employment, other objectives include strengthening natural resource management through works that address causes of chronic poverty like drought, deforestation and soil erosion and so encourage sustainable development.

A quick re-cap: NREGA is a legislation enacted in Indian parliament which **legally guarantees 100 days** of employment every financial year to every household whose adult members volunteer to do unskilled manual work. Other features include: (1) Under the Act, state governments must provide a **job card** and employment within **15 days** of a person making an application; (2) **Incentive-disincentive structure** to the State Governments for providing employment, as 90% of the cost for employment provided is borne by the Centre or payment of unemployment allowance at their own cost; and (3) **mandates 33% participation for women.**

Although it comes with obvious benefits in terms of consumption and employment, the scheme has its critics

Since the introduction of the scheme in FY07, the govt has spent Rs519bn and completed 2.6m projects. NREGS has provided employment to 21m households in FY07, 34m in FY08 and 45m in FY09. This has helped lift rural incomes, raised risk taking abilities and has led to the empowerment of women. As mentioned by Aruna Roy and Nikhil Dey, ***"transparency and accountability to the poorest and weakest is in fact the biggest political contribution of the NREGA to the entire governance system***".

Figure 17. NREGS – Key Statistics

	FY07	FY08	FY09
Total Expenditure (Bns)	88.2	158.5	272.5
Works Completed (000s)	396.7	961.2	1214.0
Households Employed(Mns)	21.0	33.9	45.0
Person days Created (Bns)	0.9	1.4	2.2
Participation of Scheduled Castes/Tribes (%)	NA	57.0	55.0
Participation of Women (%)	NA	43.0	48.0

Source: NREGA

Some of the most persistent charges are those of leakages and corruption

Leakages, yes…but monitoring mechanisms could limit it

While the NREGS does come with obvious social benefits, providing a much-needed social safety net for the rural sector and enabling households to cross the poverty line, the scheme has its critics. The most persistent charge has been that of **leakages and corruption** as a result of detaining job cards, faking the muster rolls and shortages. Other criticisms include that of (1) poor coverage, (2) delays in payments, (3) absence of bottom-up planning, and (4) few durable assets being created.

…however, inbuilt monitoring mechanisms have begun to kick in, which leaves little scope for rampant corruption and imposes checks and balances

However, we believe the strong provisions for transparency and accountability that are built into the Act will help plug leakages over time. In fact, the NREGA operates in conjunction with the **Right to Information Act**, which raises the level of monitoring tremendously and imposes internal checks and balances. Other mechanisms that would ensure the smooth operation of NREGA include:

1. Social Audits – The role of NGOs

Social audits or inspections are conducted in conjunction with NGOs, and help control the incidence of 'phantom names' and fund leakages

This is one of the unique features of NREGA, whereby social or non-governmental organizations work with the government to monitor the planning and implementation of the NREGA. Audits are typically conducted by government officials but include grass-roots groups (*such as the Mazdoor Kisan Shakti Sanghthana – MKSS and the Soochna Evam Rozgar Adhikar Abhiyan*).

Social audits allow such groups to scrutinize muster rolls, the number of works demanded and actually provided, whether payments are made on schedule, materials used and Job Cards. Social Audits are to be conducted at least once in six months. So, far Social Audits have been conducted in 219,000 gram panchayats out of total of 250,000.

The two states where social audits have worked well ensuring public participation and awareness are in Rajasthan and Andhra Pradesh. For instance, the report for **Rajasthan** indicates that, while it has fared well in providing Job Cards, it has not provided dated receipts; which leave it difficult to gauge whether payments were made in time and unemployment allowance was provided. In audits conducted in **Andhra Pradesh**, 'phantom names' were discovered in muster rolls, and laborers complained of wages not being transferred to them. Social audits have culminated in accused government officials returning the funds embezzled, and charges leveled against them.

Digitalization of records helps citizens to access muster rolls and other information and incorporate best practices across districts

2. Monitoring Mechanisms - Professional Institutional Network

The Professional Institutional Network (PIN) is an internet-based Management Information System that allows citizens to access the Muster Rolls (of attendance of workers and payment of wages). The Network consists of 20 institutes including Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), Agricultural Universities, National Institute of Rural Development, National Institute of Administrative Research and other professional institutes across 22 States.

One of the key objectives of the PIN is to identify within districts and across states good practices, positive outcomes and good performance factors. These include efficient management practices, procedures, processes, factors that have contributed to good performance and the positive outcome and impact generated so that these can be emulated across other districts.

3. Digitization of Records under the UID – Enabling Financial Inclusion

Given that funds are eventually supposed to be transferred through banks and post offices, the NREGS would go a long way in achieving 'financial inclusion'. However, currently, because of inadequate financial infrastructure and weak awareness, in many areas wages continue to be paid in the form of cash, thereby leading to corruption.

Under the UID initiatives, job cards will be entirely digitalized using biometric cards, which would help resolve the issue of fake IDs and also enable financial inclusion through linked bank accounts

To this end, biometric cards, specifically under the auspices of the Unique Identification Authority of India (UID), could help the issue, enhancing accessibility. The UID aims to issue a unique identification number to each Indian resident that can be verified in a reliable and cost-effective way, thus helping to eliminate fake identities. The job cards would then need to be updated with the UID numbers which in turn could be linked to muster rolls and bank accounts.

While the process would admittedly take some time, it is already underway in some states. For instance, **Glodyne Technoserve,** is working with the Bihar government to create 25m user accounts for NREGA implementation

Theme #4: Urban Infrastructure

INCLUSIVE GROWTH

The uptrend in urbanization has resulted in growing strain on urban infrastructure systems, including water supply, solid waste management, sewerage, and transport.

At a recent conference, PM Singh has said that "*the Centre's firm commitment to urban development stems from the recognition that the balanced development of the urban sector is an integral part of our strategy of inclusive growth*"

Given the support provided under the auspices of the JNNURM, specific focus areas are likely to be water supply and sanitation, urban transport, and affordable housing. Investor interest is already evident, with corporate forays in these segments

JNNURM: Cornerstone of Urban Infrastructure Development

In a bid to cope with the growing strain on urban infrastructure, the JNNURM was launched in 2005 to ensure integrated development across 65 mission cities

While urban infrastructure development is typically under the purview of the Urban Local Bodies (ULBs), their lack of autonomy and fragmented nature has left the onus of development on the *Jawaharlal Nehru National Urban Renewal Mission* (JNNURM). A quick recap: the JNNURM is a time-bound program that aims to bridge urban infrastructure deficiencies in 65 'Mission Cities'. Spanning a 7-year period beginning Dec 2005; the JNNURM has an outlay to the tune of Rs1trillion.[9].

As the thrust of urban renewal is to ensure improvement in urban governance so that the ULBs become financially sound and assets are created properly. A key distinguishing factor between the JNNURM and other schemes is that the centre would give funds only if the states commit to a time-bound reform agenda. As seen in Figure 18, reforms are categorized into mandatory and optional. The states that have made good progress are Maharashtra, Gujarat, Tamil Nadu and Andhra Pradesh.

Reforms are classified as mandatory or optional; and most cities are seeing good progress

Figure 18. Key Reforms Envisaged Under the JNNURM

Mandatory Reforms	Optional Reforms	State Level Reforms
E-Governance Set-up	Introduction of Property Title Certification System in ULBs	Reform in Rent Control Act
Adoption of Double Entry Accounting System	Revision of Building Bye Laws – streamlining the Approval Process	Stamp duty rationalization to 5%
Property tax – collection efficiency to reach 85%	Revision of Building Bye laws - Mandatory Rainwater Harvesting in all buildings	Repeal of ULCRA
Levying user charges so as to recover full cost of O&M	Earmarking 20-25% developed land in all housing projects for EWS/LIG	Enactment of Community Participation Law
Internal Earmarking of Funds for Services to Urban Poor	Simplification of legal and procedural framework for conversion of agricultural land for non-agricultural purposes	Enactment of Public Disclosure Law
	Byelaws on Reuse of Recycled Water	Assigning ULBs with city planning function
	Encouraging PPP	Decentralization measures
	Administrative/Structural Reforms	
	Computerized registration of land/property	

Source: JNNURM

Progress so far has been encouraging. Under the Urban Infrastructure and Governance component, 481 projects have been sanctioned, at a total approved cost of Rs521bn. Of this, Rs101bn has already been released as central assistance. As on Dec 09, 48 projects have been reported to have been physically completed.

[9] **Basic aims of** the JNNURM are (1) to prepare a City Development Plan (CDP), map out policies and financing structures (2) Identifying/Preparing Projects (3) Releasing Funds (4) Introducing pvt sector efficiencies. Its key objectives include integrated development of infrastructure services, ensuring adequate funding, providing basic services to the urban poor, development of heritage areas, and the planned development of identified cities

Monitoring & Implementation: In order to ensure efficient utilization of funds, the government has put various monitoring mechanisms in place. These include (1) Setting up 19 **program management units** at the state and Urban Local Bodies (ULB) level, of which 10 have already been put into operation; (2) 45 approved **Project Implementation Units**, of which 26 have been established; (3) Appointing independent review committees; and (4) A Rapid Training Program (RTP) for slow-performing cities; (5) Launching of PEARL (Peer Experience and Reflective Learning) – which enables cross learning and knowledge sharing through networking among Mission cities.

