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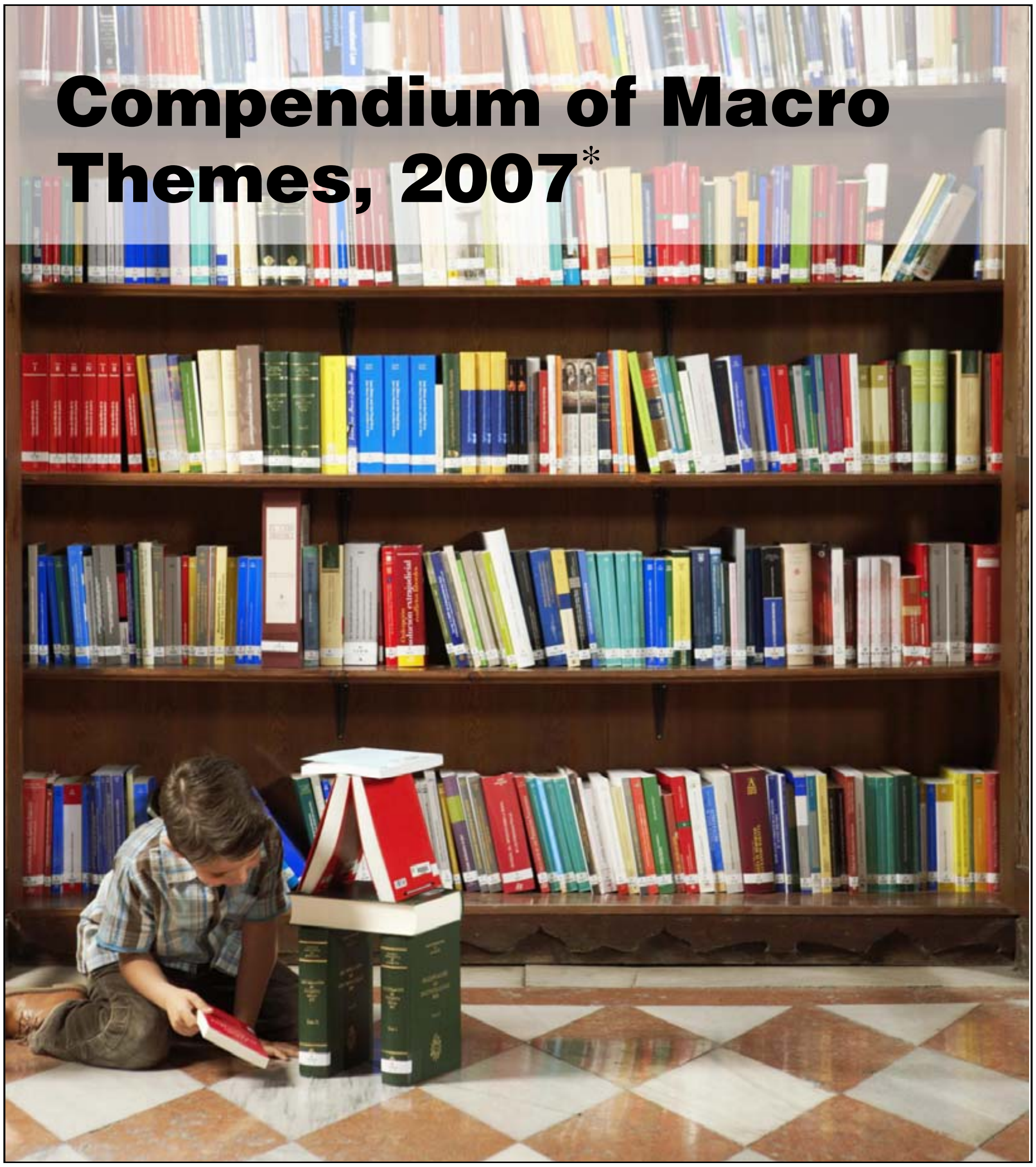
ECONOMIC AND
MARKET ANALYSIS:
INDIA

Economics

17 December 2007

Compendium of Macro Themes, 2007*



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* A compilation of our top macro pieces this year

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2007 Was About…

- **…Keeping the faith – in India's growth, returns, opportunities, and resilience. It was also the year of challenges, which are now larger, closer and a little endemic**
- **…Establishing paradigms – 9% benchmark growth rate, appreciating currency trend, and a differentiated and key 'emerging markets' investment destination**
- **…Roadblocks and Risks – Energy scarcity, fractured polity, 'pocket inflation' with managed headlines…all nipping at the economy's heels**
- **2008 should be about 'keeping your eyes on the road, and your hands on the wheel'**

Asia Pacific

* A compilation of our top macro pieces this year

2007: The Year That Was

Figure 1. Compendium of Macro Themes, 2007 — Contents

	Page	The Year That Was
Jan 07	6	**India in 2007: Managing the New Growth Paradigm** In our first publication for 2007, we find that drivers are in place for India to raise its growth potential from 8% to 10% in the coming years. However, we outline four key challenges that need to be addressed before India can move on to a higher growth trajectory.
	8	**Challenge #1: Infrastructure** While current infrastructure should help sustain growth at 8% levels, moving to the 10% level would entail higher spend across sectors. We expect the government to facilitate investments via the Public Private Partnership framework model. This would accelerate infrastructure build through accountability, transparency and inclusiveness.
	10	**Challenge #2: Human Resource Paradox** Although favorable demographics are a key positive for India's growth story, unless job creation becomes a priority, it could result in social tension. In addition, India's economic boom has not been preceded by a scaling up of talent supply. Herein lies a major paradox – the need to create more jobs on one hand, and an emerging talent shortage on the other.
	16	**Challenge #3: Need for Inclusive Growth** The widening gap between states has resulted in growth being concentrated in a few states. This has created a divergence in per-capita incomes and social sectors such as education and health. Addressing the growing disparity will be particularly vital since 60% of the incremental rise in India's population up until 2051 is likely to occur in three of the poorest states – Bihar, UP, and MP.
	19	**Challenge #4: How Real is the Naxalite Threat?** A rise in violent incidents by Naxalites, or India's Maoists, has led PM Singh to remark that Naxalism is the '*single biggest internal security challenge'* for India. We find that the Maoist insurgency, if not adequately restrained, could be a threat to the country's law and order situation, resulting in deteriorating governance and undermining investment activity.
Feb 07	22	**Logistics: Cold Chain, Hot Stuff** With both domestic and global players making forays in the food retailing segment, there remains a number of challenges to be addressed – the key amongst these being supply-chain logistics. Our theme in the *February Macroscope* thus highlights growing opportunities for the logistics sector, especially in the cold chain and air cargo segment.
Mar 07	25	**Weighing the Odds: Global Developments and India – A Scenario Analysis** Following a sell-off in global markets, our theme in the *March Macroscope* prompts us to examine the impact of a US slowdown, lower growth in China and a sharp appreciation in the yen (leading to an unwinding of the carry trade) on India. We conclude that given the closed nature of the economy, India is likely to be relatively less impacted.
Apr 07	28	**Overheating and the Question of Growth Potential** With the economy facing several classic symptoms of "overheating" – inflation, current account deficit, higher asset prices and infrastructure bottlenecks – the *April Macroscope* finds that in the near term, India's economic growth could be hitting a speed limit. But, over a longer period, continued reforms and investments could ease overstretched resource constraints and help lift growth potential to 10% levels.
Jun 07	31	**India's Growing Luxury and Wellness Industry** India's retail boom is spanning across both ends of the spectrum – with the trickle-down impact to the rural segment being as strong as growing demand for niche products. In the *June Macroscope* we discuss the latter, which reflects the fact that as incomes grow, patterns of consumption are seeing a shift from spend on necessities to a growing share of discretionary items, luxury products, and 'well-being assets'.
Jul 07	34	**The Changing Face of Rural India** The *July Macroscope* looks at the other end of the spectrum and finds that the retail boom that has swept India is now making its way to the 'bottom of the pyramid', facilitating a trickle-down impact and empowering the rural economy. Apart from the issue of corporate social responsibility, a growing number of Indian corporates are thus looking at the rural segment as a profitable business opportunity.
Aug 07	37	**Education and Training: Bridging India's Skills Gap** The skills shortage which has spread across sectors – financial services, retail, aviation, hospitality and construction – has resulted in corporates taking a number of initiatives to ramp up the pool of suitable labor. The *August Macroscope* discusses such initiatives and finds that they are opening up numerous opportunities in the education and training space.
Sep 07	40	**India: Following China on the African Safari** A growing demand for natural resource commodities has led to an increase in Asian-African trade. The *September Macroscope* discusses opportunities arising from India's forays into Africa. Though China is Africa's third largest trading partner, Indian investments are picking up. India is likely to attempt China's aid for oil strategy, i.e., the development of power or infrastructure projects in exchange for oil exploration.
Oct 07	43	**India Inc: Surviving a Stronger Rupee** The *October Macroscope* finds that while currency appreciation would have a near-term impact on exports, employment and profit margins, efficient companies aided by government support should be able to withstand a stronger INR through effective hedging strategies and productivity improvements.
Nov 07	46	**India's Energy Needs: Looking beyond Oil** With triple-digit oil prices looming and coal deficits widening, our *November Macroscope* analyzes the implications of energy shortages for India. To sustain growth at 8-9% levels, we believe India would need to increase its primary energy supply four-fold, to 1,651mtoe in FY32. This would entail ramping up domestic production, improving energy efficiency and shifting focus to alternative fuels.
Dec 07	49	**Prospects for 2008** As part of our regional publication, *Asian Prospects*, we form our outlook for 2008. We expect the rapid pace of investment growth to continue, while increasing penetration of retail credit and untapped rural potential indicate the consumption story is still alive.

Figure 1. (Cont'd) Compendium of Macro Themes, 2007 — Contents

	Page	The Year That Was
		Spotlights: Quick Takes on Key Issues In this section, we highlight our top picks of the year from CitiViews - our weekly product
		Spotlight on…
29 Jan	**52**	**Pensions:** The government's proposal to allow pension funds to invest in stocks is a step forward in developing the pension market in India. On Nov 27, the PFRDA appointed SBI, LIC and others as fund managers to invest up to 15% of the funds collected under the NPS in stocks.
12 Mar	**53**	**Poverty:** With 22% of the population below the poverty line, India is an economy of paradoxes. However, improvements in HDI rankings coupled with higher rural income levels are encouraging and bode well for agri performance.
09 Apr	**54**	**Water Management:** The government's recognition of the need to address water infrastructure points to emerging opportunities in irrigation, tube-wells, building more dams, as well as water purification facilities.
16 Apr	**55**	**Clinical Trials:** Revenues from contract research (of which clinical trials form a large component) continue to be on an uptrend. As these revenues are classified under invisibles, clinical trials bode well for the BoP and the currency.
11 Jun	**56**	**Agriculture and Food Security:** The govt's resolve to achieve 4% growth in agriculture is essential not only to ensure food security but also to enable inclusive growth and control inflation in primary products.
18 Jun	**57**	**Bio-fuels:** A shift towards alternate fuels to counter dependence on other energy sources has been positive so far. However, a key offshoot of this transition is higher prices for agricultural commodities.
25 Jun	**58**	**Strategic Petroleum Reserves:** India's decision to build petroleum reserves is a major step towards ensuring energy security. However, at just 20 days of annual imports, the size of SPRs would need to be increased if it were to truly serve as a hedge for supply disruptions.
02 Jul	**59**	**Defense:** Given that indigenization is barely 30% vs. the govt's target of 70%, we find potential for private sector participation in defense. Coupled with the offsets clause, this should help reduce India's import bill as it is one of the largest arms importers in the world.
09 Jul	**60**	**Floriculture:** A key beneficiary of the government's thrust on agriculture is floriculture. Evidence of this sector's potential is George Soros's recent investment in Karuturi Networks, India's largest floriculture company.
16 Jul	**61**	**Aviation and the MRO Industry:** We see an emerging opportunity in the Maintenance, Repair and Overhaul (MRO) segment within the aviation space, which is witnessing increased corporate interest. This also augurs well from an employment generation perspective.
30 Jul	**62**	**Dairy Products:** Given that India is the world's largest milk producer, there should be immense growth potential for the organised dairy segment. Supporting this is the rapid growth in milk production, the entry of private retail, and growing domestic demand.
13 Aug	**63**	**Wood Products:** Growth in wood products averaged 100%+ between Jan-Jun 07. This piece discusses whether the surge in wood products is for real or just another data discrepancy.
03 Sept	**64**	**Gold:** India's gold demand has been fuelled by promotion of branded jewellery and growing rural incomes. Market deregulation has resulted in gold emerging as an investment option. While this has led to rising imports, the govt has proposed a new gold mining policy.
10 Sept	**65**	**Financial Savings:** A clear uptrend in savings has helped spur GDP growth to 9%+. However, while gross financial savings have risen, net financial savings have remained constant given the rise in financial liabilities.
22 Sept	**66**	**Government's Onion Affair:** We examine the repercussions of rising onion prices that have historically spelled disaster for the government. While government measures have helped quell prices, a longer-term solution lies in improving agri production and productivity.
19 Nov	**67**	**Fertilizers:** Rising fertilizer subsidies are a worry since part of the payment to offset the subsidies are not reflected in the headline deficit number. Proposed changes in the fertilizer subsidy policy should help improve agri productivity, but effective targeting is key.
26 Nov	**68**	**Real Estate Investment Trusts**: While REITs appear to be an attractive investment option, there are issues to be addressed. Moreover, permitting REITs at this stage looks like a policy dichotomy given that the RBI is concerned about asset bubbles in real estate.
Appendix	**69**	**Statistical Snapshot**

India in 2007

On 9 January 2007, the start of a new year, we put our views on the Indian economy on the table

While we saw 4 major challenges for the economy, we concluded that, with growing investments and rising consumption, the India Story was more fact than fiction

WE BELIEVED…

- **That the India story was more fact than fiction, given a rapid pace of investment growth and continued potential for consumption.**
- **We expected growth in India to remain strong, but saw 4 key challenges ahead: Infrastructure, widening disparities between states, a growing Naxalite movement, and a human resource paradox.**

…AND WHAT HAPPENED

- **With growth in FY07 up 9.3%, India is one of the fastest-growing economies in the region. However, the key challenges are also playing out. The government's thrust on infrastructure and inclusive growth is evidence of this, while the human resource paradox has led to emerging opportunities in the education space. And, Naxalites remain a major threat to investment activity in some regions.**

India opportunity: More fact than fiction

Growth: Potential to lift trend growth over 8%

We believe India's level of trend growth will likely be sustained at 8%+, thanks to improved macroeconomic stability, liberalization in a number of key areas and gradual improvement in infrastructure.

A rapid pace of investment growth looks sustainable in the perceivable future, given current significant infrastructure gaps and above-90% capacity utilization ratios in many key industries. Gross capital formation has been growing at an above-10% pace for more than four years. Latest data, including those on the order-books of engineering and construction companies, bank credit and imports also point to strong investment momentum. The recently announced Ultra Mega Power Projects (UMPPs), continued momentum in telecom coupled with initiatives in the transport sector (road, rail, ports and airports) all bode well for an uptrend in overall investment.

Consumption has been growing at rates slightly below GDP growth. But a rising proportion of young persons in the population, growing income, and increasing retail credit point to immense potential for consumption growth. In addition is the fillip to rural incomes given that retail companies are increasingly building supply chains directly with farmers for their retail/export forays. Given the reform momentum and relatively low levels of income and economic development, we believe India probably has potential to further lift its trend growth level and to remain one of the fastest-growing economies in the region.

Accelerating growth from 8% to 10%: The four challenges

Given the reform momentum and relatively low levels of income and economic development, India probably has potential to further lift its trend growth level and remain as one of the fastest-growing economies in the region. However, to move to a high growth trajectory, the four challenges that need to be addressed are:

Challenge I – Infrastructure

While current reforms in the infrastructure are encouraging and will be able to sustain GDP growth at 8-9%, we believe the first challenge to double-digit GDP growth is the need to increase infrastructure spend across sectors. Looking ahead for 2007, we see the government facilitating investments and allocating a bigger role for the private sector via the Public Private Partnership frame-work model. This would accelerate the provision of infrastructure taking into account accountability, transparency and inclusiveness.

Challenge II – Human resource paradox

While India's favorable demographics have been touted as being the key factor contributing to growth, what needs to be noted that unless job creation becomes a priority, it could result in social tension. Another issue is the fact that India's economic boom has not been preceded by a scaling up of talent supply. Here-in lies a major paradox - the need to create more jobs on one hand, and an emerging talent shortage on the other.

Challenge III – Inclusive growth

The widening gap between states – due largely to institutional reasons, has resulted in economic growth being concentrated in a few states resulting in a divergence in per-capita incomes and social sectors such as education and health. Addressing the growing disparity will be vital since 60% of the incremental rise in India's population up until 2051 is likely to occur in three of the poorest states - Bihar, UP, and MP.

Challenge IV – Politics: (a) Stability of coalition; and (b) How real is the Maoist threat?

Politics remains a concern, given the nature of India's coalition government. Over the past year, a string of disquieting political incidents has stalled the reform progress. While slow progress on reforms already has been factored into our economic forecasts, our base case remains that the government will complete its term. Related to politics is the Naxalite issue. The Naxalite/Maoist movement is a group engaging in a violent struggle on behalf of the landless and tribals[1] against landlords and their agents has spread across 165 districts in 14 states, with fatalities involving Naxalites rising during the last two years. The rise in violent incidents led PM Singh to remark that Naxalism is the '*single biggest internal security challenge*' for India. The Maoist insurgency, if not adequately restrained, could be a threat to the country's law and order situation, resulting in deteriorating governance and undermining investment activity. However, given the government's resolve to address the Naxalite issue, we believe it is unlikely to get out of hand

[1] Tribals: Indigenous ethnic groups in India

Challenge #1: Infrastructure

A key challenge that we saw facing the economy was infrastructure

However, the government's recognition of the need for infrastructure development was positive, as was the thrust on public-private partnership

WE COMMENTED...