What to Watch Out for in the Urban Infrastructure Space

1. Water Supply and Sanitation – Aims at 100% coverage

With just 70% of the urban population having access to tap water, and 65% with access to sanitation facilities, one of the goals of the 11th Plan is to increase coverage of urban water supply and sanitation to 100% by 2012. Apart from developing appropriate water purification strategies, there is also a need to check for leakages and unaccounted water, which according to the Plan Documents, is as high as 50% in some cities.

With water supply and sanitation being one of the biggest priorities of the program, we expect to see some growth in this segment.

Specific areas for development include waste water treatment, rainwater harvesting, water purification, etc

Potential areas in this space include rainwater harvesting, and manufacture and installation of waste water treatment. Recognizing the potential of the sector, a number of corporates are foraying into this space. While small-scale industries have focused largely on **the water purification**, and **reverse-osmosis** business, larger houses, such as the Tata Group and Jindal – have ventured into municipal water supply. Work on a sea water reverse osmosis de-salinization plant has also been approved near Chennai (this is a Rs9bn project, awarded to VA Tech Wabag). PE players are also beginning to consider the sector attractive – recent deals include Sage Capital's investment in Concord Enviro Systems, ICICI Venture's investment in VA Tech Wabag and IDFC Private Equity's investment in water management company Doshion Ltd.

2. Urban Transport – "Move People, Not Vehicles"

Mass Rapid Transit Systems is an another potential growth area. These can be either via Metro or Bus

Under the auspices of the National Urban Transport Policy, 2006[10]; the government has aimed at encouraging public transport as a solution to traffic congestion. Based on the motto 'Move people – Not vehicles', there has been a continued thrust on implementing **Mass Rapid Transit Systems** (MRTS). However, apart from the Delhi Metro Project, no other city in India has an operating MRTS (Phase 1 of the Bangalore Metro Rail is under construction, and the Chennai Metro Rail Project has only been recently approved).

Cities lauded for developing reforms in this space are Ahmedabad (best BRTS); Indore (for its PPP model for operation of city bus services) and Bangalore (where the Bangalore Metro Transport Corporation saw a financial turnaround in a span of 2-3 years).

With the JNNURM providing grants for the purchase of buses under the second stimulus package released last year; many Mission Cities are ramping up their **Bus Rapid Transit Systems** (BRTS). As per latest data, as many as 15,260 buses have been approved, at a cost of Rs47bn.

Going forward, we expect to see further efforts toward an **integrated transport** system (possibly via common ticketing across buses, trains, etc); and a move towards **cleaner technologies**, in terms of emission norms, improvement in fuel quality, etc.

[10] The Government was providing 40% Central Financial Assistance for preparation of Detailed Project Reports (DPR) in the field of Urban Transport Planning. This was later raised to 80%.

3. Affordable Housing and the Urban Poor

Given the growing slum population and incidence of urban poor, there is an increasing need for affordable housing

Despite the rapid growth in housing, the Planning Commission estimates that there is a housing shortage to the tune of 24.7mn, entailing investments of Rs3.6trillion. Of this about 99% of households are from lower income groups with as many as 62mn people live in slums across India *(42m in the 640 major cities),* there is a clear need for affordable housing.

Under the auspices of the National Urban Housing and Habitat Policy 2007, the govt aims at providing affordable housing for all

To this end, the National Urban Housing and Habitat Policy 2007, aims at promoting various public-private partnerships to promote affordable housing for all. The scheme is a part of the JNNURM and provides central government assistance to the tune of 25% of the cost and disbursed in three installments, for 1m housing units provided two criteria are fulfilled. These include:

1) A mix of Economically Weak Sections (EWS) /Low Income Group (LIG)/Middle Income Group (MIG) dwelling units with the maximum size of 1200 sq ft super area for the MIG, 500 sq feet for LIG and with at least 25% of them for EWS of 300 sq feet

Several developers have already began venturing into the affordable housing space, with housing finance companies are also offering special schemes

2) The sale price of the dwelling units to have an upper ceiling price decided in consultation with the states.

What's been done so far?

In a bid to tackle the issue of housing finance, a number of microfinance institutions have also emerged, such as Monitor Group's Micro Finance Housing Corp, and Janalakshmi, which has the backing of the Susan and Michael Dell Foundation. Under a new scheme – Interest Subsidy Scheme for Housing the Urban Poor – the government is also encouraging poorer sections to avail of loan facilities through Commercial Banks/Housing Finance Companies for the purposes of construction/acquisition of houses and avail 5% subsidy in interest payment for loans upto Rs0.1mn

4. E-Governance

Digitizing records and improving accessibility of information through E-governance initiatives is another mandatory reform of the JNNURM

One of the mandatory reforms under the JNNURM is to introduce E-governance, under the auspices of the National E-Governance Plan (NeGP). This involves making '*use of information and communication technologies to enhance the access and delivery of government services to benefit citizens, employees and management of urban local bodies'*.

Aimed at enhancing transparency and improving governance, the key objectives are to provide single-window clearance for most services, improve accessibility of information, decentralize service delivery, and integrate data across various departments.

E-governance initiatives are spread across the Centre and the State levels. Measures include those in **Agriculture** (providing information on seeds, fertilizers, pesticides, etc), **Public Finances** (electronic filing of returns, payment of taxes) **digitization of Land Records**, **Citizen Services** (e.g. registration of birth/death certificates, property tax payments, online grievances, etc).

So far, 11 cities, including Hyderabad, Chennai, Kolkota have made headway in implementing e-governance. At a Ministry level, the All India Council for Technical Education and National Board of Accreditation have recently launched an e-governance model; while Karnataka is expected to launch the country's first 'Level III' datacenter, which will be used to host government applications and related data

Financing Options

With total financing requirements estimated that Rs1.2trn (US$26bn) over seven years, the JNNURM currently has secured Central Assistance to the tune of Rs500bn each year. Other sources of financing are from the States, institutional financial institutions such as LIC, HUDCO, IL&FS, etc, FDI, and external agencies like World Bank, ADB etc. Other PPP options include:

- **Pooled Financing**. Given the constraints that Urban Local Bodies (ULBs) face in securing financing, State Level Pooled Financing Mechanisms[11] – which involves the creation of a bond bank by the state that then on-lends to ULBs - is becoming a popular mode of funding. A state level Pooled Financing Mechanism has successfully been launched in Tamil Nadu, and the Centre has also set up a Pool Financing Development Fund to provide credit enhancement to ULBs.

- **Municipal Bonds.** With most ULBs resorting to either direct loans or market borrowings, the municipal bond market in India is largely under-developed. The first corporation to issue a bond was the Ahmedabad Municipal Corporation, which raised Rs1bn from the capital market. Since then, a number of ULBs have been granted permission. We believe this will spur municipalities to perform better, given that they usually borrow on the strength of the taxes, duties and fees they expect to earn.

Figure 19. ULBs Granted Permission for Issue of Tax-Free Bonds (Rs Bn)

Name	Year	Amt
Ahmedabad Municipal Corp	2001	1.0
Hyderabad Municipal Corp	2002	0.8
Nasik Municipal Corp	2003	0.5
Visakhapatnam Municipal Corp	2003	0.5
Hyderabad Metropolitan Water Supply and Sewerage Board	2003	0.5
Ahmedabad Municipal Corp	2004	0.6
Chennai Metropolitan Water Supply and Sewerage Board	2004	0.4
Karnataka Water and Sanitation Pooled Fund Trust	2004	1.0
Chennai Metropolitan Water Supply and Sewerage Board	2005	0.5
Chennai Corporation	2005	0.4
Ahmedabad Municipal Corp	2005	1.0
Total		**7.3**

Source: Ministry of Urban Development, Planning Commission

[11] **Pooled financing** involves the creation of a bond bank, which is a state-sponsored intermediary that borrows from the capital mkts. The bond bank then on-lends to participating ULBs (by purchasing their individual bonds or by providing them with direct loans). This results in reduced spreads due to higher ratings, and is efficient. As Fitch has stated, pool financing '*provides a significant window of opportunity to small/medium ULBs to access the bond mkts, and provides a shot in the arm for the devlpt of India's shallow municipal debt markets*'

Theme #5: Health Care

INCLUSIVE GROWTH

While India is amongst the fastest growing economies, it lags far behind in the health care space, resulting in it ranking significantly lower than most economies in terms of life expectancy, infant mortality and nutrition.

With the government's focus on inclusive growth – we expect healthcare reform to be in the forefront of policy priorities in the near future

In addition, external factors such as the US's $871bn healthcare program package, has prompted many economies to re-visit their own systems and pay attention to developing optimum financing structures

Potential areas for development include health insurance, public-private partnerships in healthcare delivery, and initiatives to tap the 'bottom of the pyramid'

Healthcare in India: Current Status, Reforms, and Concerns

India's healthcare system is widespread, but cannot keep pace with the surge in urbanization

Although India's healthcare system is wide-spread (accounting for 5% of GDP) and spans a unique mix of both modern and traditional medicine[12], it has not been able to keep pace with the rapid rise in population, urbanization, and the growing incidence of lifestyle diseases. More-over, a big concern is that despite remarkable economic progress, India has the highest incidence of malnutrition which in turn accounts for more than half of all child deaths in India - nearly double that of Sub-Saharan Africa.

Figure 20. Health- A Comparative Snapshot of Key Indicators

	India	Pakistan	China	Sri Lanka
Life Expectancy at Birth (Yrs)	64.0	63.0	74.0	71.0
Health Expenditure (% GDP)	4.9	2.2	4.5	4.2
Public	1.0	0.4	1.9	2.1
Private	3.9	1.8	2.6	2.1
Physicians/Thousand	0.6	0.8	1.4	0.6
Infant Mortality Rate (per 1000 live births)	54.0	73.0	19.0	17.0
Under 5 Mortality Rate (per 1000 live births)	72.0	90.0	22.0	21.0
Births attended by skilled health personnel (%)	47.0	39.0	98.0	99.0
Immunization Coverage (Measles) among 1yr Olds (%)	67.0	80.0	94.0	98.0

Source: WHO

The growing prevalence of communicable and non-communicable diseases is worrying

Further, there remains much to be done regarding both communicable and non-communicable diseases. For instance, **communicable diseases** account for 38% of the disease burden, with a rise in HIV/AIDS becoming a growing concern. In addition, recent developments such as the HINI flu indicate the need to strengthen surveillance and response capabilities.

As regards **non-communicable diseases** (include cardiovascular diseases, cancer, etc), rapid urbanization and lifestyle changes are resulting in growing prevalence and are a further concern.

Policy Backdrop

Healthcare is a state responsibility, but the Centre helps align financing with Millennium Development Goals

Although healthcare is the responsibility of states, the Centre plays a deciding role in financing public health programs. However, over time, policy has evolved over three key phases from being entirely government driven to veering towards a greater role for the private sector. Under the National Health Policy (2002), the government has aimed to (1) liberalize health insurance, (2)

[12] **AYUSH**: includes Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy

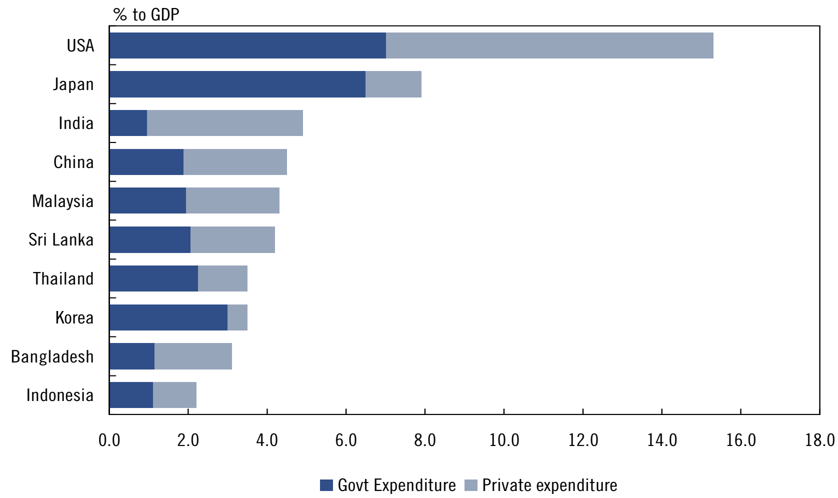
encourage private sector development and (3) restructure public health initiatives[13]

Govt funding is low at just 20% of total healthcare expenditure, with the private sector playing a dominant role

Three Key Issues - Funding, Coverage and Infrastructure

1. **Funding – Way too low:** In contrast to most economies, the public sector accounts for just ~20% of total healthcare expenditure in India. Latest data pegs public expenditure at Rs184bn in FY10 which translates to 1% of GDP. While this share is targeted to double (2% of GDP), it is far from adequate given India's population dynamics. In addition to the low level of govt expenditure, much of it has been concentrated on recurring expenditure, such as salaries and wages, and the approach is 'fragmented and disease-specific', that is, there are vertical programs for each disease, which work independently of each other. Moreover, the health budget is fragmented into over 4,000 small heads, and allocations are non-transferable, which makes utilization of funds difficult. And there is no system of monitoring and evaluation, which reduces incentive to perform.

Figure 21. Healthcare Expenditure as a % of GDP



Source: WHO

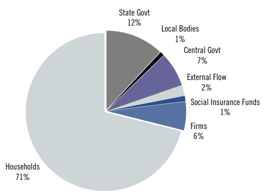
Organizational structure requires a villager to travel an avg distance of 2.2 km to reach the first health post for getting a paracetamol; 6km for a blood test, and nearly 20 km for hospital care

2. **Disparate Coverage**: Given that health is a state subject, inter-state variations are common both in the public and private sector. Moreover, while the private sector has witnessed rapid growth, it remains largely un-regulated and at times unaffordable[14] – given poor insurance coverage and household expenses on healthcare being out-of-pocket in nature. In addition, inequity is also evident in urban vs. rural areas.

[13] **Healthcare Infrastructure**: Primary Health Centers (PHCs) form the cornerstone of rural infrastructure in India. Each PHC covers a population of 25,000 and are hubs for 5-6 sub-centers covering 3-4 villages. A PHC acts as a referral centre for Community Health Centers (CHCs), 30-bed hospitals, and public hospitals at the district level.

[14] Most literature on the private sector has found it to be 'exploitative' and 3-4x more expensive when compared to the public sector, making it inaccessible to the poor. An NSS survey shows that 35% of those hospitalized in Bihar (compared to 16% in Kerala) got pushed below the poverty line due to the cost of medical treatment

Figure 22. Sources of Funds for Healthcare



Source: National Health Accounts, FY05

The Indian system is heavily tilted towards the private sector, which accounts for close to 80% of total healthcare financing. However, given that two-thirds of this is out-of-pocket spending, the system is current inaccessible to a vast majority of the population

3. **Weak Infrastructure**: Besides an unfavorable doctor-population ratio (6 doctors per 10,000 people, as compared with the developing country average of 20), physical infrastructure – both in terms of hospitals and beds remains dismal. With the current number of beds at 1.2m *(7 beds per 10,000, lagging China at 22, and Brazil at 24)*, a recent study by CRISIL estimates that India needs to add an additional 1.7m beds during 2009-27 (this would entail investments to the tune of Rs5 trillion).

Potential Areas for Development

Role of the private sector – tapping the 'bottom of the pyramid'

Corporatisation of healthcare is becoming increasingly evident with several pharma companies setting up 'super-specialty' hospitals *(e.g Wockhardt, Ranbaxy, Dr Reddy's, Escorts, Apollo Hospitals etc).* While the initial forays of the private sector were largely targeted at the higher income classes, several players through innovation have devised models and are now tapping the middle income groups. Examples include private hospitals such as Columbia Asia and Life-Spring Hospitals who are able to offer services at lower prices by managing costs through various measures *(using fully integrated Health Information Technology, outsourcing laboratory tests, pharmacies and canteens[15])*. Others, such as Aravind eye hospital, operate a discretionary pricing model whereby wealthier patients cross-subsidize poorer ones.

Not-for-profit organizations which draw funding from a variety of sources including foreign donors, corporates, and user fees are yet another growing avenue. For example, The Bill & Melinda Gates Foundation has amongst the largest HIV/AIDS prevention programs in the country, Avahan, with aid to the tune of US$338m.

Private Public Partnerships

With growing innovation in the private space, this appears to be the logical middle-path for India, given that placing the onus of financing healthcare entirely on the public sector would impose too much fiscal strain. To this end, the government has already been encouraging public-private partnerships under the auspices of the National Health Programmes. Key methods under the PPP model include (1) a join partnership with the government (2) establishing contracts with private providers for medical treatment of government employees at pre-fixed rates (3) outsourcing provision of ancillary services (e.g drug management, diagnostics etc) to the private sector.

Developing Health Insurance

Currently, just 3-5% of Indians are covered under any form of health insurance. This is largely due to a lack of regulation, high premiums, and poor infrastructure coverage in rural areas. However, with the enactment of Insurance Regulatory and Development Act (IRDA) in 2000, coupled with the growing prevalence of Third Party Administrators, there are an increasing number of private sector health insurance providers coming into the market, such as Apollo DKV, Bupa, Star Health and Allied[16].

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[15] *Lessons from a frugal innovator* – Economist, April 16, 2009
[16] Currently, India has 15 private sector insurance companies, and four public insurers. However, there are only a handful of health insurers, and 25 TPAs, in addition to community based group health insurance schemes.

Theme #6: Education

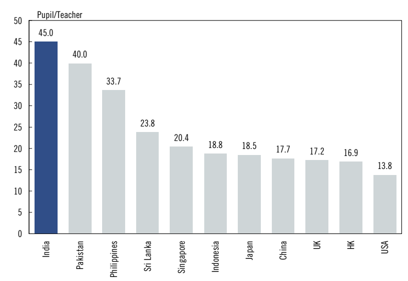
INCLUSIVE GROWTH

As human capital is the cornerstone of sustainable development, the government's education mantra remains directed towards 'expansion, inclusion, and rapid improvement in quality throughout the higher and technical education system'

Goals are to be met by enhancing public spending, private sector initiatives, and through institutional and policy reforms. This process is already underway – and hopefully the government's 100 Day Action Plan, could see fruition shortly.