- **That while reforms in the infrastructure were encouraging, it remained a primary challenge for faster GDP growth. We expected the government to allocate a bigger role to the private sector via the Public Private Partnership framework model.**

...AND WHAT HAPPENED

- **Recognizing the need for infrastructure development, the Planning Commission has pegged investments required at US$492bn. There has also been a growing thrust on PPP as a method for funding infrastructure projects, as seen in roads, airports and power.**

Infrastructure in India: Where we stand

In our report published on 9 January 2006, *"India in 2006- Maintaining the Momentum"*, we commented on the status of infrastructure projects and found that while government reforms had been encouraging, the pace of development varied. For instance, progress in telecom, roads, and civil aviation had been fast - benefiting greatly from government emphasis on private sector participation, the power sector has been laggard suffering from delays in the implementation of policy, major shortfalls in capacity, and a distorted pricing structure. However, the implementation of Ultra Mega Power Projects is now encouraging. As regards ports, the government is gradually allocating a growing role for the private sector, while railways have also seen a significant turnaround, admittedly with little private sector participation. Looking ahead, we expect to see PPP initiatives coming to the forefront.

Figure 2. Infrastructure in India: A Summary

Sector	Key Stats	Reform Initiatives and the emphasis on Private Sector participation
Power	Installed Capacity-127,600MW; Avg PLF-75%. FDI limit: 100%	The National Electricity Policy, announced in February 2005 sets the roadmap for transformation of the power sector; but the moot point lies in its implementation of deadlines fixed. Key PPP initiatives include the successful privatization of the Delhi power sector, and the recent implementation of Ultra Mega Power Plants which will help meet the government's 'Power for all by 2012' target.
Roads	Length: 3.3mn kms. FDI limit: 100% for both construction and maintenance	The most visible action in highway development is taking place through the National Highway Development Program (NHDP). NHDP is implemented in Phases, and while time and cost overruns are likely to remain concerns, a renewed focus on road development would boost the construction segment. Over time, there has been a growing emphasis on private sector participation, with phases III onward funded largely by PPP (through BOT and BOOT projects).
Telecom	Cellular Subs- 92mn, Fixed Line Subs: 56.4mn:FDI:74%	One of the biggest beneficiaries of market-oriented reforms. Going forward, lower access deficit charges, license fees, 'One India' rate proposals, and measures to boost rural telephony would give a further boost to the sector.
Ports	Traffic Handled: 423mn tonnes; FDI: 100%	The National Maritime Development Policy, which aims at improving hinterland connectivity through private-public partnerships; the Sagar Mala Project; and freight corridor are encouraging initiatives. Deregulation in the sector has resulted in growing private sector participation, primarily on a BOT basis, with a number of the major ports operated by international players. Given that the experience of operating berths through PPPs at some of the major ports has been successful, the Ministry has decided to expand the programme and allocate new berths to be constructed through PPPs.
Railways	Length: 63000km; revenue-earning traffic: 667mn tonnes	Perhaps the largest PPP initiative for the railways sector is the dedicated freight corridor linking ports of the east and west to Delhi and Punjab. The project, which involves building 2700km at an estimated cost of over Rs220bn, will help ease port congestion, upgrade rail infrastructure, and aid energy efficiency through reduced diesel consumption.
Airports	Passengers Carried: 73mn. FDI:49%	A major PPP initiative for the aviation segment is the modernization and expansion plan for airports. While modernization of Mumbai and Delhi airports is already underway, greenfield airports are being developed in Bangalore and Hyderabad With total investments for the development of airports pegged at Rs400bn during FY07-14, Rs310bn is envisaged from PPPs.

Source: Ministry of Power, NHAI, TRAI, Indian Railways, Ministry of Ports and Shipping, Director General of Civil Aviation, Airports Authority of India, IDFC, CEIC Data Company, Citigroup.

Public Private Partnerships: The way forward

With the magnitude of investment required in infrastructure pegged at US$320bn; financing India's infrastructure deficit remains an immediate concern. An increase in public investment is not really feasible given that the fact that the government is running a deficit around 7% levels. In addition, given the long gestation periods and a lack of financial viability, investment in infrastructure is typically unattractive for the private sector. Mobilizing resources through debt finance is also an issue since India's pension and long-term debt markets are still relatively underdeveloped.

To this end, the government has taken several steps to encourage the private sector through Public Private Partnerships (PPP). PPP infrastructure projects typically involve transfer of public assets, delegation of government authority for recovery of user charges, private control of monopolistic services and sharing of risks and contingent liabilities with the government. As the 11th Five Year Plan points out, PPPs must be *seen as a way of attracting private money into public projects, rather than putting public resources into private projects.* Two key initiatives include:

- **Viability gap funding**. This refers to a grant – one time or deferred – to make the project viable. In order to be eligible, the project needs to be implemented and operated by a private company, selected by a statutory body through the process of competitive bidding. More-over, the project should provide a service against payment of a pre-determined tariff or user charge. Currently, government support for projects in roads, power, ports, airports, SEZs, and international convention centres is capped at 20% of the capital costs[2].

- **The India Infrastructure Finance Company Limited** (IIFCL) is a special purpose vehicle set up by the government to meet *long-term financing requirements of potential investors.* Corporatized early in 2006, the IIFC is expected to provide financial support through long-term debt either by way of re-finance to banks and financial institutions or by direct lending to project companies. It raises funds from both domestic and external markets against government guarantees, the limit of which is prescribed each year (limit for FY06 was Rs100bn or US$2.2bn)

Other initiatives by the government include encouraging FDI in infrastructure. The government has also set up a three-member Investment Commission to make recommendations on policies and procedures to facilitate investment. The committee submitted its report earlier this year and recommendations included lifting FDI caps in strategic sectors, promoting SEZs, creating a fast-track mechanism for priority sector projects, enhancing labor flexibility and diluting PSU dominance.

Figure 3. Infrastructure- Investment Opportunities across Sectors (US$bn)

Sector	US$bn
Power	200
Roads	60
Rail	5.0
Ports	4.5
Airports	9.0
Telecom	22

Source: PM's Committee on Infrastructure.

[2] In order to be eligible for funding the PPP must be implemented by an entity with at least 51% private equity.

Challenge #2: Human Resource Paradox

Another challenge that we envisaged was the human resource paradox…

…which stemmed from the need to scale up talent on one hand and create more jobs on the other

WE EXPECTED…

➤ **That although India's favorable demographics have been a major factor contributing to growth, economic growth had not been preceded by a scaling up of talent supply. This has led to a major paradox – the need to create more jobs on one hand and an emerging talent shortage on the other.**

…AND WHAT HAPPENED

➤ **An emerging talent shortage, with only a small percent of India's talent pool suitable for employment, has resulted in wage inflation. However, the government and corporate India are taking steps that have opened up various opportunities in the education and training space to counter the crunch.**

India's demographic dilemma

The positives – Favorable backdrop to the consumption story

India's rising proportion of young workers in the labor force, a growing middle class and a retail lending boom is a favorable backdrop for the consumption story. One of the key drivers of India's economic boom is its demographics. Its critical mass of skilled, English-speaking labor force has helped fuel an off-shoring and service-sector boom; and with 32% of the population below the age of 15, the Indian workforce will continue to burgeon, contributing to growing urbanization and shifting consumption habits.

In comparison with China, India remains at an advantage. Reports indicate that China's demographic advantages could diminish over the coming years, as, due to its one-child policy, competitive pressures on China may increase from other low-income economies in labor intensive markets. For India, this is in fact positive, since labor costs in the manufacturing sector in India are only a fraction of those in China.

Figure 4. Evolution of Demographic Structure in China, 2000 and 2020F ('000 Persons in Each Age Group)

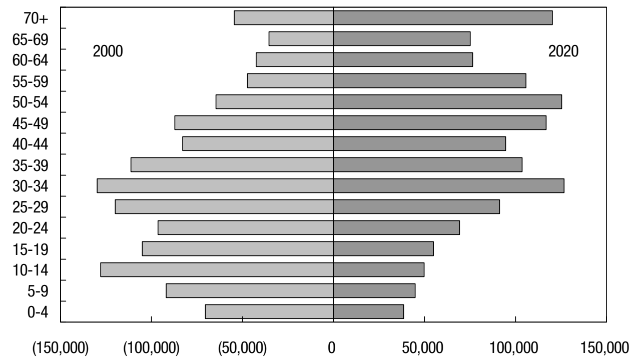
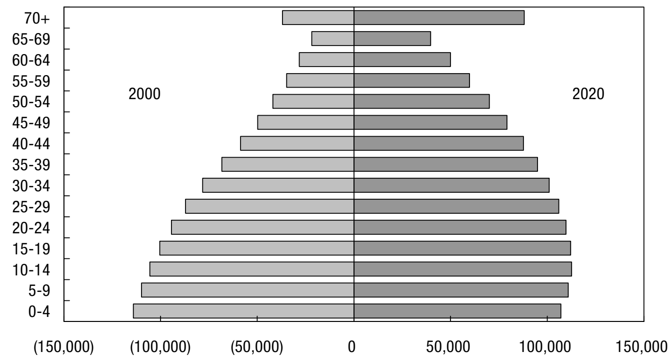


Figure 5. Evolution of Demographic Structure in India, 2000 and 2020F ('000 Persons in Each Age Group)



Source: Asian Demographics Ltd.

The negatives – Could result in social tension

Unfortunately, India's demographic boon could also be its bane. While India's favorable demographics have been touted as being the key factor contributing to growth, what needs to be noted that unless job creation becomes a priority, it could result in social tension. Despite the acceleration in growth, creation of job opportunities has not kept pace with the growing workforce. For instance, India's software industry including (BPO) has only added a little over one million jobs during the last ten years.

This situation could worsen in the coming years given India's favorable demographic profile. Official statistics peg the current unemployment rate at 9.2%. The Planning Commission says that even if the country registers 8% GDP growth, unemployment could increase to 10.6% by 2012[3].

To capitalize on India's demographic dividend (i.e., growth rate of labour force is higher than the population growth), creating more jobs is essential. In this regard, given that a major chunk of the emerging labour supply[4] is likely to be unskilled (educated below primary level), there is need to promote sectors in the economy that can employ them. These could possibly include projects such as the Bharat Nirman[5] and the National Urban Renewal Mission[6]

The Rural Employment Guarantee Scheme

In its efforts to provide a safety net and try and solve the country's unemployment problem, the National Rural Employment Guarantee Act, promises 100 days of work to one member of every rural household each year at the minimum wage on public-works projects, and has reserved 33% of the total number of applicants for women. However, two concerns surrounding this scheme is a possible strain on public finances and proper implementation of the project in order to prevent leakages.

Figure 6. Projected Age Distribution of Population (Millions)

Age	2001	2006	2011	2016	2021	2026
Under 15	363	360	351	343	337	328
% to total	*35.3*	*32.3*	*29.3*	*26.9*	*25.0*	*23.2*
15-64	622	702	780	854	916	967
% to total	*60.6*	*63.0*	*65.2*	*67.0*	*68.0*	*68.5*
65+	42	52	66	78	94	116
% to total	*4.1*	*4.7*	*5.5*	*6.1*	*7.0*	*8.2*
Total	**1027**	**1114**	**1197**	**1275**	**1347**	**1411**

Source: Registrar General India

Figure 7. The Unemployment Rate is projected to rise to 10.6% if growth continues at 8%+

	1999	2001	2002	2007E	2012E
Labor Force (Mns)	363.3	371.5	378.2	413.5	451.5
No Employed (Mns)	336.8	340.8	343.4	373.0	403.5
No of Unemployed	26.6	30.7	34.9	40.5	48.0
Unemployment Rate (%)	**7.3**	**8.3**	**9.2**	**9.8**	**10.6**

Source: Plan Documents

[3] We believe the estimates are likely to be on the low side as India suffers from a substantial amount of 'hidden' or 'disguised' unemployment, i.e. there are a large number of people who cannot afford to be unemployed, and so engage in low-productivity work earning income below the minimum wage. This occurs mainly in the unorganized or informal sector, which employs more than 94% of the total workforce

[4] 60% of the incremental rise in India's population up until 2051 is likely to occur in three of the poorest states- Bihar, UP, and MP where literacy levels are very low

[5] This is a four-year time bound plan that aims to achieve goals in six areas of rural infrastructure (irrigation, water supply, housing, roads, telephony, and electrification) that should greatly unlock the potential of rural India

[6] Initiated by the UPA government, NURM involves the re-development of 60 major cities — which includes the 7 mega-cities (Delhi, Mumbai, Bangalore, Chennai, Kolkata, Hyderabad and Ahmedabad), 29 cities with populations of over 1m and 24 cities with populations of less than 1m. The FY06 Budget allocation for NURM was Rs55bn (US$1.25bn) and is an encouraging start, and in our view, indicating the seriousness of this initiative

The Indian talent shortage

In addition to the demographic dilemma, India is facing a major paradox – the need to create more jobs on one hand, and an emerging talent shortage on the other.

Talent – The world's most sought after commodity

A growing number of businesses across the globe are faced with the predicament of 'attracting and retaining' the correct talent. Key reasons for the global talent crunch include: (1) flattening or declining birth rates (as in the US, EU and Japan); (2) trends in migration; and (3) structural changes that call for jobs which cannot be automated. The Bureau of Labor Statistics estimates that the US will have a shortfall of 10mn workers by 2010, and China and the EU will likely face labor shortages as well. A survey by McKinsey finds that although the *potential* supply of talent in low-wage countries is large and growing, only 13% of potential job candidates[7] are suitable for employment given the dispersion of labor force and domestic competition for talent.

NASCOMM projects a shortfall of nearly 0.5mn skilled employees by 2010, 70% of which will be concentrated in the BPO industry

The global talent crunch comes to India

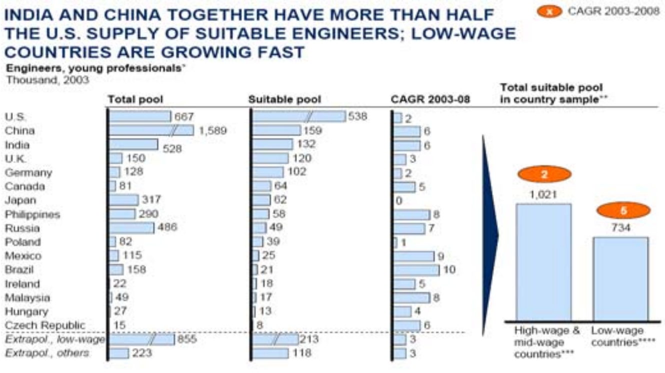
Unfortunately, the human resource crunch that developed nations are facing is likely emerging in India as well. While India's talent pool is often said to be one of the economy's biggest advantages, reports suggest that this pool is not quite as 'deep' as estimated. A report by NASSCOM[8]- McKinsey also states that while close to 3mn students (including 400,000 engineers) graduate from universities in India each year; only about 25% of engineering graduates and 10-15% of general college graduates are considered suitable for direct employment in the offshore IT and BPO industries, respectively. With growth in the off-shoring sector averaging more than 20% p.a. over the last 10 years, wages for IT project managers have increased 23% annually over the last four years – an indication of talent shortage. Even in the engineering segment, while order books of the construction and power equipment majors are filling up, a shortage of suitable engineers remains a concern. Other sectors that are seeing a talent shortage include textiles, aviation, telecom and retail firms.

Figure 8. Talent Pool in India

		Stock as of 2001	Annual Out-turn, FY06 estimates
Engineers	Degrees	1,024,380	222,000
	Diploma	1,531,720	219,000
Graduates	Arts	8,768,000	1,200,000
	Commerce	4,853,000	565,000
	Science	4,025,000	505,000
Post Graduates	Arts	3,917,278	190,000
	Commerce	902,504	70,000
	Science	805,041	50,000

Source: Nasscom, Institute of Applied Manpower Research, Ministry of HR Development.

Figure 9. Suitable Talent Pool - A Comparative Picture



Source: McKinsey

[7] Interviews conducted by McKinsey with 83 human resource managers in MNCs. For full study, please see "The Emerging Global Labor Market: The Supply of Offshore Talent in Services"; McKinsey & Co; June 2005.

[8] **National Association of Software and Service Companies (NASSCOM)** is the premier trade body and the chamber of commerce of the IT software and services industry in India. NASSCOM has projected India's IT-ITES exports to grow from US$23.4bn in FY06 to US$60bn by FY10, a CAGR of 26-27%

Why is India facing a talent shortage?

An uneven education system is among the biggest handicaps

One of the reasons behind the skills shortage is growing demand for labor particularly in the tech and outsourcing sectors as well as in the high growth industries such as retail, civil aviation, finance and engineering. However, a more important reason behind the talent crunch is India's education system, which is creaking under the strain of economic growth. While graduates from the top schools (such as the IITs and IIMs) are suitable for direct employment, the education system is uneven, and a wide variance in the quality of education explains why the average suitability rate for Indian engineers is only 25%. Other handicaps include an uneven quality of primary education and the fact that most of the older generation who worked during the license-raj have not really re-trained. High emigration rates further reduce the supply of suitable graduates from top schools.

Impact of the talent shortage

Wage cost inflation: The shortage in talent has already resulted in wage cost inflation kicking in. Growing demand from multinationals – both in the manufacturing and services sector – has helped bid wages up as these companies search for qualified labor. Although industry-specific data on salary increases in the private sector is not publicly available, reports[9] indicate that a shortage of skilled labor has in fact resulted in wage cost inflation kicking in with salary increases at 22% during 1HFY07, the highest in over three years with the biggest jump coming from service industries, including banks, airlines, IT and telecom companies; where salary bills have risen by 30-50% in just a year.