Forays by the private and corporate sector are also encouraging, and help infuse innovation to facilitate strides in education

Figure 23. Pupil-Teacher Ratio (Primary)



Source: UNESCO, Ministry of Education

The Current Scenario

India's education system is broadly classified under three categories - elementary, secondary and tertiary. With "*expansion, inclusion and excellence*" being the country's education mantra", there have been improvements – especially in the **elementary education** space. This is reflected in a rise in gross enrollment ratios **(GER)** for elementary education from 93 in 1999 to 112 currently. A key factor behind this is the "Sarva Shiksha Abhiyan[17]" (SSA that aims at free and compulsory education to children of ages 6-14 (192m) in a time-bound manner. While the Mid-day Meal Scheme[18] has helped, the **challenge in the elementary education** is now that of further reducing the drop-out rate which still is high at 25.4%.

Secondary education: Given the success of the SSA at the primary level, the government is hoping to emulate it at the secondary education level by making education accessible and affordable to all in the age group of 15-16 years. It aims at a **GER** of 75% for classes IX-X within 5yrs and universal access by 2017, providing a secondary school at a distance of 5km from every habitation.

Higher/Tertiary Education[19]: With over 471 universities and 22,064 colleges, India has amongst the largest education systems in the world. However, a point to note is that GERs at the higher education level are just 11% (vs. the world avg of 23%). Moreover, there are wide disparities in the quality of education, largely due to a weak accreditation system and poor coverage. Given that the system is not well-equipped to provide the required skills to cater to rising economic demands, India has been unable to entirely reap the benefits of a much-touted '*demographic dividend'*. This is reflected in the fact that less than 20% of graduates qualify for direct employment.

Figure 24. Education - A Comparative Snapshot of Key Indicators

	India	Pakistan	China	Sri Lanka
Public expenditure on education (% GDP)	3.2	2.9	1.9	2.5
Number of universities	471	116	NA	15
Adult Literacy (% aged 15+)	61.0	50.0	93.3	91.0
Youth Literacy rate (% aged 15-24)	82.1	69.2	99.3	97.5
Gross primary enrollment rate (%)	112.0	84.0	112.0	108.0

Source: UNESCO, Ministry Websites

[17] **Sarva Shiksha Abhiyan** – is the flagship program of the govt initiated in 2001 and aims to universalize primary education, bridge gender and social category gaps, and universalize retention by 2010.

[18] **The Mid Day Meal Scheme** involves provision of lunch free of cost to school-children on all working days. It is aimed at enhancing enrollment, retention and attendance and simultaneously improving nutritional levels among children (covers 117mn children).

[19] **The Department of Higher Education** functions under the Ministry for Human Resource Development. Key agencies include the University and Grants Commission, and 38 Central Universities. It also includes Technical Education, with key agencies being All India Council of Technical Education (AICTE), IITs, IIMs, etc

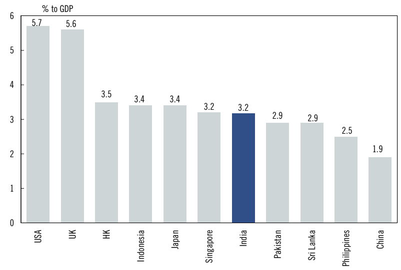
Policy Thrust – What the 100 Day Action Plan Will Mean

The new HR Minister has sweeping reforms on the anvil under the '100 Day Action Plan'

Over the last year, however, there have been a number of policy developments, under the guidance of Human Resource Minister Kapil Sibal. These include the enactment of the Right to Education Bill and universalizing secondary education. With his '100 Day Action Plan', set out in parliament last year, the HR Minster has sweeping reforms in mind for India's education sector. Some of the measures include:

1. Setting up of an independent regulatory authority for evolving new systems of assessment and accreditation in higher education
2. Moving towards a single board examination whereby all schools compete within the same system
3. Formulation of a brain-gain policy to attract talent from across the world to existing and new institutions
4. Lastly, Mr Sibal is supportive of private players in the education system, encouraging FDI, and also aims to focus on Secondary and Vocational Education – two areas that have been neglected so far.

Figure 25. Public Sector Spending on Education (% GDP)



Source: UNESCO

We expect these measures to result in a number of changes:

- **A Bigger Role For the Private Sector**

In a bid to encourage competition, we could see an enhanced role for the private sector. Currently, '**for-profit'** education is prohibited by law which means that profits have to be reinvested in the same institution and not in setting up new branches. Thus, despite the shortage of schools, Mr Sibal has admitted that reversing this may prove to be a tedious procedure. However, the 100 Day Plan calls for allowing **Foreign Educational Providers**, which would help attract international best practices.

Moreover, we are likely to see a thrust for the **Public Private Partnerships** (PPP). This model is being looked at for some of the 14' *Innovation Universities*' that aim to develop a 'brain gain' policy and also push R&D. Such universities are to be set up by the Government in conjunction with Ivy-league universities.

Apart from encouraging the private sector …

PPPs are now clearly visible in various state governments schools outsourcing IT needs (to companies like Educomp, NIIT, Everonn). For instance, the Maharastra Knowledge Corporation has recently selected US-based NComputing for its computer literacy program, where schools are operated by village businessmen and the training standards are set by the government.

… Reforms would aim at the creation of an autonomous body for Higher Education as per the recommendations of the Yash Pal Committee Report

- **Implementation of the Yash Pal Committee Report**

The Yashpal Committee Report on Renovation and Rejuvenation of Higher Education was submitted to the Ministry in July 09. One of the recommendations is the creation of an 'autonomous overarching authority for Higher Education and Research'.

The Committee has proposed the creation of a **National Commission for Higher Education and Research** (NCHER), which would take over the responsibilities of the Universities Grants Commission, the All India Council for Technical Education, and all other regulatory bodies. This body would be responsible for preparing higher education policy, establishing transparent norms, and developing sources and mechanisms for funding.

As testimony to the potential for growth in this space, a growing number of corporates are foraying into this space

Corporate Initiatives – What's Been Done So Far

Although India has amongst the highest working age population in the region, poor higher education system have resulted in a 'skills shortage', thus limiting the employable 'talent pool'.

Figure 26. India's Talent Pool

		Stock as of 2001	FY08 Annual Outturn
Engineers	Degrees	1,024,380	258,800
	Diploma	1,531,720	133,600
Graduates	Arts	8,768,000	1,299,200
	Commerce	4,853,000	498,400
	Science	4,025,000	437,800
Post Graduates	Arts	3,917,278	132,000
	Commerce	902,504	40,700
	Science	805,041	32,000

Source: NASSCOM, UGC, AICTE, IAMR

Given the lacunae in the education system and the resultant skills gap, several corporates have established their own **training schools** across sectors. Ventures are most common in the IT space, with players such as Infosys, Tata Consultancy, Wipro, and Satyam Computer Services, collaborating with universities to supply course materials and train lecturers in relevant subjects. Other such initiatives include RPG's Institute of Retail Management, the Institute of Finance, Banking and Insurance conceived by NIIT and ICICI, Cummins Engineering College, and finishing schools by NIIT, Aptech, Everonn.

Specific areas for potential in the space include interactive educational aids, and home tutoring

The need to ramp up skills has led to emerging opportunities in the innovative learning space, with several companies such as Educomp Solutions, NIIT, and Everonn Systems using digital technology to provide **interactive educational aids.** Another area in the education space that is seeing considerable growth is **online tutoring initiatives**, where tutors based in India provide English language, math and science support to students across the world. These firms include TutorVista, BrainVisa, Growing Stars (based in the US), and Career Launcher (based in India).

Theme #7: Innovation to Drive Growth

GROWTH ENABLERS

With India already proving its prowess in innovation in sectors such as IT and bio-technology, we expect innovation to play an increasing role to enable a further move up the growth trajectory.

India's strengths in terms of inputs as measured by the work force, and a pick up in R&D spending, bode well for current trends. However, much more needs to be done in terms of improving the institutional climate, encouraging the private sector, and providing funding.

Fortunately, the government appears to have recognized this, with PM Singh stating that "*The country must develop an innovation ecosystem to stimulate innovations. Innovative solutions with potential must be nurtured and rapidly applied*"

New ideas or intellectual capital, more than savings or investments, are the new keys to prosperity and to the wealth of nations.

-ADB, Sept 2007

India will likely rank amongst the largest economies by 2015

Over the last decade, the Indian economy has moved from being a US$500bn economy to a US$1.2 trillion one. Citi's global economics team believes that the ranking of world economies will change dramatically over the next 5-15 years, to become increasingly dominated by high-growth emerging markets and more Asian economies among the Top 5, and fewer European countries. According to this analysis, India would rank as the 7th largest economy by 2015 and the 4th largest by 2020, overtaking Germany, France, and the UK.

Figure 27. Global — Approximate Size of 10 Biggest Economies in USD Terms, Indexed to US = 100, 1980-2020F

	1980		2000		2005		2010F		2015F		2020F	
Rank		US =100		US =100		US =100		US =100		US =100		US =100
1	US	100	US	100	US	100	US	100	US	100	US	100
2	Japan	38	Japan	47	Japan	36	China	38	China	59	China	85
3	Germany	30	Germany	19	Germany	22	Japan	36	Japan	29	Japan	26
4	France	25	UK	15	UK	18	Germany	25	Germany	20	India	24
5	UK	19	France	13	China	18	France	20	UK	17	Russia	19
6	Italy	17	China	12	France	17	Italy	16	France	16	Germany	19
7	China	11	Italy	11	Italy	14	UK	16	India	16	UK	17
8	Canada	10	Canada	7	Canada	9	Brazil	13	Russia	15	France	15
9	Spain	8	Brazil	6	Spain	9	Spain	11	Brazil	14	Brazil	15
10	Argentina	7	Mexico	6	Brazil	7	Russia	11	Italy	13	Italy	12

Note: We use IMF data for 2000 and 2005, with Citi forecasts for nominal GDP and exchange rates over 2010-20
Sources: IMF and CIRA (from *Global Economic Outlook and Strategy – Prospects for Economies and Financial Markets in 2010 and Beyond*; 23 Nov 2009)

What Will Spur Growth?

Productivity Increases; Fuelled by Innovation

Empirical studies on growth accounting[20] have come to explain acceleration in growth to '*Total Factor Productivity*' (TFP). TFP is the 'X-Factor' – the portion of output that is not explained by the amount of inputs used in production (i.e capital, labor). During 1993-2004, when economic growth in India averaged 6.4%, average annual growth in TFP was 2.3%. An IMF study[21] attributes the increase in productivity during the liberalization era to an *'attitudinal shift by*

[20] **Sources of Growth in the Indian Economy – Bosworth, Collins and Virmani**: Empirical research on productivity growth uses the concept of an aggregate production function and is either based on growth accounting or direct econometric estimation. **Growth accounting** assumes competitive markets and focuses on identifying contributions of individual factor inputs and a residual, typically called total factor productivity (TFP). In contrast, **the econometric approach** focuses on exploring alternative functional forms for the production function.

[21] **From Hindu Growth to Productivity Surge:** The Mystery of Indian Growth Transition by **Rodrik, Subramaniam**

the government in favor of private businesses'. However, productivity in India continues to lag that in China, which averaged 4%. We believe the decade ahead will see yet another productivity surge, driven largely by **innovation**, or technological change.

Innovation – defined as 'New to the World' or 'New to Market' activities are evident across India

What is innovation? The World Bank defines innovation to include creation and commercialization activities, **'new to the world'**, or diffusion activities and absorption of existing knowledge to help boost underperforming enterprises, '**new to the market'** [22] . In India, instances are visible everywhere: from farmers checking prices of farm produce online to the growing expanse of microfinance initiatives, and the rising penetration of mobile communications. Even the network of '*dabawallas'* or lunch carriers in Mumbai, which has been fine-tuned into a six-sigma delivery system and has become the subject of business school case studies, is a classic example of innovation at work.

What's Been Done so Far, and Areas for Opportunity

- **Private Corporate Sector Initiatives:** These are wide-ranging, and span from **automobiles** (Tata's small car project - Nano), to the **rural segment** (ITC's E-Choupal, HLL's Project Shakti), **technology** (developing a low-cost computer developed for rural areas and for microfinance/e-governance initiatives), t**elecom** (lower tariffs, low-cost handsets, use of mobile banking) and **pharmaceuticals and healthcare** (Dr Reddy's, Nicolas Piramal, Lupin's anti-tuberculosis molecule and Phillips). Other instances include a low-cost antimicrobial water system that uses no electricity (Tata).

- **Public Sector Initiatives:** Includes forays such as (1) the **Grassroots Innovation Augmentation Network** (GIAN), which provides start-up funding for prototype development, facilitates links between innovators and technological institutions, and identifies commercial enterprises; (2) the **National Innovation Foundation**, which provides institutional support in scouting and sustaining grassroots innovations and helping their transition to self supporting activities; (3) the **Rajiv Gandhi National Drinking Water Mission** which has used technology to prepare groundwater maps, (4) **Sujala**, a watershed development project that uses scientific planning tools like satellite remote sensing, geographic information systems, and information technology and (5) The **Consultative Group for International Agricultural Research** (CGIAR) which uses scientific methods to extend productivity gains to agriculture.

- **Initiatives by NGOs:** These include Drishtee, which provides fee-based education, insurance, and commerce services; and SEWA, which sells rural handicrafts made by women.

Potential Growth Areas

Social finance and mobile banking are two key areas where we could see further activity

We see several spaces where there is considerable untapped potential. Upcoming areas include **'social finance',** where financial innovation is being used to help the needy. This could take the form of social investing, which is similar to microfinance, but deals with equity or capital markets rather than loans (such as IGNIA, the Acumen Fund, The Children's Investment Fund Foundation, The Bill & Melissa Gates Foundation and The Dell Foundation). Another field is **mobile banking**, which provides financial services to a vast market of people (a successful example is M-PESA, launched in 2007 in Africa).

[22] World Bank, *Unleashing India's Innovation Potential - Towards Sustainable and Inclusive Growth*, 2007

"Enabling Innovation" – The Road Ahead

Although India is reasonably well-equipped for an innovation surge, much remains to be done. As the World Bank study points out, building a conducive environment for innovation would entail creating an 'innovation system' which comprises of '*policies, institutions, and capabilities that affect how enterprises create and absorb knowledge'*.

- **Improving the investment climate**. Unwieldy labor laws, weak infrastructure, and a labyrinth of legal and bureaucratic hurdles make the investment climate in India a difficult one for most investors. According to World Bank's Doing Business Indicators, it takes just 37 days to start a business in India, but seven years to shut up shop (as compared with 1.7 years in China). Restrictions on FDI policy and high tariffs are other barriers. To this end, modifying the Companies Act and the Industrial Disputes Act may be steps in the right direction.

- **Encouraging the private sector.** Given that the private sector accounts for just 25% of R&D spending, there is considerable potential for development here. Although over 300 multinational corporations have set up R&D facilities in the country, investments are not significant. Encouraging private sector investment could involve providing fiscal incentives, and some financing.

- **Providing Financing**. Providing financing for Early Stage Technology Development (ESTD) is thus key. A World Bank Study suggests two key steps to improve financing

  - Measures to make it attractive for wealthy individuals to invest in VC funds, possibly through tax incentives and changes in the SEBI rules; or by relaxing guidelines for investments by pension and insurance funds

  - Encouraging public-private partnerships, whereby the government provides leveraged returns to private investors by increasing potential returns or reducing potential risks.

- **Improving skill sets.** There continues to remain an urgent need to reap the benefits of India's much-touted 'demographic dividend'. Apart from a poor quality of basic education, a large number of workers remain in the informal sector. Moreover, the best researchers tend to go abroad for postgraduate study, leaving lesser-qualified students behind. There is thus a need to improve functional literacy, invest in training, increase private sector participation, and tap the diaspora.

Theme #8: Land Reforms and the Naxalite Threat

In the recent past, Corporate India has been witness to a number of stalled or delayed investment projects due to land acquisition issues …

… which brings to the fore-front the much needed reform on land-related issues as well as viable resettlement and re-habilitation policies

Added to this is the growing Naxalite threat that has spread to 223 districts in 20 states which, besides resulting in internal security issues, is now delaying/halting progress on economic activity …

… However, a positive development on this front is OPERATION GREENHUNT which aims to conquer the Naxal threat with development initiatives

Land Acquisition – A rocky process

Land acquisition snags have resulted in several projects being stalled over the last few years

As per the current structure, land policy is the purview of state governments, with the Centre's role being primarily advisory in nature operating via the Department of Land Resources under the Ministry of Rural Development. Historically, reforms have centered on imposing ceilings on privately-owned land and equitably distributing the remaining land at favorable terms. But limited success has resulted in issues such as concentration, land ceilings, tenancy rights, etc, continuing to plague India.

Land acquisition issues largely in the resource-rich Eastern states have resulted in several large investment projects being delayed or put on hold. Recent examples include:

1. Steelmakers such as **Posco, Arcelor-Mittal, and Tata Steel**, which had planned investments in the eastern states of Chhattisgarh, Jharkhand and Orissa, but have failed/yet to win mining licenses due to protests by farmers over land acquisition issues.
2. In Nandigram (W Bengal), large scale protests prevented the **Salim** Group of Indonesia from setting up a chemical plant as part of an SEZ.
3. More recently, Tata Motors was forced to shift the production base for the **Nano** from Singur in West Bengal, to Gujarat over similar issues.

This is a major deterrent to investment and industrialization

Increasing industrialization and FDI necessitates the need for land acquisition and could result in a possible displacement of population. However, the rising incidents of protests appear to be a legacy of flawed land and tenancy laws and the lack of an appropriate resettlement and rehabilitation policy. This is a clear indication of an urgent need for reform.

Two reasons behind these issues are (1) the use of agricultural land for non-agricultural purposes and (2) the displacement of indigenous communities

With land use norms currently in the spotlight, two key issues that need attention are:

1. The **use of agricultural land for non-agricultural purposes**, which has raised the issue of land acquisition and rehabilitation rights
2. **Displacement of tribals**[23] due to development projects (e.g. irrigation projects, mining, industry, highways and urbanization.

[23] **The Panchayat Extension to Scheduled Areas (PESA) Act** brought a decentralized approach to forest governance by bringing the Gram Sabha centre stage and recognized the rights of tribals over "community resources"—land, water, and forests. It mandates that there should be consultation before land acquisition for development projects and before resettling or rehabilitating persons affected by such projects.

What Needs to Be Done?

Key measures that need to be taken include ensuring rights for tribals, rehabilitation and resettlement, contract farming, and the imposition of land ceiling laws

In a bid to expedite reform, the government recently constituted (1) A **Committee on State Agrarian Relations and the Unfinished Task in Land Reforms** under the Chairmanship of Minister of Rural Development and (2) A **National Council for Land Reforms** under the Chairmanship of the Prime Minister to suggest appropriate measures for reforms.