Why is the wage rise higher in India? According to the Hewitt Global Salary Planning Report, the overall salary increases in India[10] (across ranks) averaged 13.8% over 2005 – the highest among all Asia Pacific countries, followed by Philippines (8.2%) and China (8%). The key reason for higher wage increases in India is the fact that the demand for labour in India is largely coming from the knowledge-led services sector while in China the demand is largely from the manufacturing led blue collar worker.

Problems of retention/attrition: Besides higher wage inflation, the talent shortage has resulted in problems of retention as well as higher attrition. This is more so in the service sector due to the fungibility of skills. For instance, the skill set for customer relations in banks, hotels, hospitals, retail is more or less similar. As a result, while several corporates are in expansion mode, they are finding it difficult to bridge the talent crunch.

Development of new talent centers: A positive offshoot of India's talent crunch is that as wages increase in destinations such as Mumbai, Bangalore and Gurgaon, companies are entering smaller metros such as Hyderabad, Jaipur and Pune where supply of labour exceeds demand. This we believe will be an indirect way of achieving the government's new mantra of "inclusive growth".

[9] Please see http://www.business-standard.com/common/storypage_c.php?leftnm=10&bKeyFlag=BO&autono=264559&chkFlg= for article. More details on the talent shortage are in the India Macroscope, at https://www.citigroupgeo.com/pdf/SZB40750.pdf

[10] The Hewitt Global Salary Planning Report: 2005 & 2006 compiles salary information in 34 countries for (1) Top executives (2) Middle management (3) Professional and supervisory (4) Clerical and administrative; and (5) Manual. The full report is available at http://www.hewittassociates.com/_MetaBasicCMAssetCache_/Assets/Articles/global_salary_planning.pdf

Reversing the talent crunch

While India’s talent crunch has already resulted in wage cost inflation kicking in, we believe that this is only a temporary setback that can be addressed by enhancing the knowledge base and through corporate initiatives

Upgrading the education system

Though India has over 300 universities and 15,600 colleges resulting in 2.5mn graduates a year, which in terms of volume trails just behind the US and China, its quality is far from satisfactory. Though the top schools are comparable to the best in the world, they generate few graduates, while the quality in private colleges is uneven. This we believe is one of the key reasons causing the talent crunch.

Thus a key solution for addressing the talent crunch lies in upgrading the education system, so as to improve not just the *quantity* of graduates but the *quality* as well. This would entail the government developing better certification procedures and insisting on higher standards that would result in a higher turnover of suitable candidates. To this end, de-regulating the higher education system and providing greater autonomy to universities would provide them with greater freedom to develop curricula to meet the needs of industry.

Corporate initiatives

Globally, companies are recognizing the need to garner talent and have developed appropriate recruitment strategies. In India, most IT firms, including Infosys and Tata Consultancy Services have resorted to hiring fresh graduates and training them on the job to bring them up to par with industry standards. In this regard, IT training businesses are also seeing structural changes; with companies such as NIIT profiting from the IT companies’ search for cheaper non-engineering talent.

Other sectors such as aviation and retail are also seeking talent through new means-for instance, Pantaloon Retail funds two-year retail-management courses at two colleges in Bombay and is slated to set up its own retail school. Other organizations, such as Crompton Greaves, Johnson and Johnson, and Mahindra & Mahindra have arrangements with universities to hire students as part of sponsored projects during their period of study.

Other innovative ways to hire suitably skilled labor include web-based recruiting drives, whereby students take on-line tests to qualify for jobs; and partnering with educational institutions to enhance skills.

Government policy

Recognizing the looming talent shortage, the government is making an effort to improve the education system, both at the grassroots level as well as secondary and higher education. For instance, the national program for universal elementary education - *Sarva Shiksha Abhiyan* - initiated in 2001; addresses the needs of 209mn children in the age group of 6-14 years. This has resulted in gross enrollment ratios for the age group increasing from 32.1% in FY51 to nearly 85% currently. As far as higher education is concerned, the government has recently cleared FDI in education, which would allow foreign universities to enter India as deemed universities.Another encouraging development is the setting up of the National Knowledge Commission (NKC) in 2005. The Commission’s mandate is to use knowledge as a key tool for economic development, by promoting excellence in education, science and technology, agriculture, industry, and e-governance; and has been given a three-year time frame (until 2 October 2008) to achieve its objectives. The Commission has also attracted the interest of several corporates, particularly in the fields of IT and biotechnology. Given India's vast untapped talent pool, we believe the NKC will help leverage the country's knowledge base, and also build educational facilities and human capital at the grassroots level.

Improving infrastructure in the emerging talent centers

With companies slowly entering smaller metros where supply of labour exceeds demand, the government would need to build/improve the infrastructure. A McKinsey study[11] stated that in order to enable companies avail untapped pockets of labour supply, the government would need to build airports in less well-known cities and help them with marketing. The study said that companies exploring the second-tier cities could consider telecommuting as a way of gaining access to additional employees and/or offer incentives to get graduates to move.

Role of the diaspora

India's 20mn strong diaspora is also playing a part in mitigating the skills shortage. A NASSCOM survey finds that 68% of Indian executives in America were actively looking for opportunities to return home, which is likely to reverse the brain drain that has already taken place, and help augment the talent pool within the country. The government is taking active measures to allow this diaspora to 'participate in the Indian boom'- such as issuing special visas for Persons of Indian Origin, observing an annual Pravasi Bhartiya Divas, and relaxing norms for investment in India.

The quota issue could see more graduates in premier universities

Earlier this year, the government proposed a move to introduce reservations for Other Backward Classes (OBCs)[12] in central universities. While reservations for OBCs were abolished in private colleges in August 2005, re-visiting the Mandal Committee recommendations[13], the government is now proposing to introduce reservations for OBCs in central government – funded universities such as the IITs and IIMs. We believe this move is regressive and will raise reservations to 27% from 22.5% currently.

To examine this issue, an Oversight Committee (also known as the Moily Committee) was established. The committee report estimates that in order to implement 27% reservations, an expansion in seats to the extent of 54% over three years would be required, for which a package totaling Rs172bn would have to be put into operation.

[11] *'Ensuring India's Offshoring Future'*; by Diana Farrell, Noshir Kaka, and Sascha Sturze ; McKinsey Quarterly; Sept 2005

[12] To explain briefly, castes in India are classified into forward classes (FC), other backward classes (OBCs), scheduled castes (SCs), and scheduled tribes (STs), based on social, historical, and economic criteria. Individuals in each classification might be rich or poor, as class does not necessarily define wealth in today's India. However, the SCs and SCts (collectively known as Dalits), as well as the OBCs, can access affirmative action programs that reserve jobs, scholarships, and other benefits for castes that were historically persecuted or disadvantaged.

[13] OBCs were identified in 1953 under the Kaka Kalelkar Commission; however, they came under the spotlight only in 1978, when the Mandal Commission used 11 criteria to identify 3,743 caste groups as OBCs, comprising 52% of the population at that time. A complete list of OBCs is available at http://www.ncbc.nic.in/

Challenge #3: Need for Inclusive Growth

A third impediment to growth was the need to bridge widening disparities between states…

… given that a significant proportion of population increases going forward would be in states where growth was lagging

WE COMMENTED…

- **Addressing the growing disparity between states would be vital since 60% of the incremental rise in India's population until 2051 is likely to occur in three of the poorest states – Bihar, UP, and MP.**

…AND WHAT HAPPENED

- **With regional disparities becoming a growing concern, the 11th Plan strategy is aimed at resolving the issue.**

Growing state disparities

Among the biggest concerns is the widening gap between states, resulting in growth being concentrated in cluster of states while others are left behind resulting in a divergence in per-capita income. It is reported that, India's ***five poorest states****, home to 40% of its population – account for only 25% of its output; while the* ***five richest states****, home to only a quarter of the population, produce 40% of the output*[14].

Capital flows are similarly concentrated, with half of FDI approvals and 55% of total capital stock going to the five richest states while the five poorest states receive only 15%. As a result, new job opportunities are higher in the rich states resulting in them being generally better at reducing poverty. We believe addressing the growing disparity is going to be vital as 60% of the incremental rise in India's population up until 2051 is likely to occur in three of the poorest states- Bihar, UP, and MP.

Figure 10. Growing Divergence Between India's States – Key Indicators (Rs, %)

Poor States			Middle-Income States			Rich States		
	Per capita Income	% of Pop below poverty line		Per capita Income	% of Pop below poverty line		Per capita Income	% of Pop below poverty line
Bihar	6,327	43.0	Andhra Pradesh	25,526	16.0	Tamil Nadu	25,965	21.0
Uttar Pradesh	11,477	31.0	W Bengal	20,896	27.0	Gujarat	26,979	14.0
Orissa	13,026	47.0	Kerala	27,048	13.0	Haryana	32,712	9.0
Madhya Pradesh	14,626	37.0	Karnataka			Maharashtra	29,204	25.0
Rajasthan	15,673	15.0				Punjab	30,701	6.0

Source: RBI; IMF; 2001 Census

What's behind the uneven growth?

The reason behind poor growth in some states compared with others is institutional rather than structural – as due to federal structure, states' revenue-raising powers do not match their expenditure responsibilities[15]. Besides the inherent problem of dependence on central government transfers, which has led to soft budget constraints and a reliance on bailouts, the situation is further worsened by archaic agricultural polices, labor laws and weak infrastructure.

[14] India is a federation of 29 states and 67 Union Territories. See Mind the Gap- Is Economic Growth in India Leaving some states behind?' ; Catriona Purfield; IMF Working Paper

[15] States undertake over half of govt spending, but account for less than 40% of total receipts. While the center imposes direct taxes, and it taxes goods at the manufacturing level, states tax goods at the point of sale. Major sources of revenue for the states are thus limited to agricultural taxes, sales taxes, excise duties on liquor and motor vehicle taxes, among others. However, states are responsible for implementing spending on a range of services, including power, health, public order, and rural development

Dependence on central government transfers

Fiscal federalism in India

India's fiscal system has been ranked as one of the most decentralized in the world with the centre and state sharing constitutionally defined revenue and expenditure functions. However, as states' revenue-raising powers do not match their expenditure responsibilities, the gap between states' expenditure and revenue inflows is largely bridged by: (1) inter-governmental transfers (sharing of taxes and giving grants); and (2) borrowings. The inter-governmental transfers are largely determined by the Finance Commission (FC) (extent of 65-70%) and the Planning Commission (30-35%). The FC is the body that determines how taxes are shared between the centre and states and also makes grants to states. The grants recommended by the FC made up the shortfall between the states expenditure and post-tax devolution revenues. The Planning Commission which formulates five-year development plans transfers resources for implementing these plans. Plan expenditure is met by plan assistance, borrowings and current revenue balance of states.

The FC is a body of five experts constituted by the president every five years that makes recommendations for the devolution of tax revenues to states, and suggests measures to raise revenue collections

As seen in the table below, states with greater access to central government transfers tend to have higher deficits as the link between revenue and expenditure is broken. This in turn leads to an increase in the debt burden and expectations of bailouts. Moreover, when funds available from bail-outs are limited, social sector spending takes a hit resulting in lower human development indicators in poorer states.

Figure 11. Indian States - Key Indicators

	Gross Fiscal Deficit (% to GSDP)	Revenue Deficit	Total Debt (Rs Bils.)	GTransfers from Centre (Rs Bils.)	Per Capita NDP* (Rs)	Population (Mils.)	Literacy Rate (%)	% Below Poverty Line
Andhra Pradesh	3.9	0.5	914	149	25,526	75.7	61.0	16.0
Arunachal Pradesh	12.4	-8.0	20	18	17,393	1.1	54.0	34.0
Assam	6.5	0.7	191	96	14,523	26.6	63.0	36.0
Bihar	8.3	0.3	549	160	6,327	82.9	47.0	43.0
Chhattisgarh	3.0	-1.8	150	44	14,863	20.8	65.0	–
Goa	6.1	0.6	59	6	58,677	1.3	82.0	4.0
Gujarat	3.2	0.2	861	57	26,979	50.6	69.0	14.0
Haryana	2.0	0.7	299	22	32,712	21.1	68.0	9.0
Himachal Pradesh	4.2	0.4	184	43	30,139	6.1	77.0	8.0
Jammu and Kashmir	6.9	-7.9	150	102	16,126	10.1	56.0	4.0
Jharkhand	10.2	3.2	231	50	8,025	26.9	54.0	–
Karnataka	2.9	-0.7	539	96	21,696	52.7	67.0	20.0
Kerala	5.3	4.0	577	66	27,048	31.8	91.0	13.0
Madhya Pradesh	4.0	0.0	535	108	14,626	60.4	64.0	37.0
Maharashtra	3.9	0.3	1,546	106	29,204	96.8	77.0	25.0
Manipur	7.4	-11.2	33	22	14,766	2.4	71.0	29.0
Meghalaya	3.8	-2.3	28	21	19,572	2.3	63.0	34.0
Mizoram	10.0	-5.5	31	15	22,207	0.9	89.0	20.0
Nagaland	3.5	-5.6	29	24	20,746	2.0	67.0	33.0
Orissa	2.2	0.8	394	85	13,026	36.7	63.0	47.0
Punjab	3.7	1.7	576	42	30,701	24.3	70.0	6.0
Rajasthan	5.0	0.7	727	101	15,673	56.5	60.0	15.0
Sikkim	16.2	-11.6	16	10	24,115	0.5	69.0	37.0
Tamil Nadu	2.6	0.2	687	96	25,965	62.1	74.0	21.0
Tripura	5.8	-5.9	50	27	18,676	3.2	73.0	34.0
Uttaranchal	10.4	1.8	152	46	16,528	8.5	72.0	–
Uttar Pradesh	5.1	1.2	1,614	269	11,477	166.1	56.0	31.0
West Bengal	4.9	3.8	1,262	110	20,896	80.2	69.0	27.0
NCT Delhi	1.5	-2.6	183	-12	51,664	13.8	82.0	8.0
All States	**3.2**	**0.5**	**12,587**	**1,979**	**23,241**	**1,027.0**	**65.0**	**26.1**

* Latest available. Source: RBI Report on State Finances 2006-07, 2001 Census

Reforms are encouraging

Fiscal measures

Gap-filling grants that are largely unconditional, coupled with a fixed grant-loan ratio of 30:70 has resulted in a steady deterioration of state finances since states increasingly ignored budget constraints and relied instead on frequent bailouts with the deficit in FY02 touching a high of 9.9%..

Following this, the government set up the Twelfth Finance Commission (TFC). TFC recommendations stipulated the passing of the Fiscal Responsibility and Budget Management Act (FRBM)[16], which subjects states to greater market discipline, and rewards them for fiscal consolidation targets.

Education

Government efforts toward improving education have been encouraging, with key initiatives towards both elementary (*Sarva Siksha Abhiyan* – a comprehensive program that aims to provide elementary education for all is a major initiative) as well as higher education. As a result, literacy rates have seen a significant jump, from 18.3% in 1951 to 64.8% in 2001. However, this continues to be below par, with higher rates in several other developing countries such as China (86%) and Sri Lanka (92%). Even more concerning are growing inconsistencies in educational parameters across states. While the southern states have performed well, the larger northern and eastern states continue to be laggards. For instance, the southern states account for just 0.6mn out-of-school children, while the northern states together account for 3.5mn out-of-school children. Reports[17] suggest that disparities are due to low levels of investment and the 'higher per capita' effort required for the larger states. Even within states, government funding has been uneven for urban and rural areas. We believe these discrepancies are a cause for concern and need to be addressed.

Health

Over the past few years, the government has taken major steps to increase health spending. The National Health Policy, 2002, addresses all aspects of healthcare and aims to increase public spending on health. However, health indicators remain weak. The World Health Organization (WHO) reports that India has just seven hospital beds per 10,000 people, compared with 23 in China, and 33 in the US. Due to a burgeoning population, the density of physicians per 1000 people is also low – just 0.6 as compared with nearly three in the US. Similar to other social sector parameters – healthcare systems are better in the southern states, which is reflected in lower infant mortality rates and a higher number of professionals; while the northern states are lagging behind. For instance, Tamil Nadu has 4.3 healthcare professionals per 1000 people, while Bihar and Jharkhand have just 0.5 professionals. While the skewed distribution is a cause for concern, the National Rural Health Mission (NHRM), launched in April 2005 is encouraging since it aims to strengthen primary healthcare for the rural population, with a special focus on 18 states that have particularly weak health indicators.

[16] The Fiscal Responsibility and the Budget Management Act (FRBM), passed in 2004, mandates annual reductions in the central government's fiscal deficit to 3% of GDP by 2009 and aims to eliminate the revenue deficit completely by then.

[17] Economic Times; 21 December 2006- *Regional Disparities*

Challenge #4: How Real is the Naxalite/Maoist Threat

A final challenge that we considered was the growing threat from Naxalite forces

Unless controlled, we anticipated the Maoist insurgency to be a major threat to investment activity

WE EXPECTED…

➤ **That the Naxalite insurgency, if not adequately restrained, could be a threat to the country's law and order situation, resulting in deteriorating governance and undermining investment activity.**

…AND WHAT HAPPENED

➤ **While we stated that the odds of it getting out of hand are limited given the government's resolve to address the Naxalite issue, we have been proven wrong. Recent events in Nandigram, coupled with several incidents of violence in Jharkhand and Chattisgarh, suggest that the movement remains a threat to investments.**

Naxalites in India

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 labourers and tribal people against landlords and their agents which include the government, forest contractors etc.

Inception of the Naxalite Movement

The Naxalbari uprising

The Naxalite Movement is a revolutionary communist opposition that took shape in early 1967, inspired by the Chinese Communist Party and Mao Zedong thought. It derived its name from an uprising in Naxalbari – a village in the Darjeeling district in West Bengal. The Naxalbari Uprising[18] was led by Charu Mazumdar and Kanu Sanyal; two leaders of the Communist Party of India (Marxist); or the CPI (M) who broke away from the parent CPI (M) and along with others formed the **CPI (Marxist-Leninist**). This became the principal organization of the movement, advocating guerilla warfare for the purpose of *'class annihilation with the aim of establishing a communist regime'*.

Formation of the MCC and the PWG

Following Mazumdar's death in 1972, the movement was fragmented into several small groups and lost its impetus. Two of these groups- the Maoist Communist Centre **(MCC)** in Bihar, and the People's War Group **(PWG)** in Andhra Pradesh, assumed importance. Both thrived in underdeveloped areas where there existed class segregation between rich landowners and landless tribals; and organized the poor on demands for higher wages, and redistribution of land; targeting landlords, politicians, police officers, and forest contractors. Their strategy entailed '*building up bases in rural and remote areas and transforming them first into guerrilla zones and then as liberated zones'*.

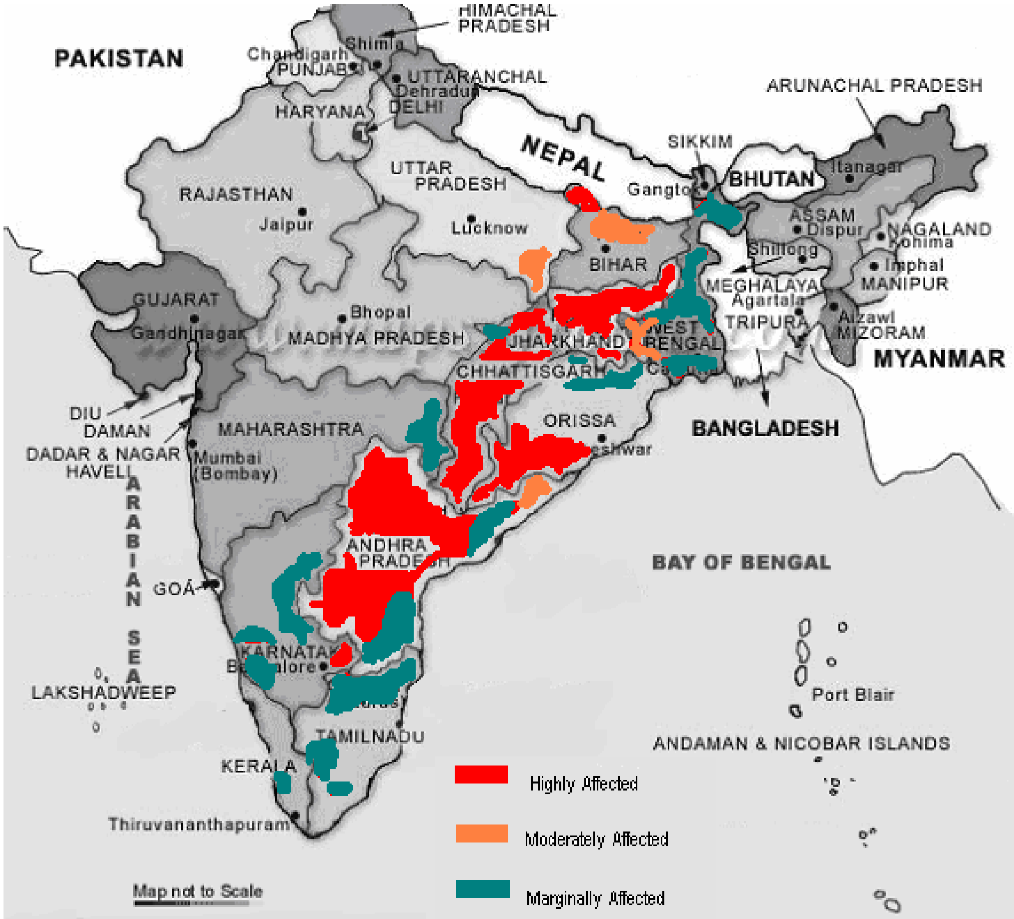
[18] The Uprising began the 'land-to-tiller' slogan and occurred when landless peasants backed by the CPI(Marxist) led an armed protest against landlords

The Naxalite Movement today

Consolidation of the MCC and PWG: The CPI (Maoist)

In **September 2004**, the MCC and PWG merged to form the **CPI (Maoist)**[19], which is the largest Naxalite group in India. Together with other smaller organizations, the Naxalites have succeeded in establishing rule over a large geographical stretch known as the ***'red corridor'***, across central India from Nepal in the north to Karnataka in the south, and including Andhra Pradesh, Chattisgarh, W Bengal, and parts of Orissa. The Naxalites are most well-entrenched in the Dandakaranya region in the state of Chattisgarh, where they have established a government of their own- the *Janatana Sarkar*. The Maoists continue to perpetrate grave acts of violence, with the number of fatalities in Naxalite-related incidents rising to 628 in the 9 months to October 2006.

Figure 12. The Red Corridor: Spread of the Maoist Movement in India


HIMACHAL PRADESH
PAKISTAN
Chandigarh
Shimla
PUNJAB
UTTARANCHAL
Dehradun
DELHI
HARYANA
ARUNACHAL PRADESH
NEPAL
SIKKIM
Itanagar
BHUTAN
UTTAR PRADESH
Gangtok
RAJASTHAN
Jaipur
Lucknow
ASSAM
Dispur
NAGALAND
Kohima
Shillong
BIHAR
Imphal
MANIPUR
MEGHALAYA
Agartala
GUJARAT
Bhopal
TRIPURA
Aizawl
MIZORAM
Gandhinagar
MADHYA PRADESH
JHARKHAND
WEST BENGAL
MYANMAR
CHHATTISGARH
DIU
DAMAN
MAHARASHTRA
ORISSA
BANGLADESH
DADAR & NAGAR HAVELI
Mumbai (Bombay)
ARABIAN SEA
ANDHRA PRADESH
BAY OF BENGAL
GOA
KARNATAKA
Bangalore
LAKSHADWEEP
Port Blair
TAMILNADU
ANDAMAN & NICOBAR ISLANDS
KERALA
🟥 Highly Affected
🟧 Moderately Affected
🟦 Marginally Affected
Thiruvananthapuram
Map not to Scale

Source: Institute for Conflict Management; The Economist

Can the Maoist Movement impact investment activity?

The Naxal problem extends to 165 districts in 14 states covering close to 40% of the country's geographical area and affecting 35% of the population. Given that the Naxalite movement has spread to the mineral-rich states of Orissa, Chhattisgarh, Jharkhand, and slowly even around the districts in Bangalore, its economic impact could be far-reaching.

[19] Reports suggest that there exist fraternal and logistic links with the Communist Party of Nepal (Maoists) and the CPI (Maoists).

Orissa, which has abundant reserves of iron ore (33% of the country's total reserves), 51% of bauxite, 25% of coal, and alumina, is the destination for a large number of the country's steel and aluminum plants (including NALCO and others). With major projects[20] totaling over Rs2,509bn, and several major companies including Posco and Vedanta proposing to set up plants in the state, naxalite disturbances remain a major threat.

In Chhattisgarh, home to India's richest reserves of iron ore, coal, limestone and bauxite - where investments for steel and power total are estimated at Rs130bn, the Naxalite campaign against industrialization remains a looming risk. Reports suggest that the Maoists have also issued a direct threat to multinational corporations, and view hi-tech industries as a 'symptom of an oppressive capitalist system'.

Government measures

While a number of rival groups- such as the Ranvir Sena and the Salwa Judum[21] have sprung up to tackle the Naxalite threat, these are equally militant in their approach. Government measures have primarily aimed at stepping up security related expenditure (in FY06, Rs200mn was released to nine Naxalite-impacted states) and strengthening the police force. As a grassroots initiative, the government also aims to improve the physical and social infrastructure in backward areas under the Backward Districts Initiative.

While the threat of the Naxalite movement in India cannot be dismissed, we believe the government's recognition of the gravity of the situation, coupled with adequate measures to address the issue should restrain its spread. However, the movement could impose a threat to governance and could hinder investment flows (particularly FDI flows) if not restricted in time.

[20] Based on report in Economic Times, dated August 5, 2006 –"Hype or Opportunity". Figure includes projects by Reliance, Posco, Arcelor-Mittal, amongst others.

[21] It is reported that the Chattisgarh government has raised the Salwa Judam which is supported by both the Congress and the BJP

Logistics – Cold Chain, Hot Stuff

With food retailing ventures continuing to mushroom across the country, on the 20th of February we envisioned emerging opportunities for the logistics sector

We saw particularly bright prospects for the cold chain and air cargo segments

WE EXPECTED…

- **That with food retailing emerging as a key growth driver for organised retail, there would be growing opportunities for the logistics sector, especially in the cold chain and air cargo segment.**

…AND WHAT HAPPENED

- **Gearing up for the challenge of organized retail, several airlines are adding cargo capacity, while logistics companies such as Gateway Distriparks, GATI, Gateway Distriparks, Allcargo, and Transport Corporation of India are all increasing investments to meet emerging demand.**

Food Retail – A key driver of organized retail in India

Though organized retail in India still accounts for less than 4% of total retail sales, the growing proportion of young population in the workforce coupled with positive income demographics has resulted in changing consumption habits and spending patterns, and fuelled a retail revolution in India.

As a retail boom sweeps the country, given that India is the third-largest producer of food in India, food retailing is fast becoming a key driver for growth in organized retail. Currently though food products comprise close to 45% of consumption expenditure, food forms around 20% of organized retail. Moreover, the level of food processing remains low – just 2% of total produce of fruits and vegetables – as compared with 80% in USA, 70% in France, and 30% in Malaysia. This indicates the vast untapped potential that India has in this sector[22]. What makes the sector even more attractive are supportive government policies as food processing has been accorded high priority by the government with the aim of increasing the level of food processing from 2% currently to 10% by 2010 and 25% by 2025.

Corporate Forays in the Food Retail Business

Given that the food industry has favorable demand and supply dynamics, a number of corporates have been making forays into this segment as the rural market provides a vast customer base, with immense latent potential. On the supply side as well, corporates are increasingly using various experiments to link the rural sector, particularly as far as food retail is concerned. Widely-known initiatives include ITC's E-Choupal; Reliance Retail's chain of 'Fresh' stores, Bharti, DCM Shriram, Godrej Agrovet etc[23]. The common thread between these models is the effective elimination of the middle-man, encouraging price-transparency, and an attempt to bring the rural market into the retail fold.

[22] The Min of Food Processing estimates mkt size of this industry to treble, from Rs4600bn currently to Rs13500bn by 2015. For more details on the food processing industry in India, please see "*India in 2006- Maintaining the Momentum*", dated 9 January 2006.

[23] For instance, **Reliance's** model is a 'farm-to-fork' one, whereby the company will use its multi-format retail stores to sell vegetables and fruits sourced from farmers through the company's agri hubs. **The Bharti Group**, which has tied up with Wal-Mart and Rothschild-owned Field Fresh stores, has a model that is based on leasing farm land, that produce vegetables for export purposes. Other corporates such as **DCM Shriram and Godrej Agrovet** are one-stop shops' for farmers and their communities

Logistics – A Key Challenge for Food Retail

Although the potential for growth is immense, a key obstacle facing corporate forays into food retailing and the food processing industry remains the long supply chain. With the modern retail format still in its nascent stages, marketing and distribution of products is through the unorganized sector, which has resulted in a fragmented supply chain and a weak link between producers and consumers.

Poor infrastructure in this space – transportation[24]; warehousing and cold chain facilities - is an even more acute problem, particularly since agricultural produce is seasonal and perishable in nature. Studies estimate that of the global supply chain and logistics market of US$3trn, India's market size is just US$50bn each year. Poor logistics have resulted in a huge wastage of agricultural products currently estimated at 25% of total produce. All of this indicates significant potential for organized logistics players in food retail.

Cold Chain Logistics – The Crucial Link

The cold chain is an integral part of the logistics system[25] of any supply chain, which provides facilities for maintaining ideal storage conditions for perishables from the point of production to the point of consumption in the food supply chain. A well-organized cold chain generally comprises of pre-cooling facilities, cold storages, refrigerated carriers; involves packaging and warehouse management, and also allows for traceability[26].

Currently, cold chain facilities in India cater to less than 10% of total produce – most of these products are those who can bear the price such as ice-creams, meat and sea food. Moreover, there is not a single complete cold chain solution provider in the market, since the absence of reefer containers and high power costs pose as an impediment.

How corporates are tackling the logistics issue

Given the absence of distribution networks, there is immense potential for organized logistics players, particularly regional transport companies and third-party logistics players. While several large-scale retailers – such as Reliance – handle their own logistics, other players are tying up with third-party providers.

Key players in the cold chain logistics space, include Concor and Gateway Distriparks both of which are already ramping up capacity in anticipation of greater demand from food retailers[27]. Although the industry is currently fragmented, we are likely to see greater consolidation amongst organized players as competition develops.

[24] A common problem in India is that drivers of vehicles switch off chilling systems in order to save on fuel costs; and thus increase their profit margins.

[25] The **hub and spoke system** is a key logistics pattern; whereby shipment is delivered first to a primary hub and then transported to the final destination by rail, road, or inland waterway. It may be either an **hourglass** (shipment comes from one region, accumulates at a hub, and is then diversified in the opposite region) or **hinterland** system(uses spokes to feed the hub and consolidate for long-haul routes)

[26] From N Vishwanandham, "*Can India be the Food Basket for the World*" ISB Working Paper

[27] Several players are ramping up capacity. Eg- **GATI** is opening hi-tech warehousing and distribution facilities in 23 locations across the country, **CONCOR** has recently tied up with the Transport Corp of India to provide rail-road logistics and warehousing facilities, and **Gateway Distriparks** has acquired a majority stake in Snowman Frozen Foods to get a leg-up in their cold chain logistics business

What more needs to be done and what are the benefits?

Measures so far are encouraging but there is need for more reforms

In a bid to encourage investments in cold chain infrastructure, the government has allowed 100% FDI for the sector. This includes coolers, warehouses, carriers, refrigerated trucks, etc. The rationalization of tonnage tax and the move towards VAT is also encouraging for third-party providers. Given that transportation accounts for 40% of total logistics expenses, infrastructure development of roads and highways is a major positive for the sector.

Need for further reforms

While measures so far are encouraging, what would give the industry an additional fillip are amendments to the Agricultural Produce Marketing Commission Act as currently the Act doesn't allow processing units to store fruits and vegetables for more than a month. In addition, given that cold storage industry is capital intensive and that food processing is at a nascent stage – fiscal incentives for the cold chain setups such as lower excise tariffs on refrigerated trucks, carriers etc. would help.

Who are the beneficiaries of this story?

Macro Benefits:

1. **Export competitiveness**: Although India is among the biggest producers of food products in the world, agri products comprise less than 10% of its total exports. With an increasing number of organized retailers putting in place an advanced logistics system, the competitiveness of export products is likely to increase.

2. **Employment via Food Processing and Retail:** Besides minimizing wastages of agricultural produce and enhancing food quality, the development of the logistics sector will provide a fillip to the food processing and retail industries – both of which are employment-intensive industries. More importantly, the jobs created require high school or college graduates, of whom India has abundance.

Logistic Plays:

Logistic Plays: Our Logisitics analyst believes that besides Concor and Gateway Distriparks, who have made forays in the cold chain space, other beneficiaries in the logistics space include GATI, Gateway Distriparks, Allcargo, and Transport Corporation of India – all of who are increasing investments to meet the emerging demand.

Cargo Industry: While cold chains are just one segment of the logistics chain, there are several other facets that are also attracting interest, including cargo and freight services. Most of the domestic players – such as Jet Airways, Kingfisher, Air Deccan, etc. plan to enter this space. Moreover, there is an increase in demand for cargo aircraft from those retailers who are handling their own logistics- such as Reliance, the Tata Group, Bharti, and the Future Group aircraft as that would enable them to backward integrate their supply chain logistics

Weighing the Odds of Possible Global Developments on India

A sell-off in global markets led us to revisit our assumptions on the 13th of March

We outlined a doomsday scenario, weighing the odds of possible global developments on India

WE EXPECTED…

➤ **That in a worse-case scenario of a US slowdown and lower growth in China, India would not be considerably impacted given the relatively closed nature of the economy. However, given that the Indian corporate sector has been party to the carry-trade game, it could be impacted if the yen appreciated significantly.**

…AND WHAT HAPPENED

➤ **While the jury is still out on the likelihood of a US recession, domestic growth has remained relatively buoyant. However, flows into emerging markets have increased post the Fed cut, resulting in Indian regulators coming out with various measures to stem inflows.**

Scenario #1: The US economy slows down

Base Case – Positive: Our US economists expect growth to come in at 2.7% in 2007 marginally lower than its 3% long-term potential growth[28]. As regards concerns on sub-prime delinquencies, our US economists believe that they are unlikely to trigger a general credit tightening that increases the risk of an economic downturn.[29]

Market – Divided: However, the market is divided on the outlook and recent comments from former Fed chairman- Alan Greenspan- coupled with weak data have fuelled further conjectures of a possible slowdown.

What if?

While there are arguments which talk about “Switching Engines” in the world economy, as well as the growing importance of “intra-regional trade”; given that the US economy comprises 28% of world GDP, and 12.5% of world trade, we believe a slowdown could take its toll on trade, investment flows, exchange and commodity price movements. However, the extent would depend on the openness and policy flexibility of an economy.