However, proposals are still in the discussion stage and have not been implemented yet. Apart from measures to improve administration, introduce crop insurance, and legalize tenancy, key reforms recommended by the committee as well as by other industry bodies include:

According to the NSSO Report on landholding, 96% of the farmers are within the small and the marginal categories own approximately 62% of the operated land

- **Land acquisition process:** The ministry of rural development has pointed out that tribals are amongst the biggest victims of displacement – although they comprise just 9% of the population, they contribute to 40% of land acquired so far and has recommended that
  - Tribals living within reserved forests etc should be given permanent land rights and not be displaced
  - Revisiting SEZ Act comprehensively and putting a ban on exemptions on diversion of land in scheduled areas.
  - The CII suggests that the government mobilize a land survey to identify fertile and productive agricultural land to be protected, and differentiate this from land earmarked for certain areas for different types of development, including infrastructure.
- **Rehabilitation and Resettlement:** The Government's recently-approved Rehabilitation and Resettlement Policy aims at striking a balance between the need for land for development activities and, at the same time, protecting the interests of the land owners, and others, such as the tenants, the landless, the agricultural and non-agricultural laborers, artisans, and others whose livelihood depends on the land involved. However, as always, implementation remains key.
- **Contract Farming:** This is a system whereby farmers enter into contracts with agro-processing companies/trading units to sell agricultural produce at a pre-determined price. This would help farmers to meet capital needs and also enjoy inputs and technical guidance from the company, without losing land rights.
- **Land Ceilings**: Since ceiling laws of all states (apart from W Bengal and Gujarat) were not implemented retrospectively, large landowners resorted to partitions and fictitious transfers of land. Thus there is a need to re-fix ceiling limits with retrospective effect. Proposals indicate that the new limit should be 5-10 acres in the case of irrigated land and 10-15 acres for non-irrigated land, to be decided by the concerned State Governments.

The Naxalite Threat Continues to Mount

The Naxal issue besides resulting in internal security issues is now delaying/halting progress on economic activity.

In addition to landing acquisition issues, another problem that could hamper investments is the growing Naxalite threat. The Naxalite Movement, which in 2004 was identified as the '*single biggest internal security challenge'* for the country, has entrenched itself more firmly, with 20 states and 223 districts being impacted by the Maoist threat. The most impacted states include Chhatisgarh, Jharkhand, Orissa, Bihar and Andhra Pradesh.

A quick recap: Naxalites or Naxals is a term that is used to define Maoist groups waging a violent struggle or what they call a class struggle on behalf of landless laborers and tribal people against landlords and their agents which include the government, forest contractors etc. The movement typically demands '*land for the tiller'*, with followers largely being victims of privatization, land displacement, etc. *(For a detailed analysis on the Naxalite issue, please see 'India in 2007 – Managing the New Growth Paradigm' dated Jan 9, 2007)*

Over the past year, Naxalite incidents have seen a huge surge, with Maoists carrying out massacres of policemen, attacking railway stations and holding train passengers hostage. Economic targets include mobile communication networks, NMDC mines, Gramin Sadak Nirman Yojana works, Essar pipelines in Chhattisgarh and Orissa, and solar plates in Bihar. Given the spread to the movement across the mineral-rich states in the east, and now to industry hubs in Bangalore, the economic impact could be far-reaching.

Government Response

The government aims to tackle Naxalism by development and improved governance in the affected areas

Until recently, Naxalism was considered as mainly a "law and order" problem left to local authorities to tackle. However, in the recent past, the government at the centre has started a pilot scheme called 'Operation Greenhunt', which combines the use of paramilitary forces to conquer the Naxalite threat with economic development.

Under this scheme, the government is strengthening the policy force in tribal areas, and aiming to drive out the Naxals and introduce governance by building roads, schools, healthcare centres, etc. The government has also approved a special development package with a budget of Rs200bn for the 33 Naxal-affected districts, along with 22 districts around Naxal-infested areas.

Theme #9: A Return to Fiscal Consolidation

MACRO THEMES

While many argue that deficits are likely to remain high, we think that the worst on the fiscal front is probably over and that the current tenure of the UPA government may well go down as one associated with far-reaching tax reforms

Reasons to be hopeful include expected reform on both expenditures and revenues; as well as a phased exit from the fiscal stimulus measures taken over the last two years

On the expenditure side, while most of the expenditure is sticky, we expect measures on the subsidy front – in particular fertilizers – as this expenditure has now exceeded the country's defense budget

The revenue side provides more hope with the government likely to make changes during its reign on both direct and indirect taxes. A successful disinvestment program would be an additional bonus.

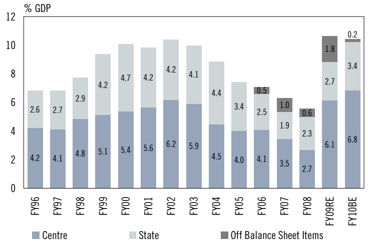
Are high deficits here to stay? We think not ...

Although India saw significant fiscal consolidation during FY02-08 under the Fiscal Responsibility and Budget Management Act (FRBM), progress was reversed during FY09. The centre's deficit rose from a low of 2.7% of GDP in FY08 to 6.8% levels in FY09, and trends are likely to come in close to 7% in FY10.

However, the deviation from targets can be attributed to a combination of unusual circumstances including (1) **Lower revenues** due to weak growth in the wake of the financial crisis; (2) **Fiscal stimulus** measures post Lehman; and (3) **Higher subsidies** and social sector measures, which were key for the Congress getting an additional 53 seats versus the 2004 elections.

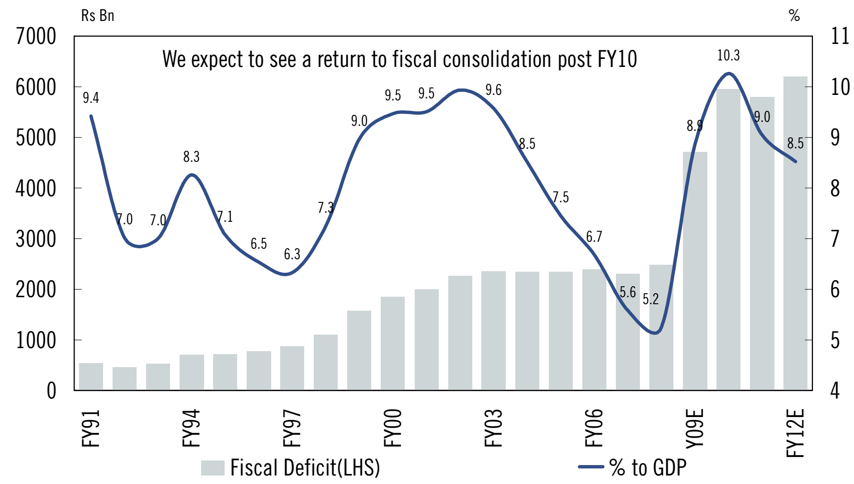
But, discounting these factors, will the government's fiscal deficit targets of 5.5% in FY11 and 4% by FY12 be met?

Figure 28. Trends in the Fiscal Deficit



Source: Budget Document

Figure 29. Trends in the Combined Fiscal Deficit (Rs Bn. % GDP)



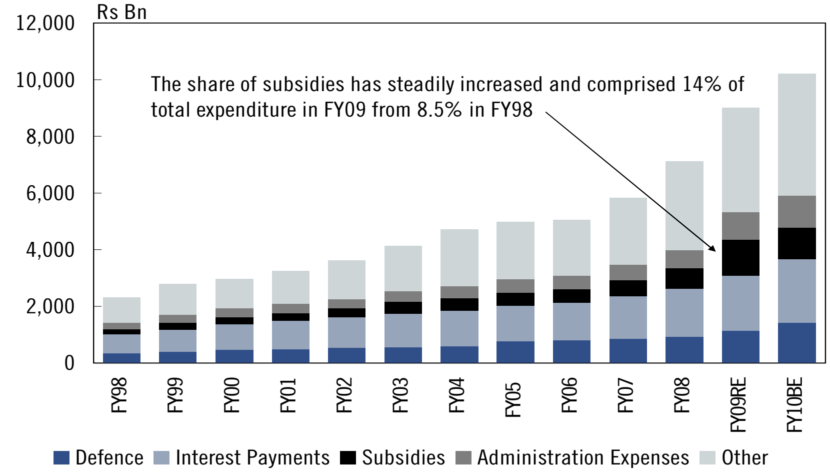
Source: Budget Documents, CIRA Estimates

Expenditure Reforms

Total expenditures have grown at a CAGR of 13% over the last decade, and crossed the Rs10trn mark in FY10. Unfortunately in India's case, most of this is un-productive as interest, defense, wages and subsidies account for nearly 80% of total expenditure. The one area where we could see some reform is in the subsidy component as various studies have shown that very little actually reaches the end user.