Thus in the case of India, given that the economy is largely a domestically-driven one, with domestic consumption accounting for nearly 70% of GDP, the impact of a 1% reduction in US growth from the base case would have the smallest impact on GDP growth as compared to the region. This takes into account the rising share of trade (including software) from less than 14% of GDP to close to 20% currently.

[28] **US GDP Growth:** The 2.7% GDP estimate for 2007 incorporates the recent 6% decline in orders – the biggest in three years and 2.7% fall in shipments – the fourth in five consecutive months; both of which can be attributed to the recent softening in investment in the face of an uncertain housing outlook. However, our US team believes that the US expansion is weathering the housing downturn, buoyed by a temporary lift from lower energy bills and the effect of strong profits on job growth

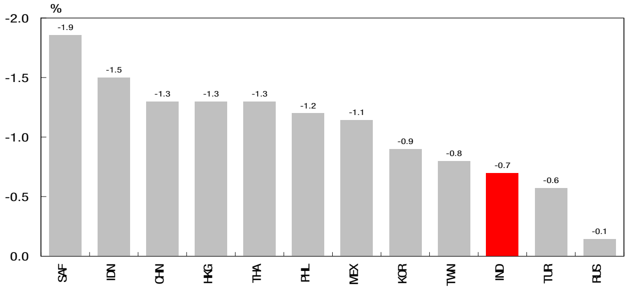
[29] **Sub-prime delinquencies:** Our US team says that rising loan delinquencies at this point of the interest rate cycle are not surprising and are a **lagging**, not leading, indicator. Higher interest rates always have a more pronounced impact on marginal credits given the more limited ability of those borrowers to repay obligations. This cycle’s spike in late payments to date is consistent with the 425bp increase in short rates More over, this is unlikely to weaken the balance sheets of major intermediaries, as sub-prime mortgages comprise only 8% of the total mortgage market

Examining the sectors- we see a few areas that are likely to be impacted given their dependence on exports to the US: gems and jewelry, textiles, and software exports.

While the impact on growth and exports can be quantified, the impact on currency and capital flows is not as clear. The reason is that despite India being a domestic-driven economy with strong macro fundamentals, in times of an increase in risk aversion, countries with twin deficits, inflation and political challenges tend to be viewed with caution. In addition, a lot would also depend on monetary policy responses (both of the Fed and the RBI) as asset re-allocation could result in inducing capital flows to those countries where interest rates are higher.

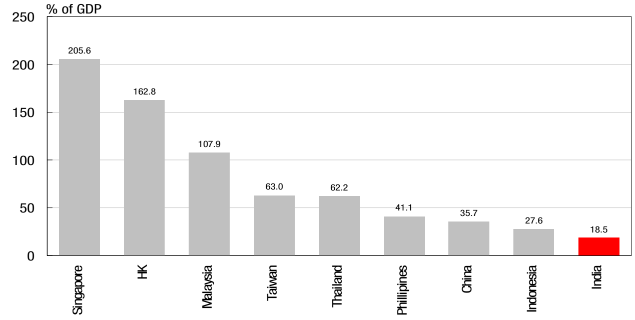
While there may be near-term volatility, we believe that given India's strong external position – a result of the high forex reserves (US$195bn), the size and composition of its current account deficit (currently at 1.9% of GDP, with close to 70% of the imports being investment oriented), and strong capital flows (as reflected in the scale change in FDI v/s portfolio), the long-term rupee appreciation story still holds.

Figure 13. Impact of a 1% Slow-Down in the US economy (% Change from Base)



Source: Oxford Economic Forecasting

Figure 14. Share of Exports as a % of GDP



Source: CEIC Data Company

Scenario #2: The China Factor

The 9% drop in the A-Share Shanghai Index[30] on February 27, which sent ripples throughout global equity markets, is the first time that China's global influence extended from the real economy to the financial markets. While our Asian Regional Economist – Yiping Huang – believes that China's influence is likely to increase as the Chinese economy grows and its capital markets open up, he says that barring major policy mistakes, China's economy and markets show no immediate risks and that the economy should perform strongly and policies should stay accommodative.

What if?

While our China team estimates that growth should continue in the 10% range, and that real interest rates are likely to remain negative given that Chinese monetary policy is restricted by its unwillingness to see a fast currency appreciation, investors are concerned on the impact of lower growth led due to: (1) a possibility of tightening in policy on the back of overheating concerns, which could slow down investment; and (2) slower export growth due to a moderation in growth in the US. Analysing the impact of lower Chinese growth on India, we find that though India's

[30] **Chinese Stock Market:** China's A-share market plunged 9% on speculation that the CSRC Chairman was leaving, a potential interest rate hike, and potential implementation of capital gains tax

exports to China have risen over *twelve times* since FY00, as a percentage of total exports, the share remains low at 6.5%. What is important to note is that a significant chunk of these exports comprise commodities- such as iron-ore and alumina, which have benefited from the ongoing investment expansion in China. Thus, in the event of a slowdown, one could see a pull-back in exports of these commodities.

Scenario #3: The Yen Appreciates Further

Among the many triggers that led to re-pricing of risk, and consequently the significant sell-off, was the appreciation in the yen, which resulted in a partial unwinding of the carry trade[31]. The BoJ raised its policy rate by 25bps to 50bps on February 21. While the yen carry still trade remained attractive, the key point to note is that the BOJ raised short-term rates to 0.50% at a time core inflation dropped back to zero. This implied a notable increase in real short-term interest rates in Japan after a long time. Consequently, highly leveraged investors who had borrowed low-interest yen to finance higher interest rate assets were forced to offload assets to repay yen loans, thereby creating a vicious cycle of falling asset prices.

What if?

If we see a significant appreciation in the yen, besides the impact of leveraged investors offloading high yielding assets to repay yen loans, which would result in capital outflows (thus impacting stocks and the INR), the Indian corporate sector has also been a party to the carry-trade game – directly via taking ECB/trade credit in JPY as well as via the derivative route (taking INR loans and converting them synthetically in Yen). However, two caveats to this are: (1) to the extent that the rupee doesn’t weaken more than the interest differential, the JPY credit benefits the borrower; and (2) anecdotal evidence indicates that most of these deals were done at USD/Yen level of 110-115.

Conclusion

Unlike the May 2005 sell-off, the current correction resulted in a correction across all markets and all asset classes. India too was affected, but relatively less so (stock markets correcting 14% since the high of 14652 and the rupee falling to Rs44.64). An important factor that could support optimism on India is that its growth story is domestic-oriented, which provides better insurance (than many other Asian neighbors have) at a time if/when global growth begins to moderate. This, combined with its relatively sound external position, should help sustain investor confidence

[31] **Yen Carry Trade:** The carry trade involves borrowing in a low interest rate currency (eg the yen, Swiss franc) and investing the proceeds in higher interest rate assets keeping the exchange risk open. It is profitable as long as the yen does not appreciate against the invested currency more than the interest differential.

Overheating and Growth Potential

Faced with classic symptoms of overheating, the 19th of April found us concerned about the India's future growth potential

We concluded that as supply constraints eased and productivity improved, India could lift growth to 10% levels

WE EXPECTED…

- **That although rising inflation, current account deficit, higher asset prices, wage pressures and infrastructure bottlenecks were classic symptoms of "overheating"; India would continue to lift its growth potential to 10%, as it did from 6% to 8% in the past.**
- **However, to achieve this, India would need to make more investments and implement further reforms to ease supply constraints and promote faster productivity growth.**

…AND WHAT HAPPENED

- **Whilst macroeconomic issues of creeping inflation and higher asset prices have been addressed through monetary/fiscal measures, the government has recognized the need for infrastructure development and human resource improvement to move on to a higher growth path and is tackling these issues separately through policy initiatives.**

Yes, The Indian economy is overheating…

The issue of overheating in the Indian context was first raised by the RBI in its October 31, 2006 policy where it defined an overheating economy as one that "is growing so rapidly that its *productive capacity cannot keep pace with resulting demand pressures"*. While noting that potential output in India is difficult to ascertain given the underemployment of resources and the current structural transformation in the economy, its stance on overheating turned amber in December – when inflation as measured by the WPI crossed its comfort level of 5.5%.

The classic symptoms of overheating

The two classic symptoms of overheating are a rise in (1) Inflation and (2) the Current A/c Deficit (CAD). And yes, India is experiencing both – inflation as measured by the WPI rose from 4% levels in the beginning of FY07 to touch a high of 6.73% in Feb07, while the current account has witnessed a complete turnaround since FY04 – when it was in a *surplus* of US$14bn, to FY07, where we expect it to come in at a *deficit* of US$14.6bn (-1.6% of GDP). Other variables include escalating asset prices, wage pressures and tightening infrastructure bottlenecks – all of which suggest that the Indian economy is overheating.

…But its growth potential appears to be rising

The overheating symptoms are an indication that, in the near term, India's pace of growth is hitting a speed limit. The good news for India is that continued economic reforms and investments may over time, ease overstretched resource constraints. This should help lift India's growth potential to 10% in the near future, just as it successfully lifted its growth potential from 4.5% in the 1980s to 6% in the 1990s and 8% levels currently. Faster growth during 1993-04 was mainly attributable to two important factors – more rapid accumulation of physical capital stocks (growth at 1.8% in 1993-04 compared with 1.0% in 1978-93) and stronger total factor productivity growth (2.3% compared with 1.1% previously).[32]

Conceptually, overheating and growth potential are two closely related terms. Growth potential refers to the pace of sustainable growth without causing persistent inflationary pressures. If actual growth exceeds the potential, the economy exhibits symptoms of overheating – high inflation, asset price bubbles and a shortage of resource supplies. However, growth potential may shift higher over time if resource constraints are eased via policy reforms and investment bridge capacity constraints.

Thus, despite current symptoms of overheating, we firmly believe that the Indian economy is moving toward higher levels of growth potential, perhaps around 10%. But, in order for India to climb to a higher level of growth potential, it needs to make substantial policy effort to remove the remaining barriers to ensure faster growth of production factors(labor, skill/education, capital, land) as well as productivity.

Further reforms and investment are key to lifting growth potential

While strong investment demand is an important contributing factor to today's overheating problem, ongoing investments – both in corporate capex as well as infrastructure – will eventually raise supply capacities and ease bottlenecks. But, clearly more needs to be done and at a quicker pace.

The rise in labor costs, especially those of unskilled labor, appears odd, given India's abundant labor force. The reason, perhaps, lies in labor market rigidities, which is yet another barrier for India's move to a higher growth potential. The Chinese experience suggests that migration of farmers to non-agricultural activities, through development of labor-intensive urban sectors, was a key contributor to the extraordinary 4% total factor productivity gain during the past 30 years. While a rapid increase in cost of skilled labor in India is less surprising and points to the potential limit of the current growth model, the government and the corporate sector have been making efforts in easing this constraint, though admittedly the accumulation of skills takes time.

While market-oriented reforms and an open-door policy were key reasons for India's ascendancy in the world economy during the past decade or two, to move the economy to the next level of growth, further reforms to promote productivity growth are necessary. These include better macroeconomic management and greater reduction of transaction costs for businesses and investors.

The IMF[33] points out that at 1.5% of GDP, the CAD is manageable given India's low trade openness, high reserves and the fact that external commercial borrowings are subject to quantitative, term and end-use restrictions.

Examining current concerns on the current account, money supply and inflation

Current Account: While India's CAD deficit is a cause of concern, its magnitude, below 2% of GDP, still looks modest and thus poses little near-term risk to the growth outlook. For now, capital inflows appear sufficient in financing the deficit. As the deficit is largely caused by imports of capital goods and industrial materials, it could actually help increase domestic supply capacity going forward. The real question is the trend of the current account balance. If it can help boost exports and

[32] Barry Bosworth and Susan M. Collins, 2007, "Accounting for growth: Comparing China and India", Working Paper 12943, National Bureau of Economic Research, Cambridge MA.
[33] IMF India: 2006 Article IV Consultation - Published February 2007

generate revenues, then the deficit will decline over time, else it may be a challenge for macroeconomic stability.

Credit and money supply: Rapid growth of both credit and money supply has been another major concern for policymakers and investors. There are probably special reasons why monetary growth accelerated recently, including the increasing shift from buying government securities to making commercial loans by the banks, coupled with financial deepening – a consequence of the ongoing structural transformation and higher growth trajectory that India has embarked upon. But overall, it is clear that the monetary variables are growing too rapid to real output.

Inflation: The rise in inflation is yet another concern. However, excluding base metal prices, inflation has largely been due to primary/food products. Trends in prices, as measured by the WPI, rose from 4% levels in the beginning of FY07 touching a high of 6.73% in Feb07, largely driven by primary products – a rise in prices of wheat, edible oils, pulses. This is corroborated by trends in the CPI where primary articles comprise over 60% of the index. The CPI for industrial workers rose from 5% in April to a high of 7.6% while the CPI for rural labor has risen even higher to touch 9.5%.

Interesting to note, the IMF's recently concluded Article IV consultation report while not ruling out the possibility, succinctly summarizes the situation: "*Reading inflationary pressures is complicated by uncertainties about the extent to which credit and output buoyancy reflect financial deepening and rising productivity, rather than overheating*".

Policy response to overheating and impact on growth

The RBI has been tightening policy since October 2004. The reverse repo (borrowing rate) has been increased from 4.5% to 6% with two hikes coming in FY07, while the repo rate (lending rate) has been raised from 6% in October 2005 to 7.75% with five of the seven hikes taking place in FY07. In addition, it started using the CRR in Dec06 and since then has increased it by 150bps to 6.5%. We expect RBI to implement one more rate hike in the coming months.

The RBI is likely 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 has possibly finally reconciled to an appreciating rupee (the INR has appreciated by close to 5% since March 2007); which in turn would reduce sterilization giving it greater freedom to target money supply, credit growth and inflation. The RBI has also taken several prudent measures in raising risk weights and tightening norms in areas of high growth – real estate, housing etc. This coupled with greater supervision has resulted in financial indicators, e.g., NPLs still favorable.

Near-term downside risks to growth outlook

While we are currently retaining our FY08 estimate of growth sustaining around 9%, with 5 of the 7 repo rate hikes taking place in the last nine months, near-term outlook is clouded and much further tightening poses downside risks to our forecasts.

India's Growing Luxury and Wellness Industry

On the 15th of June, the onset of a languorous summer, we viewed conspicuous consumption as a retail opportunity

As incomes spiraled, we found Indians were willing to spend big, making the country a top destination for luxury goods retailers

WE EXPECTED…

- **That as incomes in India witnessed rapid growth, patterns of consumption would see a shift from spend on necessities to a growing share of discretionary items and luxury products[34] as well as 'well-being assets'.**

…AND WHAT HAPPENED

- **Home to a growing number of millionaires, India appears to be the next big destination for luxury retail, with international players such as Gucci, Mont Blanc and LVMH foraying into the country. The segment has also been a top pick for many private equity players.**

India's retail revolution – well on track

In our year ahead piece "India in 2005 – Positive Base Case; Presenting Scenario Analysis", we discussed a couple of themes including the retail boom that were likely to drive growth. The story is now well-known - growing urbanisation, positive income and age demographics, changing consumption habits and spending patterns have all fuelled a retail boom in the country. Though the share of organised retail in total has risen from barely 2% in 2004 to close to 5% today, low penetration coupled with continuing rise in disposable income (as per Hewitt estimates, average wage increase in India has been over 14% for the last three consecutive years) bodes well for continued growth in this sector. Interestingly, India's retail boom appears to be spanning across both ends of the spectrum - with the trickle-down impact to the rural segment being as strong as the growing demand for niche products. In this month's macroscope, we look at a miniscule but rapidly growing segment within the retail framework i.e., the luxury and wellness industry and its impact on the economy.

Plutonomy characteristics – slowly being seen in India

Plutonomy, a term coined by our strategists in 2005[35], is defined as an economy where growth is powered by and largely consumed by a wealthy few. In simple terms, rich consumers that are few in number but comprise a disproportionate share of total income and consumption, drive spending. The report cites six key drivers of plutonomy: (1) an ongoing technology/biotechnology revolution, (2) capitalist-friendly governments and tax regimes, (3) globalization that re-arranges global supply chains with mobile well-capitalized elites and immigrants, (4) greater financial complexity and innovation, (5) the rule of law, and (6) patent protection.

While the US, UK and Canada are world leaders in plutonomy, Japan, Scandinavia, France, Germany and Continental Europe other than Italy are non-plutonomies. A classic example of a plutonomy is the United States economy, where the top 1% of

[34] From '*Bird of Gold- The Rise of India's Consumer Market*', McKinsey Global Institute , May 2007

[35] Please see '*Plutonomy: Buying Luxury, Explaining Global Imbalances*', published 14 October 2005

households account for 20% of total US income, slightly smaller than the bottom 60% of the households put together. On the back of increasing globalization, economies such as China, India and Russia have begun to embrace many of the six drivers of plutonomy, and we are likely to see growing spend on luxury products from these countries in the future. Supporting this is recent article which highlights that China, Russia and India helped fuel a vintage year for the luxury goods market in 2006[36].

Profiling the luxury goods market in India

While India has historically been a nation where wealth has been concentrated in a small percentage of the population, positive demographics, buoyant economic growth coupled with the effects of wage inflation[37] have resulted in India registering one of the fastest increase in high net worth individuals (HNIs) in the world. HNIs or individuals with financial assets over US$1mn have risen to 83,000 a growth rate of 19.3% yoy.

A study by Technopak "India Luxury Trends" estimates that currently there are 1.6mn households earning over Rs4.5mn (US$100,000) p.a spend Rs0.4mn (US$9000) of their income each year on luxury products; thus resulting in a market size of about US$14.4bn for such products.

Key growth areas

The increase in HNIs coupled with changing spending patterns – with more spending on discretionary items such as personal products, health care, and recreation coupled with cultural changes and willingness to take on debt/credit card loans have resulted in global players in the luxury space recognizing India as an emerging player in this niche market. Over recent months, a number of luxury-marketing companies- such as the Luxury Marketing Council (LMC- a collaboration of 700 luxury goods and services companies from across the globe) and the World Luxury Council have set up chapters in India to help catalyze further growth in the segment. The key focus areas are apparels, time-wear accessories, branded jewellery and gourmet food and wines[38].

Road Ahead: Future potential and barriers to growth

While overall macro conditions and the absence of a strong counterfeit industry are conducive to rapid growth in the luxury products sector, the key deterrents include high tariff rates on imports (e.g., import duties on watches are as high as 50%). Further, although the government has permitted foreign direct investment to the tune of 51% in single-brand retail, the absence of luxury retail environments is another impediment to growth. So far, most of the entrants have been housed in five-star hotels, which provide for most facilities and do not compromise on exclusivity.

[36] Look east to the rising appetite for luxury goods – Scotland on Sunday May 13, 2007. Also see Economist dated May 31, 2007 – Maharajas in the shopping mall

[37] Average salaries saw a 14% increase during 2005 and a projected 13.5% increase during 2006; according to a survey by Hewitt Associates.

[38] Some recent entrants include Louis Vuitton (LVMH), D&G, Versace, Moschino, Hugo Boss and Cavalli in the apparel space, Cartier, Christian Dior, Swatch in time-wear and accessories; Rolls Royce and Porsche in the auto space; Bang & Olufsen in the electronics space; and Lladro and Villeroy and Booth (Porcelain/Home accessories)

How does one play this theme domestically?

While one way to play the luxury segment is via retail/real estate with developers intending to set up luxury malls and domestic corporates intending to bring in the big name brands; another way is via the nascent wellness industry – which again is a result of rising incomes coupled with the desire to build 'well-being assets'.

The Wellness Industry: A new sunrise sector

Rising disposable incomes coupled with an increase in lifestyle-induced illnesses is gradually resulting in a wellness boom in India. While the *high end* health care industry is an obvious play given rising affordability of quality healthcare and changing disease profiles (Apollo Hospital, Fortis and others); the wellness industry is pro-active (i.e., people voluntarily become customers to 'feel healthier') and is thus emerging as another way to play this niche theme.

Globally, health, wellness and the beauty industry is already a competitive one. In India, the industry is still in its nascent stages, but there are all signs of an emerging boom, with the Confederation of Indian Industry (CII) estimating the size of the industry at US$9bn. This explains mushrooming gyms, spas, holistic centers and a growing interest in yoga and other forms of alternative medicine across the country.

Impact on the economy

While one can say that the growth of the luxury sector would lead to conspicuous consumption and further widen the growing inequality in making the difference between the haves and have-nots even higher, another way of looking at it, is that the steady growth in the wellness industry in particular could have a far-reaching impact on the economy and across sectors.

For instance, spiritual tourism – closely linked with the wellness industry - is amongst the fastest-growing segments of the tourism sector. The Ministry of Tourism is promoting spiritual tourism through its *Incredible India* marketing campaign that focuses on yoga, ayurveda and other spirituality-related concepts. The impact of attractively-packaged campaigns is most apparent in Kerala which has been touted as the home of Ayurvedic medicine and a centre for holistic healing. Other destination spas in India include the Ananda Spa in the Himalayas, Amatra Spa in Delhi, Golden Palms in Bangalore, and Sereno Spa in Goa.

The wellness industry has also begun making inroads in the retail food industry, with several industry majors such as Dabur venturing into specialty retail and launching a range of organic food and skincare products. Other forays include HLL's chain of Lakme beauty salons across the country; while Marico operates Kaya Skin Clinic - a chain which offers a range of dermatological procedures. Pantaloon Retail India is planning to launch 'Health Village' - a brand which will offer beauty salons, a pharmacy and fitness centers (*reports suggest that Pantaloon has signed an agreement with India's largest and oldest chain of health centres- Talwalkars*[39]). VLCC- a chain of grooming and fitness centers- has also chalked out a rapid expansion plan. The growth of the wellness industry bodes well for the economy in terms of job-creation, potential for food-processing and exports.

[39] India Retail Report 2007 (Images F&R Research)

The Changing Face of Rural India

After our story on luxury goods, on the 13th of July we quickly shifted focus to the lower end of the spectrum…

…and found that a growing number of corporates were capitalizing on the bottom of the pyramid, thus contributing to the changing face of rural India

WE EXPECTED…

➤ **That the retail boom in India would seep to the '*bottom of the pyramid'*, with corporates looking at the segment as a growing and profitable business opportunity. This would facilitate a trickle-down impact and empower the rural economy.**

…AND WHAT HAPPENED

➤ **While the road has been rocky (e.g., Reliance Retail having to temporarily close outlets in certain states), a number of Indian corporates are combining corporate social responsibility and development with business opportunities in the rural segment.**

➤ **Recent forays into this segment include those by FMCGs (Dabur, ITC, Godej), banking and financial companies (ICICI) and Telecom (Reliance, Bharti, Vodafone).**

Rural Retail: Capitalizing on 'The Bottom of the Pyramid'

Rural retail – providing favorable demand and supply-side dynamics

Despite the declining significance of the monsoons on the economy and the diminishing share of agriculture in India's GDP, the rural market remains an integral part of India's economy, accounting for over 70% of India's population and typically comprising over 50% of total consumption. Interestingly, the retail boom that has swept India in recent years is now making its way to the '*bottom of the pyramid*', facilitating a trickle-down impact and empowering the rural economy. Further, a growing number of corporates have begun to see the potential in rural areas largely due to the rural sector's role in both demand and supply-side dynamics.

Growing Demand, supported by rising incomes

Supported by rising income growth, the rural sector has seen a significant shift in consumption trends. For instance, food items, which comprised 73% of expenditure in the 1970s is down to 55% currently. A key factor aiding consumption is the wealth effect impact of land sales.

Figure 15. Rural Share of Consumer Demand (%)

	FY96	FY02	FY10E
Scooters	33.1	39.4	39.9
Motorcycles	47.3	39.8	48.3
Mopeds	52.7	58.2	57.7
Cars/jeeps	2.1	8.0	10.9
Automotive	37.9	36.0	37.9
TVs	54.0	54.5	44.2
Other white goods	23.8	23.9	23.7
All fans	50.0	56.9	56.7
Other low-cost items	58.1	60.1	61.3
Shampoos	27.2	31.9	33.0
Edible oils	64.3	67.1	62.9
Washing cakes	68.7	71.4	75.6

Source: NCAER

Figure 16. Distribution of Households by Income (Figs in Mns; Income in Rs)

	2005-06			2009-10E		
	Urban	Rural	Total	Urban	Rural	Total
Upto 45,000	6	47	53	3	31	35
45,000-90,000	17	62	80	15	65	80
90,000-1,35,000	14	20	34	15	34	49
1,35,000-1,80,000	9	7	16	11	10	21
Above 1,80,000	14	7	22	25	12	37
Total	**61**	**143**	**204**	**69**	**153**	**222**

Note: Income is in FY02 prices

Rural Corporate forays- Spanning across Sectors

Besides the corporate social responsibility angle, corporates are increasingly using various experiments to tap the latent potential in the rural sector. As an NCAER study points out, 17% of India's 627,000 villages account for 50% of the rural population and 60% of rural consumption. As a result, tapping 100,000+ villages would enable retailers to address 50% of the rural opportunity. Apart from the traditional initiatives of marketing agri produce inputs (tractors, fertilizers, seeds), companies have forayed into consumer durables, financial services, and other areas. Key among these include:

A Two-Way Flow: Supply-Side dynamics are also favorable

- **Consumer and Food Retail:** Rising rural incomes have resulted in a visible rise in rural spending – not only on agricultural inputs like seeds, fertilizers, and soil testing, but also on groceries, household items, and consumer durables. While growing demand is a major factor driving growth in the rural segment, a number of corporates have forayed into the sector to improve supply-chain dynamics directly with the farmer. By eliminating the role of the middleman[40], the farm-to-fork models (egs. ITC's E-Choupal, HLL Project Shakti, DCM Shriram, Godrej Agrovet) have introduced price-transparency and reduced wastages. Contract farming is also an area that is seeing growing corporate interest.[41]
- **Banking and Financial Services:** With 58% of farming households still lacking access to basic banking services and *financial inclusion* gaining importance with policy officials, micro finance has emerged as an attractive financial proposition for large banks. Moreover, with several corporates also tying up with banks, retail is fast aiding penetration into financial services in the rural segment. For instance, ITC and DCM are collaborating with the State Bank of India (SBI) and ICICI Bank[42] respectively to either open branches in their stores or aid farmers with loans; thus eliminating the money-lender. Insurance companies are also making inroads into the rural segment. Currently, insurance covers only 2% of the poor in India. Regulations stipulate that 7% of a company's policies must come from rural areas in the first year of operation to 16% by the fifth year.
- **Telecom**: Although the telecom sector has witnessed unprecedented growth over the past decade, with 7mn new connections each month, the distribution is highly distorted, with urban tele-density at 31%, and rural at 2-3%.[43] Companies have begun tapping the mobile telecom market through innovative initiatives. For instance, while several **Reliance** phones are targeted at rural markets through an emphasis on price, other handset providers, such as **Nokia, Motorola and Vodafone**- have also launched low-cost mobile phones in the US$20-30 range. Another initiative is the **Mahamaza** model where-in dealers consolidate orders from surrounding villages and pass on discounts received from bulk buying.

[40] Under **ITC's E-Choupal**, a computer with an Internet connection placed in a farmer's house, serving farmers in surrounding villages. Farmers use the computer to access daily closing prices in local markets and sell their produce directly to ITC at the previous day's close. In this way, ITC procures output directly from farmers, rather than from the local market. The system also ensures price transparency. Other initiatives include **HLL's Project Shakti** which involves working with self-help groups, to educate rural women and also employ them as direct selling agents; thus leveraging them to improve market penetration as well

[41] Eg - **FieldFresh**- a tie-up between the Bharti Group and Rothschild, which leases farmland producing vegetables for export

[42] **ICICI Bank's** rural lending doubled to Rs165bn (US$4bn) in the year ended March 07. While it tripled the number of rural clients to 3.2mn last year, it aims to use branches, franchisees and ATMs to expand its rural base to 25mn clients over the next 5 years.

43 Currently, the **United Service Obligation scheme** (USO) aims at providing access to basic telephone services to people in rural and remote areas at reasonable prices, even when some of these connections may not be justified on commercial considerations.

- **Information Technology:** The IT segment's foray into rural is still in a fairly nascent stage but an interesting initiative is the Byrraju Foundation's GramIT project set up by Satyam Computers. The objective is to set up basic data processing outsourcing centers in all the 160 villages adopted by Byrraju so as to enhance employment, technology, and education in villages, and at the same time benefit from low-cost labor.

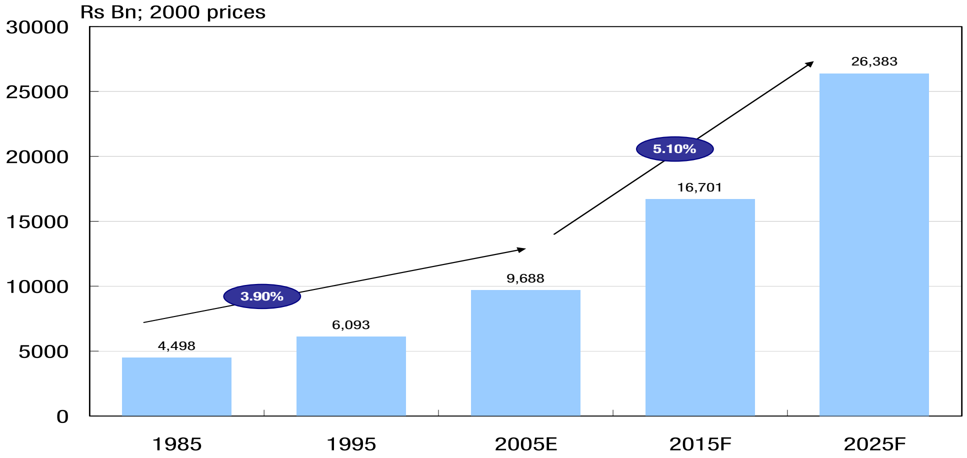
Government initiatives will lead to further improvements

Government initiatives have also been positive and have encouraged growing commercial viability. These include the Rural Employment Guarantee Scheme[44], and the Bharat Nirman Program[45] – both aimed at building infrastructure. Improvements in infrastructure are also key to connecting rural areas with the hinterland, which in turn would encourage corporate entry. In addition as the recent McKinsey study points out, investment in infrastructure has a two-fold impact on rural incomes – in the short term, it will create jobs that will boost income growth; while over the longer term, it will stimulate local economies, which in turn will provide alternate sources of income for residents.

Benefits

The benefits of corporate forays into the rural sector are likely to be wide-ranging. For instance, apart from encouraging employment generation within agriculture, corporate entry into rural retail would also help diversify employment outside the segment. More importantly, the upward shift in income levels – a result of farmers getting a better deal as the produce gets diverted from traditional markets to the retail majors where payment is immediate - will eventually help lift people out of poverty and create a stronger middle-class. As farm-sector activities climb up the value chain, productivity *within* agriculture is also likely to see an improvement.

Figure 17. Projected Trends in Rural Consumption



Source: Mckinsey & Co, Bird of Gold May 2007

[44] The scheme enables one member of every rural household to 100 days a year of work at a minimum daily wage of Rs60

[45] **The Bharat Nirman Program** is a four-year time-bound plan that aims to achieve goals in six areas of rural infrastructure - irrigation, water supply, housing, roads, telephony, and electrification. Key goals include (1) bringing an additional 10mn hectares under assured irrigation; (2) to connect all villages that have a population of 1,000 (or 500 in hilly/tribal areas) with a road; (3) to construct 6mn additional houses for the poor; (4) to provide drinking water to 74,000 uncovered habitations; (5) to expand the reach of electricity in rural areas; and (6) to extend rural telephone connectivity

Education and Training – Bridging India's Skills Gap

Events took a studious turn on the 16th of August, when we realized that to bridge India's skills gap…

… a number of corporates were venturing into the education and training space, making it an investment opportunity

WE COMMENTED…

➤ **That India's growing skills shortage has resulted in corporates taking a number of initiatives to ramp up the pool of suitable labor. The development of technology-aided education had immense potential, with online leaning/tutorials emerging as a key growth area.**

…AND WHAT HAPPENED

➤ **Recognizing the need to bridge India's talent shortage, training institutes, online tutorial and vocational training firms are significantly picking up and attracting interest from a number of private equity investors.**

➤ **Key players in the space currently include NIIT, Aptech, Educomp, Everonn, JetKing, Career Launcher, Tutorvista, and Mahesh Tutorials.**

India's Talent Shortage: A Temporary Phenomenon

India currently has over 300 universities and 15,600 colleges producing close to 2.5mn graduates a year. However, a poor accreditation system and low government spending (3.5% of GDP) have resulted in an uneven education system, such that while the top schools are comparable to the best in the world, they generate relatively few graduates. The wide variance in the quality of education explains why less than 20% of graduates qualify for direct employment. Faced with this skills shortage, corporates have begun to undertake a number of initiatives to ramp up the current pool of suitable labor, which in terms of volume trails just behind the US and China, though its quality is far from satisfactory.

Facing the Talent Crunch: What are Corporates Doing?

As an increasing number of companies begin to recognize the need to garner talent and develop appropriate recruitment strategies, the training and education industry for college graduates is emerging as a growing opportunity for investment.

Information Technology: With only 1 in 4 engineering graduates directly suitable for employment, Nasscom has pointed out that unless remedial action is taken, the shortage of skilled workers will rise to 0.5mn by 2010. Initiatives by the industry majors include the introduction of '*finishing schools*' aimed at developing soft skills include language training and industry specific knowledge such as basic engineering and technical skills. While Nasscom has launched its finishing school on a pilot basis, other institutions that offer specialized training include NIIT, Aptech and Everonn Systems. An interesting initiative is the Wipro Academy of Software Excellence (WASE) which is a tie-up between Wipro and the engineering institute - BITS Pilani wherein Science graduates work with Wipro and get an engineering degree at the end of four years.

Retail: Given the relative infancy of the industry in India, companies are either resorting to help from third-parties, or conducting in-house training. For instance, Pantaloon Retail funds two-year specialized retail management courses in collaboration with colleges across the country, and is setting up its own retail school. Other initiatives include ITC's proposed retail training academy in partnership with NIS Sparta; and RPG's Institute of Retail Management.

Banking and Financial Services: Growing financial intermediation and forays into insurance, retail and private banking have increased the demand for finance professionals. Recent initiatives include the setting up of the Institute of Finance, Banking and Insurance (IFBI), jointly conceived by NIIT and ICICI. Its flagship program is the post graduate diploma in banking operations- a six-month course to create entry-level manpower that is absorbed into ICICI and other domestic banks. Students are also offered a supervised internship for 3 months, and education loans by the Bank.

Engineering and Construction: The upturn in the domestic investment cycle, competition from the software industry, the realty boom along with the surge in the Middle East capex (as India is the preferred source of manpower for MNC contractors working in the Middle East), has increased pressure for trained man-power in this space. Unlike the other sector initiatives, corporate forays into the education space have been largely initiated by the corporate social responsibility (CSR) angle. These include Cummins Engineering College which is starting its first batch of 60 students in mechanical engineering, Bharat Forge tying up with rural engineering colleges, polytechnics, as well as taking over the operations of the Industrial training institute, Thermax's social Initiative Foundation which has taken over a few municipal schools in Pune and Kirloskar's tying up with the College of Engineering in Pune to introduce a six month course in turbo- machinery.