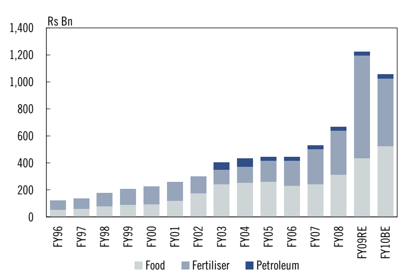
Expenditures, which crossed the Rs10trillion mark in FY10, are largely unproductive in nature; with the subsidy component most in need for reform

Figure 30. Trends and Components in Expenditure (Rs Bn)



Source: Budget Documents

Figure 31. Trends in Subsidies



Source: Budget Documents

- **Fertilizer subsidies**: Two key changes that have recently been approved which could reduce the subsidy bill[24] include
  - A shift from the **product-pricing policy** to a nutrient-based pricing regime, which would encourage balanced use based on crop requirements and not only cost;
  - A proposal to **directly transfer subsidies to the farmer,** which would address the issue of inequitable distribution.

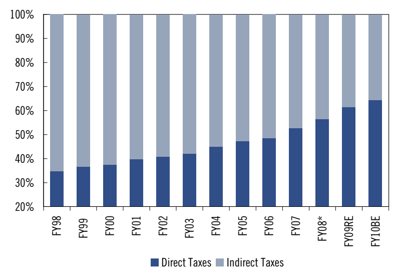
While a blueprint has been prepared for the shift to a nutrient based regime, changes have not been implemented yet.

- **Oil subsidies**: Rising oil prices have once again resulted in mounting losses for oil companies (*under-recoveries estimated at Rs459bn during FY10).* However, the Kirit Parikh Committee is currently revamping the fuel pricing mechanism. The Committee is expected to focus on (1) **financing oil subsidies** *(may replace oil bonds with direct cash subsidies);* (2) **appropriately targeting subsidies and minimizing leakages** (*possibly via the use of smart cards to below-poverty-line families, and subsequent direct cash-transfers to distributors);* (3) **de-regulation of products**. While petrol and diesel could be de-regulated, there is a lower probability of diesel and Kerosene being de-regulated, given that these fuels are used by the masses.

[24] The government regulates selling prices of domestic and imported fertilizers. Unchanged retail prices and rising costs/imports drove up subsidies.

- **Food Subsidies**: While part of this is due to subsidized food prices through the public distribution system (PDS), a significant part of what is included under the heading of "food subsidies" in the budget reflects the inefficiency of the public sector enterprise Food Corporation of India (FCI). This refers to the cost of procuring, transporting, storing and delivering the amounts supplied by the PDS of various commodities and implies that, the higher the stocks held by the PDS, the higher is the recorded subsidy, due to carrying costs.

Figure 32. Direct and Indirect Taxes (%)



Source: Budget Documents

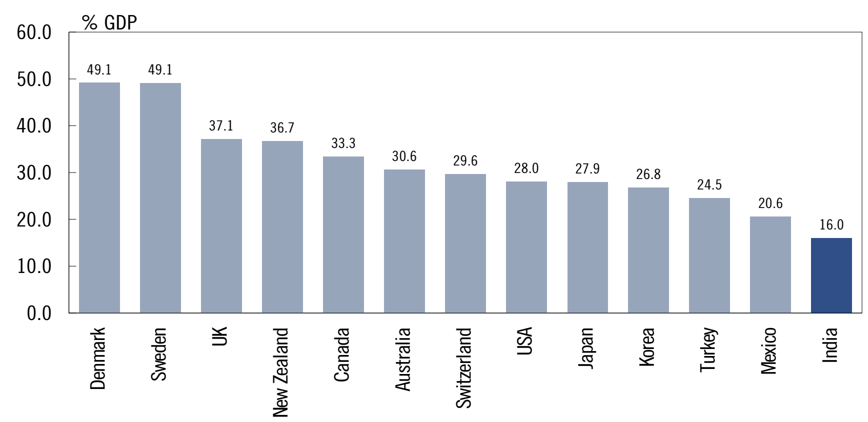
Revenue Reforms

Revenues as a percent to GDP continue to remain low, largely due to the continued incidence of indirect taxes (over 40%) over direct taxes.

In the medium term, measures that could shore up revenues include 3G spectrum auctions, divestment proceeds, and a fiscal exit strategy

Revenues have typically risen at a CAGR of 13% over the last decade, but as a % of GDP, remain at 16% - comparing poorly with China's 19.5%. Going forward, structural changes would continue to aim at increasing the share of direct taxes, while simultaneously rationalizing indirect taxes. Apart from an uptrend in growth, which would support revenue buoyancy, other positive changes *(divestment proceeds, 3G license auctions, and the reversal of excise duty cuts implemented last year)* would also help shore up non-tax revenues.

Figure 33. Tax- GDP Ratio (% GDP) – A Comparative Picture



Source: OECD, Budget Documents

Direct Taxes –To be benefited by the Code

The Direct Tax Code is expected to improve compliance and tax collections over the long run. However, there remain a number of thorny issues to be resolved

The key change on the anvil is the proposed **Direct Tax Code**. Since the draft Code was released in Aug 09, there have been two consultative meetings with stakeholders. Targeted for approval by 2011, we see the Code as positive, given that it aims to moderate tax rates, widen the tax base, and remove exemptions. During the course of the meetings, the Ministry has identified a number of issues that need to be resolved (these include treatment of Minimum Alternate Tax, shift from EEE (Exempt-Exempt-Exempt) to EET (Exempt- Exempt-Taxable) method, capital gains tax, deduction of interest on housing loan, etc. While there are grey areas that need to be resolved, proper implementation would help improve tax collections.

Indirect Taxes – GST to Enhance Revenues

As far as indirect taxes are concerned, the GST is expected to shore up revenues and also provide gains to GDP

On the indirect tax front, the much-anticipated reform measure is the introduction of a uniform **Goods and Service Tax (GST).** Although the deadline for implementation is likely to be missed, the government appears keen on introducing a 'flawless' GST.

... However, implementation will likely be later than the targeted timeframe of Apr 10 given that the passage of constitutional amendments could result in delays

To this end, the recommendations of the Thirteenth Finance Commission are encouraging, but there continue to remain a number of issues. The report proposes a dual levy imposed by the Centre and States separately, at a Revenue Neutral Rate. This has been estimated at 5% for the Centre and 7% for the States. Taxes to be subsumed under the GST would include excise duties, service tax, additional customs duty, surcharges, VAT, stamp duties, entry taxes, etc. Key concerns to be resolved include: (1) Constitutional amendments to allow the states to tax services and the centre to tax goods at the consumption stage; (2) a correct revenue neutral rate (12% is not consensus); and (3) whether a dual rate structure is ideal for equity.

Benefits: According an NCAER study, GST would help provide gains to India's GDP in the range of 0.9-1.7%, wage rates (0.68-1.33%), exports (3.2-6.3%) and returns to capital (0.37-0.74%). While central government finances are expected to benefit from improved compliance and better growth, the state governments are estimated to see additional revenues to the tune of Rs700bn in the first year of implementation.

Disinvestments

The government's announcement of criteria on divestments will help shore up non-tax revenues

Late last year, the government announced measures that would likely give much-needed traction to a hitherto-hazy disinvestment program. It is now mandatory for: (1) All profitable listed PSE's to have minimum 10% public ownership; and (2) Unlisted PSEs that (a) have a positive net worth, (b) no accumulated losses, and (c) posting a net profit over the last 3 years would need to get listed on the bourses.

In addition to laying down the criteria for disinvestments, the government has "temporarily" modified the usage of funds from the National Investment Fund (NIF)[9]. It has now been decided that, during Apr 09-Mar 12, the disinvestment proceeds credited to the NIF would be 'available in full' to fund capital expenditure of specific social sector schemes.

Progress so far - While the government has already divested its stake in NHPC and Oil India, other stake sales on the anvil include, NMDC (8.3%), REC, Sutlej Jal Nigam, SAIL (10% dilution by GoI) and Coal India Ltd (IPO - 10% dilution by GoI).

Thirteenth Finance Commission Recommendations

The 13th Finance Commission headed by Dr Vijay Kelkar submitted its report to the President late last year and is expected to be in the public domain in the budget session of parliament in February. The suggestions of the 13th Finance Commission assume extra significance as the government seeks to introduce changes on the both the direct tax front, as well as the introduction of a comprehensive indirect tax regime through the GST from the next financial year.

A quick re-cap: The Finance Commission is a body appointed every five years which makes recommendations on the sharing of tax revenues between the centre and state governments and distribution of funds among states and support to local bodies. The 13th FC is headed by Dr. Vijay Kelkar, the ex-Finance Secretary, with other assisting members including Mr B. K. Chaturvedi, Dr. Indira Rajaraman, Prof. Atul Sharma and Dr. Sanjiv Misra. It deals with the devolution of central taxes for the next 5 years starting Apr 2010.

MACRO THEMES

Theme #10: Capital Account – Controls or Liberalization?

With rising growth and interest rate differentials between EMs and developed world, the management of capital flows is once again in the forefront

To this end, we expect the authorities to focus on rebuilding reserves, allowing for some INR appreciation, as well as reversing some of the measures taken last year, although punitive/direct controls are unlikely

Moving on to the other side ... capital account liberalization would bring gains to market participants through improved access to global capital markets. However, it would be beneficial only as long as the authorities are able to manage the macro effects of excess flows

Looking ahead, while there is scope for further liberalization on the bond markets, policymakers appear to be cognizant of the risks associated with an open capital account

Managing Capital Flows

Growth and interest rate differentials are causing a renewed surge in capital flows to Emerging Markets. This has resulted in currencies appreciating, forex reserves rising (*in most cases to pre-crisis levels*) and some countries imposing controls on capital flows. How a country deals with capital flows depends on (1) its export dependence and (2) inflationary/sterilization costs associated with dollar inflows.