Aviation: The rapid transformation of the Indian aviation industry resulted in an acute shortage of pilots resulting in high wage inflation with carriers hiring pilots from Eastern Europe and other emerging markets. Given the increase in fleet utilization coupled with the likely expansion (c.approx 400 additional aircraft over the next 5 years), the Ministry of Civil Aviation has forecast that Indian carriers would require 5,000 pilots over the next five years. As a result, private carriers have tied up with training institutes such as the American School of Aviation. This coupled with current trainees coming into the labor pool would in time reduce the demand-supply mismatch. Corporate forays in the cabin crew/ground services space include the Avalon Aviation Academy (an arm of Aptech) and Frankfinn.

Hotels/Shipping: The shortage has affected the hospitality industry as well. Though the Oberoi and Welcomgroup have their own institutes, they have now also started programmes to recruit directly from schools for a working-cum-grad programme. Other hotels setting up training institutes include the Park, while the Leela has started the "Earn while you learn" programme for college students and offers them part-time jobs. Some of these people are hired later. As regards shipping, with the Indian tonnage growing, the industry is facing an acute shortage since the current law prohibits foreign nationals working on board Indian flag carriers. This policy could see a change as the shortage has resulted in a deterioration in the work environment – a result of reduction in crew size and longer work hours.

Other Initiatives in the Education Space

Besides government proposals to increase the gross enrollment ratio from 10% to 15% by the 11th Plan, other initiatives include the development of technology-aided education, whereby online leaning/tutorials are fast-emerging as a growth area.

Innovative learning/Teaching Aids – The K-12 Segment

Companies in the innovative learning space - such as Educomp Solutions, NIIT, and Everonn Systems, aim at using digital technology to provide interactive educational aids. For instance, key products from Educomp include Smart Class, a package to enhance classroom teaching, ICT Solutions for running computer education programs in government schools as well as Professional Development courses for teachers. Educomp has also ventured into online tutoring (with mathguru.com) as well as pre-schooling (Roots to Wings). Other companies - such as NIIT and Everonn, focus on IT/ITES related aids, but have also ventured into the K-12 segment. Everonn Systems, for instance, has developed technology-enabled virtual classrooms. All companies collaborate with both government and private schools for the provision of these teaching materials.

Homework Outsourcing – An Emerging Opportunity

Another area in the education space that is seeing considerable growth is online tutoring initiatives – where tutors based in India provide English language, Maths and Science support to students across the world (particularly in the US) generally using a shared virtual whiteboard. These firms include TutorVista, BrainVisa, Growing Stars (based in the US), and Career Launcher (based in India). - With rates as cheap as US$18 per hour, firms are exploiting labor-cost advantage, since support in the US costs as much as US$50 an hour. Given their immense potential, venture capitalists have financed these initiatives. For instance, TutorVista is backed by Sequoia Capital, while Intel Capital has a stake in Career Launcher. But a key deterrent to growth would be the availability of tutors.

Government Initiatives in the education space

Though the government is unlikely to meet its promise of increasing spend on education to 6% of GDP, its national program for universal elementary education - *Sarva Shiksha Abhiyan* - initiated in 2001 aims at making free and compulsory education to children of ages 6-14 (estimated to be 205 million) by 2010. As far as higher education is concerned, the government has recently cleared FDI in education. The PM in his Independence Day speech has reiterated the need to increase the gross enrollment ratio to 15% by 2012 from 10% currently by expanding the education infrastructure. This would entail setting up 6,000 schools, 7 new IIMs, 8 new IITs, and 30 central universities.

To conclude, the jury is still out on corporate initiatives to alleviate the talent shortage. On the positive side are examples of corporates funding educational institutions while on the other hand there is concern on the true motive of the backers/pledgers. However, on balance we believe that these efforts are encouraging and coupled with initiatives to upgrade the quality of education is a clear indication that India's skill-shortage would be a temporary scenario.

India: Following China on the African Safari

The 18th of September found us on a bumpy ride…following China on the African Safari!

In a quest for oil and energy resources, we found that India's trade with Africa had risen nearly 5-fold, and diplomatic efforts indicated further growth

WE COMMENTED…

- **That growing demand for natural resources from China and India had led to an increase in Asian-African trade. India is also likely to attempt China's aid for oil strategy, i.e., the development of power or infrastructure projects in exchange for oil exploration.**

…AND WHAT HAPPENED

- **Reports indicate that Africa will meet 25mt of India's oil imports by 2010 vs. 18mt currently. There has been particular focus on countries such as Sudan, Nigeria and Egypt. Diplomatic efforts have also been rising, with India trying to match China in aid diplomacy.**

India, China and Africa: A Tale of Three Countries

High growth rates in China and India have resulted in growing demand for commodities – mainly oil, ores and timber, which has led to an increase in Asian-African trade. A notable amount of these exports are to the two fastest-growing economies in Asia – China and India. Bilateral trade between China and Africa currently stands at US$55.4bn while that of India and Africa is relatively lower at US$25bn. However, the patterns of trade are a bit different. While natural resource extractive industries are a chief focus area of the China – Africa trade, India's is a little more diversified and labor intensive than those of China.

Energy: A chief focus area

High levels of economic growth in both China and India coupled with perennial hiccups in the Middle East have resulted in the need for energy security being a key factor attracting most investments into Africa. Africa accounts for approximately 9.4% of the world's known oil reserves[46].

The Institute of Defense Studies[47] outlines 3 key reasons for Africa's attractiveness as a source of oil: (1) The oil is low in sulphur and therefore of high quality; (2) new discoveries are offshore, located away from potential conflict zones; (3) Unlike the Gulf and Saudi Arabia, Africa's oil markets are open to foreign participation.

China's initiatives in Africa – trade, aid and infrastructure

Africa has been a traditional ally for China helping it to return to the UN in the 1970s However, in recent years, driven by its insatiable demand for natural resources, particularly energy, China has become a major investor and donor in Africa. Total bilateral **trade** between the two countries, which stood at a mere US$11bn in 2000, rose to US$56bn in 2006 – up 423%, while a study by the Carnegie Endowment

[46] Not only is this oil still relatively untapped but new deposits are also being discovered in countries previously thought of as dry. Bulk of Africa's crude oil reserves is located in **Nigeria** – the 12th largest producer of petroleum in the world with proven reserves to the tune of 35.2bn bb/d, and the 8th largest exporter, Angola, Sudan, Guinea, Gabon and Republic of Congo. The remaining reserves are found in Ghana, Cote d'lvorie, Benin, and Senegal. As a result, there has been considerable investor interest in these areas

[47] *Africa's Energy Potential: Prospects for India* - Ruchita Beri, Strategic Analysis – July-Sept 2005

states that Chinese oil firms have spent over US$15bn buying up oil fields and local companies. What is important to note is that China's relations with Africa have not been limited to trade alone. **Aid** has been one of its key tools but unlike other donors, China prefers to provide loans rather than grants as it can then use these loans as leverage. In addition, China has been playing a major role in African **infrastructure**.

China's presence is strongest in oil-rich countries such as Nigeria, Angola, and Sudan, with Chinese companies building pipelines, refining and port facilities in Sudan while Nigeria's petro-dollars are being ploughed back into infrastructure- much of which is contracted by China. China is also establishing itself in other parts of Africa as well - building hotels and restaurants in Sierra Leone, investing in the cobalt/ copper mines in Congo and soybean processing in Mozambique.

In addition to China's energy-related initiatives in Africa, our China economist Yiping Huang believes that China's African move is an important part of the global strategy of balancing the global power distribution. This has resulted in a step-up in its **diplomatic** efforts. Since the establishment of the Forum on China-Africa Cooperation in 2000, China has been assisting African countries through technical transfers, training programs and scholarships. In 2006, the Chinese government issued 'China's Africa Policy' that set guidelines with regard to politics, economy, and security and pledged to double its assistance to Africa by 2009 from around US$19bn currently, allow zero-tariff status for a number of export items from Africa's poorest countries, and cancel debt through government loans.

The other side of the picture: While the Chinese strategy has boosted bi-lateral trade giving Africans access to cheap durable goods, the flood of cheaper imports particularly textiles and apparel have begun to affect domestic industry. Further, its *Aid for Oil* strategy has met with some debate and there has been concern that the Chinese state owned companies have been getting their own workforce which is costing Africans their jobs. In addition, China's military presence in Africa is also debatable, with its peacekeepers posted in Liberia and Congo, and arms supplied to Sudan, Ethiopia and Sierra Leone. Lastly its willingness to attach no conditions to aid money coupled with its doctrine of non-interference at times undermines efforts towards increasing transparency, human rights and good governance.

India – Following China on the African Safari

Though India's cultural and trade ties with Africa go back longer than those of China, China today is Africa's third largest trading partner. However, Indian interest has accelerated since 2000, but its strategy in Africa is quite different from China's. This is largely due to the fact that India's ties with Africa go back to the colonial era. In fact, several African countries drew inspiration from the Indian independence movement[48]. As one World Bank[49] report points out, most Indian investments in Africa are largely private sector driven or in the informal sector, but are better integrated into domestic markets, while strategies followed by Chinese firms offer them greater control across the production chain, resulting in fewer spillover benefits for Africa. However, recent years have seen a marked shift in India's **diplomatic**

[48] "*India and West Africa: A Burgeoning Relationship*", Sushant K Singh, Chatham House, April 2007

[49] "*Africa's Silk Road: China and India's New Economic Frontier*"; Harry Broadman, World Bank, 2007.

initiatives[50] toward Africa, with bilateral trade rising from US$5.5bn in FY02 to US$25bn currently. Late last year, over 300 delegates from Africa attended a conference organized by the Confederation for Indian Industry, where projects worth US$17bn related to oil exploration, construction, software and healthcare were discussed.

Energy – again the key focus area

Similar to China, energy security has been a key reason behind growing investments in Africa. Currently India sources 18% of its oil from Africa, but faced with a rising demand for oil, India is attempting to diversify its reliance on oil supplies away from the Middle East (from where it obtains 74% of its energy imports) towards other sources. For instance, the Indian Oil Corporation has signed a MoU with Edo State in Nigeria to set up an oil refinery, while ONGC and Mittal have set up a joint venture – ONGC-Mittal Energy Limited to establish a refinery, power plant and railway lines in Nigeria in exchange for oil-exploration rights. More recently, Reliance has acquired a majority stake in Gulf Africa Petroleum Corporation (GAPCO), which has significant presence in East Africa in the petroleum downstream sector. In addition, companies such as ONGC Videsh, OMEL, IOC and GAIL have indicated interest in the establishment of refineries /gas pipelines from the Niger Delta to Algeria. India is also likely to attempt China's aid for oil strategy, i.e., the development of power or infrastructure projects in exchange for oil exploration

Other sector initiatives

While energy has been a key focus area for the two countries, there has been a diversification to other sectors as well. The Federation of Indian Chambers of Commerce and Industry has identified five prime sectors as 'engines of growth'- pharma and healthcare, IT, water management, food processing and education.

How does one play the Africa Story in India

Two key ways to play the Africa story are through the oil and non-oil sector. Besides the oil stocks, several Indian companies in the non-oil space, have expressed interest in Africa. Indian **telecom companies** (e.g.- Bharti, RCOM and MTNL) have been bidding for telecom licenses in African countries though not with much success till now. VSNL has a 26% stake in SNO Telecom, second fixed-line operator in S Africa where it has also recently acquired 26% in InfraCo, third network/long distance operator. In the **pharma** space, Ranbaxy acquired Be-Tabs while Matrix has a JV with Aspen Pharma. Indian pharma companies are also looking at Africa as a market for their drugs, especially in areas such as anti-retrovirals, anti-malarials and anti-TB.

In the **capex and construction space**, BHEL has won orders in Sudan and Tanzania; while JSW Steel has a presence in Mozambique. In the **autos segment**, Tata Motors has a Spanish associate that has a subsidiary in Morocco, while Mahindra &Mahindra is also contemplating setting up an assembly plant in South Africa. In **hotels**, Indian Hotels has entered into a JV for setting up hotels in Cape Town and Johannesburg.

[50] In a bid to enhance ties with the energy-rich areas of northern Africa, India has undertaken a couple of initiatives though its size pales in comparison to China's. These include the formation of **TEAM-9** (Techno-Economic Approach for Africa-India Movement) where India has extended lines of credit to the tune of US$500mn to the West African countries, the **Focus Africa** program which aims at enhancing bilateral trade and the **New Economic Partnership for African Development** - a program that calls for investments in Africa with the promise that African governments would deliver good governance in return

India Inc – Surviving a Strong Rupee

On the 16th of October, the sharp appreciation in the currency led us to wonder whether India Inc could survive a stronger rupee

We found that while inefficient firms would be weeded out, efficient companies would withstand the INR through hedging strategies and productivity improvements

WE EXPECTED...

➤ **That while the sharp rupee appreciation could have a near-term impact on exports, employment and profit margins, efficient companies aided by government support would be able to withstand a stronger INR. However, better infrastructure would be pre-requisite to improving efficiency and helping exporters absorb some impact.**

...AND WHAT HAPPENED

➤ **The rupee has appreciated 12% this year. While profit margins of exporters have been hurt, government sops coupled with company-level initiatives such as hedging strategies – both on the P&L (higher imports & dollar expenses) and balance sheet (forex loans) fronts – have helped offset the impact to an extent.**

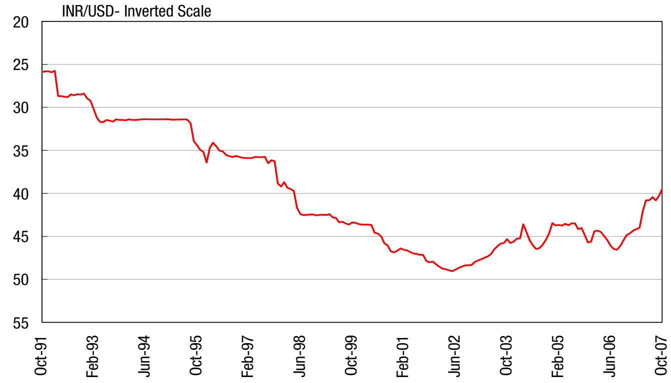
Quick Re-cap: INR movements – not been uni-directional

The rupee, which for years had been a depreciating currency touching a low of Rs49/US$, changed course in **June02** – a result of dollar weakness coupled with changing domestic growth and balance of payments dynamics *(See page 15 for details).* But the appreciating trend seen since June 2002 has not been uni-directional. It took a slight breather in the months following the surprise election result in **May04** as well as during **Oct-Nov05** – a result of dollar strength and the IMD redemptions and more recently during the **2006** EM Sell-offs. However, the pace of appreciation, changed in **2007** with the rupee gaining 9% this fiscal to a nine-year high of Rs39.3/US$. This is on the back of unprecedented dollar inflows triggered by a re-rating of the India story, the Fed cut and dollar weakness.

So what now?

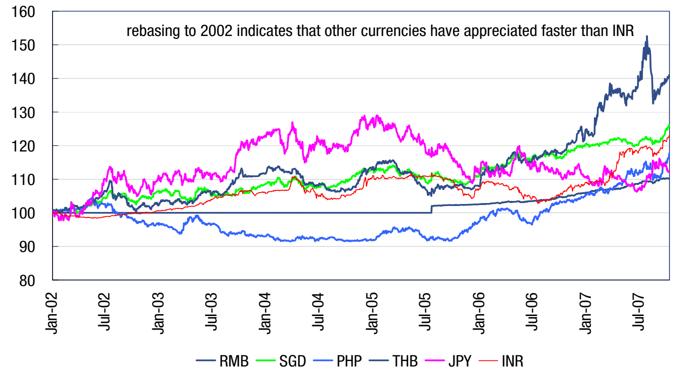
While this has created dissent from exporters and also poses liquidity management issues for the RBI; we maintain that while movements will not be uni-directional, the long term appreciation story still holds with the rupee likely to hit 38 in 2008.

Figure 18. Trends in the Rupee



Source: CEIC Data Company Limited, Citi

Figure 19. Trends in Exchange Rates – Rebased from 2002



Source: Bloomberg, Citi

India Inc has coped well with previous challenges

Drawing from past experience, an appreciating rupee is not the first issue that industry players have had to deal with. Key exogenous factors tackled include:

(1) Reduction in tariffs: Import tariffs have declined from 150% in FY92 to 10% currently with the government committing to bring down tariffs further to Asean levels. Although lower tariffs have meant greater competition for firms, it has helped weed out inefficient companies and improve productivity levels.

(2) Removal of Quantitative Restrictions (QR): The removal of QRs on imports and China's entry into WTO in 2001-02 initially raised concerns for industry, but product innovation helped tide issues while consumers benefited from better quality.

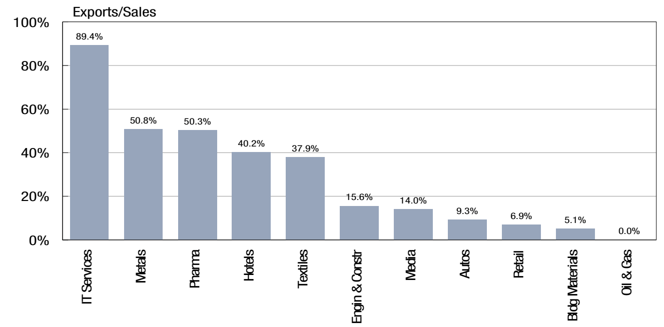
Gauging the Impact of a Rising Rupee

Macro Impact: A strong rupee could have a near term impact on exports, profits and employment. *(However, since the rupee started appreciating in 2002, export growth has risen 20%+).*Given the sharp appreciation this year, the government has stated that exports in FY08 will not meet their target[51]. While imports could trend higher, the trade deficit could partially be offset by buoyant invisibles. Employment may also be impacted given that nearly 50% of exports come from the SME segment (textiles, gems & jewellery, leather) where margins are low. However, given India's commodity imports, a stronger INR would be marginally positive for inflation.