India Likely to Be Trapped in the Impossible Trinity Again

As we have pointed out in an earlier report[25], we believe that, over coming months, the RBI could once again be likely to be caught in the trap of the 'impossible trinity', given its attempts to have an independent monetary policy, simultaneously targeting exchange rates, with a partially open capital account. It would thus have to either (1) reconcile to an appreciating rupee, (2) looser money supply, credit growth and inflation, or (3) take measures to curb capital inflows/encourage outflows.

We expect that the initial goal would be to **re-build reserves** as ~US$60bn was run down during FY09. Secondly, we believe that we could see some **INR appreciation** (our estimates: March 10 at Rs44/US$ and March 11 at Rs41/US$) to offset inflationary pressures. While we do not expect that India will impose 'punitive controls', one could see a **reversal of some of the measures** taken last year to ease liquidity conditions *(see Figure 35).*

Managing the Trilemma: An interesting paper[26] by Rakesh Mohan and Muneesh Kapur indicates that by adopting a **middle ground** of managed but flexible *exchange rates* and managed, but mostly open, *capital accounts*, India was able to manage the Impossible Trinity. What also helped was that the Central Bank used many instruments rather than a single instrument. This was possible due to the fact that both monetary policy and regulation of banks and other financial institutions and key financial markets are under the jurisdiction of the Reserve Bank, which permitted smooth use of various policy instruments.

Figure 34. Currencies & FX Reserves – Pre & Post Crisis

	Currencies		FX Reserves	
	Pre-Crisis	Latest	Pre-Crisis	Latest
EU	1.4	1.5	199.2	195.1
Japan	107.9	91.4	996.6	1005.2
Switzerland	1.1	1.0	86.3	78.9
Korea	1,107	1,122	270.0	259.3
India	**45.5**	**45.6**	**258.6**	**262.0**
Taiwan	31.9	31.8	348.2	341.2
Philippines	46.6	45.9	45.0	35.8
China	6.8	6.8	2,273	2,273
Hong Kong	7.8	7.8	255.8	226.8
Indonesia	9,504	9,156	65.8	58.9
Malaysia	3.4	3.3	92.4	86.0
Singapore	1.4	1.4	187.8	181.8
Thailand	34.7	33.0	133.6	130.5

Source: Bloomberg

[25] *India Macroscope – Capital Controls: Back in Vogue…Will India Follow?* 18 Nov 2009

[26] *Managing the Impossible Trinity – Volatile Capital Flows and Indian Monetary Policy* ' Rakesh Mohan and Muneesh Kapoor; Nov 2009 (Stanford Centre for International Development)

Moreover, the study indicates the "*practice of adequate sterilization has been successful in preventing the unwarranted growth of base money and other monetary aggregates in the face of rising foreign exchange reserves. Hence, by and large, they have also been successful in containing inflation*".

What Can We Expect?

In the current scenario, curbing speculative inflows creates a case for selective controls in specific sectors (e.g. real estate). However, punitive controls are unlikely to be effective given that: (1) Capital inflows are emerging as an important source of financing investment. Shutting off the taps would thus nip the fragile growth recovery that is currently underway; (2) Inflation is largely supply-side driven due to a food shortage, which would render controls largely ineffective; and (3) India is already a relatively closed economy, with limits/restrictions on capital flows.

Figure 35. Capital Flows – What to Expect

	Pre-Global Financial Crisis	Policy Relaxations post Sept08	What has been done and Possible Further Measures
ECBs	1. Infrastructure companies permitted to bring back just US$100mn per company per FY for rupee expenditure. This was limited to US$50mn for corporates. 2. Minimum avg maturity period of 7 years for ECBs of over US$100mn for rupee expenditure by the infrastructure sector 3. **All in cost ceilings**: 3-5 Yrs: Libor +200bps; 5-7+ Yrs: Libor +350bps	1. All companies allowed to bring back US$500mn for rupee expenditure. Min avg maturity of 7 yrs dispensed with. 2. Expanded definition of infrastructure co's to include mining, exploration/refining companies 3. Payment for 3G licenses/spectrum considered as eligible end-use . Raising funds for Integrated townships permitted under approval route. 3. **All in cost ceilings:** Revised for 3-5Yrs to Libor+300bps and for 5-7+ Yrs to Libor +500bps before **<u>entirely eliminating</u>** these requirements until December 09	**Measures Taken:** 1. Re-imposed all-in-cost ceilings for 3-5 Yrs at Libor+300bps and 5+ Yrs at Libor+500bps. 2. Discontinued FCCB Buybacks 3. Modification of end-use norms such that 3G spectrum allocation/NBFCs borrowing for infra-financing are eligible **Possible Further Measures:** 1. More tightening of all-in cost ceilings 2. Imposing restrictions on ECBs for companies with weak credit quality; 3. Tightening funding for real estate
NRI Deposits	Interest Rates: **FCNR(B):** Libor -25bps **NR(E)RA:** capped at Libor	Raised to: **FCNR(B):** Libor + 100bps **NR(E)RA:** Libor +175bps	Reducing interest rates to make NRI deposits less attractive
Foreign Debt Flows	Limits for FII investment in: **Rupee-denominated corporate bonds**: upto US$4bn and **Government bonds**: upto US$5bn	Caps raised to US$15bn for **rupee-denominated corporate bonds**	
Banking Capital	Banks allowed to borrow funds from their overseas branches and correspondent banks up to a limit of 25 % of their unimpaired Tier I capital as at the close of the previous quarter or US$10mn, whichever is higher,	Banks will be allowed to borrow funds from their overseas branches and correspondent banks up to a limit of 50% of their unimpaired Tier I capital as at the close of the previous quarter or US$10mn, whichever is higher	Norms could be reversed to pre-crisis standards; and exports could be included within these caps
FDI	Most sectors allow up to 100% foreign ownership, apart from retail trading, arms, atomic energy and mining,	Relaxation of norms for downstream investment by foreign investors, commodity exchanges, and easier regulations for hierarchical foreign investment into sectors such as insurance, telecom, etc	
FII	In 2007, SEBI imposed curbs on Participatory Notes (P-Notes) wherein (a) further issuance of p-notes through derivatives/sub-accounted was stopped; (b) existing positions were to be unwound over 18 months.	1. Cap on issuance of P-notes in the cash segment removed; 2. Ban on P-notes with derivatives as underlying removed, fresh positions can be created beyond 40% of assets under custody; and 3. 18-month deadline set earlier for unwinding of current positions lifted.	While we do not expect any punitive controls (such as what Brazil did), we expect authorities to focus on strengthening norms on accounting and corporate governance, and capital market regulations

Source: RBI, SEBI, Citi Investment Research and Analysis

How Liberalized is the Indian Capital Account?

While there is broad consensus on the desirability of open trade in goods, it is not visible as regards to the capital account. Another study by the same authors[27] points out that, while there could be some microeconomic gains to market participants through improved access to global capital markets, it would be beneficial as long as the authorities are able to manage the macroeconomic effects of such excess flows. Thus, there is "need for a coordinated and calibrated approach to simultaneous movement in financial market and sector development on the one hand and gradual opening up of the capital account".

In this regard, there is consensus on the appropriate sequencing of opening of the capital account, that is, FDI, equity flows and, lastly, debt flows. While there remain FDI caps in a few sectors, equity markets are now reasonably liberalized, and debt markets continue to remain relatively closed. In a Five-Year Roadmap Towards Fuller Capital Account Convertibility[28] released in 2006, a six-member committee laid out several recommendations for the introduction of CAC in a phased manner.

The key objectives behind this were: (1) To facilitate growth through investment by minimizing the cost of equity and debt; (2) Improving financial sector efficiency through increased competition; and (3) Providing opportunity for diversification of investments by residents.

However, the committee said that the move towards fuller capital account convertibility (FCAC) does not imply '*zero capital regulation*', but **it requires that all non-residents (corporates and individuals) are treated equally**. This implies the removal of tax benefits currently enjoyed by NRIs, discriminatory tax treaties, and greater supervision to strengthen the banking system.

Several Steps towards Liberalization Have Already Been Implemented

There has been considerable progress in implementation of CAC recommendations. Dr Rakesh Mohan and Muneesh Kapoor point out that India is now more open than the United States in the current account – overall current account openness (the ratio of current receipts and current payments to GDP) has risen from 34.4% in 2000 to 60.9% in 2008 (vs. 41.1% in the US). Coupled with capital account liberalization, they find that the **overall financial openness** of the Indian economy - inflows and outflows on current and capital accounts taken together –increased from about 32% in FY91 to 120% in FY08, and thereafter moderated to 112% in FY09.

… But there is potential for some more

However, areas that continue to be subject to regulations and caps include the corporate debt markets. In the same paper, the authors quote the IMF in saying that '*given the country's massive investment needs, it is essential that scarce fiscal resources be focused on jumpstarting infrastructure investment, together with further opening up to foreign inflows and developing the domestic corporate bond market to augment the needed financing*'.

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27 '*Liberalization and Regulation of Capital Flows: Lessons for Emerging Market Economies*', Rakesh Mohan and Muneesh Kapur , October 2009

28 Capital Account Convertibility is the freedom to convert local financial assets into foreign financial assets, and vice versa, at market-determined rates of exchange.

Appendix A-1

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