Monetary Impact: While the RBI has been tempering the pace of appreciation, mopping up of dollars has led to a rise in domestic liquidity. In order to keep liquidity in check, the RBI has already increased the ceiling for MSS issuances. Looking ahead, we could see the ceiling raised further and/ or a CRR hike.

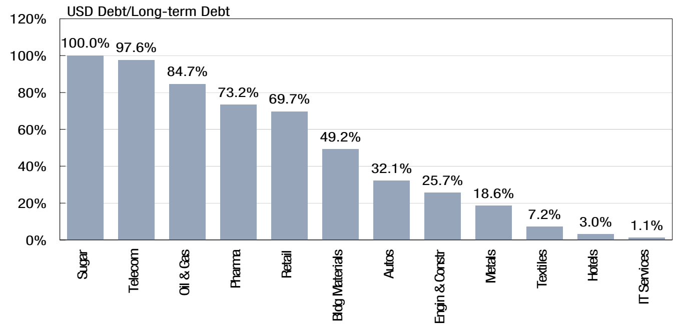
Sectoral Impact: Rupee sensitivity has been most apparent in export-dependent sectors, such as IT, metals and mining, pharma and textiles where forex earnings comprise a bulk of total income (79%, 33%, 23% and 79% respectively). But, the degree of the impact is dependent on other factors as well. As seen in the charts below, a number of these sectors (pharma, metals, construction) hold dollar-denominated debt, which would partly mitigate the impact. Company-specific factors such as EBITDA margins also serve as a determining factor of the cushion available.

Figure 20. Industry-Wise Exports as % of Sales



Source: Citi India Universe

Figure 21. Industry-Wise Dollar-Denominated Debt as % long term Debt



Source: Citi India Universe

[51] Economic Times : Another Re Victim: Exports come in at US$140bn v/s the target of US160bn

Analyzing Key Sectors

- **IT/ITES:** Surendra Goyal and Hitesh Shah, our software analysts estimate that a 1% rupee appreciation results in margins declining by 30-50bps. Companies are aiming for a higher non-$ proportion of revenues, focusing on reusable code to improve realization per employee and negotiating price increases. While leading IT majors such as Infosys, TCS, and Wipro are relatively better positioned to deal with the problem, the smaller companies would feel the pinch**.**
- **Textiles:** Ashish Jagnani- our textiles analyst-believes that a 1% appreciation would adversely impact margins by 60-80bps. Companies are taking initiatives such as focusing on value addition, diversifying to non-US$ currencies, exploring natural hedges through raw material imports/debt and negotiating higher prices.
- **Pharma and Healthcare:** Our pharma analysts, Prashant Nair and Chirag Dagli believe that the generic companies would be most impacted, given that a large share of revenues are dollar denominated and pricing power is limited. Pharma companies that pursue the innovator CRAMS business are at less risk as they have currency reset clauses built into most contracts. MNCs and hospitals stand to benefit as they import a large part of their requirements. Company level initiatives include hedging strategies - both on the P&L and balance sheet fronts, negotiating price increases and increasing the share of non USD exports.
- **Import parity industries**: A stronger rupee hurts those sectors whose pricing is linked to global commodity price trends. This is negative for their margins, although Pradeep Mahtani our metals analyst says this could be mitigated if companies dollarise their debt.

Government taking small steps…but big ones needed

In a bid to protect exporters, the Ministry of Commerce has announced a number of relief measures, including extending the number of services eligible for tax exemption/refunds, re-introducing interest payment on EEFC account, and extending the period and scope of pre/post shipment credit. But, what would help is the government speeding up on its infrastructure plans as poor infrastructure adds to the cost. This would increase efficiencies and help absorb the impact of appreciation.

Looking at the Sunny Side: The Positive Impact

To conclude on a positive note, the positive ramifications of a stronger INR include:

- **Lower loan repayments**: The capex sensitive sectors that have been funding domestic activity through overseas borrowings are likely to benefit as dollar-denominated loans would now have to be re-paid at a lower exchange rate.
- **Facilitating growth:** Productivity gains are another outcome, since efficient firms with superior hedging strategies would thrive, while inefficient firms would be weeded out - an important aspect contributing to long term growth.
- **Overseas acquisitions and set-ups:** While a stronger rupee would make overseas acquisitions cheaper, one cannot rule out the possibility similar to what happened in Japan where-in the sharp appreciation in the yen led to Japanese companies setting up plants overseas. While this would enable companies to maintain margins, it would further impact domestic job creation

India's Energy Needs – Looking beyond Oil

On the 22nd of November, we ended our Macroscopes for the year on a pensive note as triple-digit oil prices coupled with a widening coal deficit…

…prompted us to 'Look beyond Oil' and explore alternate options to meet India's growing energy needs

WE EXPECTED…

- **That with triple digit oil prices on the horizon, India would need to look beyond oil as a primary energy source to ensure sustainable energy security. This would entail ramping up production, improving energy efficiency and focusing on alternate fuels.**

…AND WHAT'S ON THE ANVIL

- **The NELP will likely result in the continuation of new discoveries in oil and natural gas, while the allocation of coal blocks to private and public companies is a start to addressing the coal shortage. In addition, efforts to shift towards alternate fuels (such as biofuels, wind and hydel power) and nuclear energy should go a long way in addressing India's energy shortage.**

India's Growing Energy Demand

In-order to sustain growth at 8%-9% levels through 2031-32, a detailed study by the planning commission indicates that India would need to increase its primary energy supply to 1,651mtoe. Currently, coal meets more than half of India's energy needs, oil accounts for close to 30%, while natural gas, lignite and hydro power make up the balance. As seen in the table below, given the supply shortfall, India is likely to continue to rely on imported fuels.

Figure 22. India's Energy Scenario (in millions tonnes of oil equivalent-M toe)

	FY91	FY01	FY06	FY12E	FY32E
Availability	**192**	**314**	**388**	**496**	**1,651**
Coal	108	163	215	257	835
Oil	60	107	122	166	486
Natural Gas	11	24	27	44	197
Lignite	7	12	15	NA	NA
Hydro Power	6	6	8	12	35
Nuclear Power	1	1	1	17	98
Production	**167**	**231**	**281**		**1,351**
Imports	**32**	**94**	**130**		**387**

Source: Planning Commission

Meeting India's Energy Needs- What are the Options?

To ensure sustainable energy security, India would have to ramp up production by a significant extent, not only through domestic sources, but also by turning to alternate fuels and improving energy efficiency

Oil: Domestic Exploration Initiatives could assuage higher imports

India's oil import bill is rising…

With India importing 70% of its crude oil requirements (700mn barrels), a US$1/bbl increase in oil prices increases India's import bill by US700mn. However, besides the reserve cushion of US$270bn, India's declining energy intensity, coupled with productivity improvements, what makes the impact less severe than in the past are new discoveries and petroleum product exports.

…but discoveries could help quell growing imports

Thanks to the initiation of the New Exploration Licensing Policy (NELP), in 2000 which ended the government's monopoly in oil exploration, various foreign and private sector firms have been participating in the bidding procedure for oil blocks. For instance a factor that could partially offset the higher oil import bill are the hydro-carbon discoveries by Reliance, ONGC, GSPCL and Cairn. However a key point to note is that only the discovery by Cairn is oil while those of Reliance and ONGC/GSPCL are natural gas. ***Thus it would result in a saving to the extent gas can substitute oil.*** Increasing E&P activity in India benefits offshore service players such Aban Lloyd and Great Offshore.

Figure 23. Potential Impact of Oil Discoveries

	Production per day (bbl/d)	Annual production (bbls)	Oil price (US$/bbl)	Annual Savings (US$bn)
Reliance	0.50	180	80	14.4
ONGC/GSPCL	0.24	86.4	80	6.9
Cairn	0.16	57.6	80	4.6

Source: Citi

Petroleum product EXPORTS- current uptrend is encouraging

With new refineries coming on stream, India's exports of refined products have risen from 0.1% of total exports in FY00 to US$18.5bn or 14% in FY07. Looking ahead, with refining capacities led by Reliance Petroleum projected to rise from 138mt currently, to 195mt in FY10, we expect petro-product exports to rise to US$30-35bn which would help offset some of the damage caused by higher oil prices[52].

Coal: Shortages leading to more imports

Currently, 26 power plants out of 75 are facing critical coal stocks (at less than 7 days), while 15 plants suffer from a super-critical (less than 4 days) situation.

Coal is the dominant fuel in India. About 76% of the country's coal is consumed by the power sector and the balance by such industries as steel, cement, fertilizers, chemicals, paper, and transport. However, despite having the third largest coal reserves in the world (246bn tonnes), underinvestment in mining capacity due to budgetary constraints and Coal India's limitations[53] in financing large-scale investments has resulted in a shortage that is likely to increase to 100m tonnes by 2012, from 45m tonnes currently.

Today, besides cement companies increasing their coal imports, many power plants are facing critical coal stocks. However, power plants have not yet suffered shutdowns, as they have either been timing their maintenance around the time the stocks are at low levels or resorting to imports.

Figure 24. India's Coal Balance (Mn Tonnes)

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07
Coal Production	304.1	313.7	327.8	341.3	361.2	382.6	407	430.9
Coal Imports	19.7	20.9	20.5	23.3	21.7	29.0	38.4	45.0

Source: Plan Documents

[52] For details on impact of oil prices on inflation and fiscal deficit pls see "India- CitiViews: Spotlight on Oil, **the Party Sp'OIL'er**" dated 6th August; at https://www.citigroupgeo.com/pdf/SAP07906.pdf

[53] The Brookings Institution in its recent **Brookings Foreign Policy Studies Energy Security Series: India** has mentioned that CIL is inefficient given that that production costs are 50% higher than in other countries, it is the second largest employer in the world with strong unionization and a lack of technical ability to mine efficiently and access coal in deeper areas

Addressing the Shortage: The government has recently allocated 27 coal blocks to private and public companies for captive mining. These blocks have reserves to the tune of 10bn tonnes sustaining 46,000MW of power generation. Another recent measure was the new coal distribution policy, which re-introduces the e-auction sale of coal. However, much more needs to be done as the government currently allows private coal mining only for captive use. A relaxation of coal mining laws and FDI in coal mining is essential to bridge the gap in coal requirements. Further, the lack of a market-determined pricing structure has hurt CIL's funding capabilities. Some of the Coal/Lignite plays include GMDC, NLC, NTPC, CESC, GVK, Reliance Energy, and Tata Power.

Natural Gas: A Potential Substitute for Oil

Natural gas is gradually replacing oil as a primary energy source. As our oil and gas analysts explain, before the advent of LNG and recent discoveries off the east coast, India was a gas-starved economy. But, driven by increased domestic gas supplies and more economical pricing, the share of natural gas in India's energy mix will likely rise to 12% in 2030 from 9% currently; while that of oil will decline to 29% from 36% currently. Increasing gasification will benefit distribution companies such as GSPCL and enablers such as EKC.

Nuclear Energy: The Nuclear Deal will be Positive

India currently has a big demand–supply gap in electricity, with shortfalls of about 10% (energy deficit) and 14% (peak deficit). Nuclear energy accounts for less than 3% of electricity generation. Thus if the government is able to overcome all the road-blocks, the Indo-US nuclear deal government should help India develop the use of nuclear facilities for electricity generation — and other civilian uses. This is a big positive given India's energy deficit where over half the resources for electricity are powered by coal. Moreover, as geopolitical risks associated with crude oil imports continue to increase, reduced dependence on this source will only be beneficial.

Alternative Fuels- Likely to Gain Importance in the Coming Years

Improving energy security and reducing greenhouse gas emissions are compelling governments to identify alternatives to petroleum fuels. To this end, the government has already made conversion to 10% ethanol blended fuels mandatory by 2010. Besides the sugar companies, key plays include D1 Oils, IKF Technologies, Gujarat Agrovet, Reliance, Noble Explochem and Praj Industries. Other renewable energy plays include Suzlon, Hindustan Zinc, NEPC, Vestas and Enercon (**wind energy**); Tata BP Solar, Moser Baer, Webel (**solar energy**); NHPC, Jaiprakash Associates, , Patel Engineering, Hindustan Construction, DS Construction (**hydel energy**).

A Final Measure- Improving Energy Efficiency

The energy intensity of India's growth has been falling and is about half of what it used to be in the early seventies. Currently, India consumes 0.16 kg of oil equivalent (kgoe) per dollar of GDP expressed in PPP terms. India's energy intensity is lower than the 0.23 kgoe of China, 0.22 kgoe of the US and a World average of 0.21 kgoe but its still higher than countries in Europe. Lowering the energy intensity of GDP growth through higher energy efficiency norms will further ensure energy security

Prospects for 2008

As another year drew to an end, on November 23rd, we drew up our predictions for 'Prospects in 2008'…

…and prophesized that investment-led growth would continue into the new year

WE EXPECT: INVESTMENTS TO POWER GROWTH

➤ **Given the current infrastructure deficit and above 90% capacity utilization ratios in many key industries, we expect the rapid pace of investment to continue into 2008.**

➤ **While consumption has slowed due to interest rate tightening, favorable demographics, increasing penetration of retail credit and untapped rural potential indicate the consumption story is still alive.**

➤ **India has potential to further lift its trend growth level and remain one of the fastest-growing economies in the region. But moving to a higher growth trajectory entails addressing a number of challenges.**

Investment-led growth to continue

We expect the Indian economy to sustain growth at 9% levels in the coming years given the continuation of key growth drivers – investment, consumption, outsourcing and the trickle-down effect, which is a result of initiatives for the rural side of the economy. The growth upturn is being supported by an improvement in productivity along with trends in savings and investment, which have both risen more than 10 percentage points during the last five years.

Of all the growth drivers, the investment side of the story appears to be powering ahead. Although the share of gross fixed capital formation is less than 30% of GDP while that of consumption still remains close to 70%, growth in investment at 15.9%yoy remains more than twice that of consumption, suggesting future potential for growth. We believe the rapid pace of investment growth looks sustainable in the perceivable future, given the current infrastructure deficit and above 90% capacity utilization ratios in many key industries. Further support comes from order backlogs of engineering and construction companies that are estimated to double from Rs801bn in FY07 to Rs1,626bn in FY10.

Consumption has been growing slightly slower than GDP growth, largely due to moderation in interest rate-sensitive sectors. Sectors such as consumer durables are sensitive to interest rates and have seen a slowdown due to the lag impact of monetary tightening. However, the slowdown in loan growth and relatively benign inflation trends will result in a benign monetary policy environment with the next move likely down. This coupled with favorable income and age demographics and increasing penetration of retail credit indicate the potential for consumption growth. Added to this is a fillip for rural incomes, as retail companies are increasingly building supply chains directly with farmers for their retail or export forays.

While the wholesale price index (WPI) may remain well behaved, it probably underestimates the actual inflationary pressure, as domestic oil prices have been unadjusted since oil traded at US$60/bbl. Oil companies in India are compensated for marketing losses by the government, in the form of oil bonds, which is an off-balance sheet item.

Fiscal conditions should remain healthy. With rising government expenditure, the fiscal deficit is unlikely to continue its decline that started in FY02 when the deficit stood at 9.9% of GDP compared to 6.2% in FY07. Rising expenditure pressure has been arising from oil subsidies, extension of the National Rural Employment Guarantee Program, higher interest payments due to more bond issuances under the market stabilization scheme (MSS) and expected higher wages for government employees.

On the monetary front, policy interest rates have been on hold since April. However, with forex reserves up US$70bn this fiscal year and the rupee already gaining 12% since April, liquidity management has posed a dilemma for the authorities. The RBI increased the ceiling for market stabilization bonds to Rs2.5trn and raised the cash reserve requirements (CRR) five times by 50bps to 7.5%. If the surge in dollar inflows continues, RBI will probably continue to tap the stabilization bond ceiling and cash reserve requirements in liquidity management. The government likely will closely monitor capital inflows, especially real estate and private equity, and encourage capital outflows to lessen pressure on the currency. We expect the USD/INR to average Rs38/$ while 10-year yields are likely to moderate to 7.5%.

Despite a widening current account deficit, we maintain our positive stance on the external sector. Our views are based on three key factors: (1) the size of India’s current account deficit: well under 2% of GDP; (2) its composition: over 70% of the rise in non-oil imports is due to capital goods and industrial raw materials; and (3) its financing: buoyant capital flows are more than sufficient to finance the current account deficit. Strong FX reserves provide an added cushion.

Given the reform momentum and relatively low levels of income and economic development, India probably has potential to further lift its trend growth level and remain as one of the fastest-growing economies in the region. But to move to a higher growth trajectory, a number of challenges need to be addressed. While physical infrastructure constraints are well documented, there is a growing need to address social infrastructure constraints, namely education and health. Other key challenges include scaling up India’s talent supply in order to deal with the growing human resource paradox - the need to create more jobs on one hand, and an emerging talent shortage on the other. Ensuring inclusive growth across states is yet another concern, given that 60% of the incremental rise in India’s population up until 2051 is likely to occur in three of the poorest states - Bihar, Uttar Pradesh and Madhya Pradesh.

On the political front, while the stalemate between the Congress and the Left parties over the nuclear deal with the US continues, reports indicate that the government may prefer completing its term in 2009 rather than going ahead with the nuclear deal. Thus, while slow progress on reforms already has been factored into our economic forecasts, a change in government remains a key risk to our estimates.

A US recession could also pose as a risk for India’s economic outlook over the next two years. But given the relatively closed nature of its economy, India would be relatively less impacted as compared with most other economies

Spotlights: Quick Takes on Key Issues

In this section, we highlight this year's top picks from 'CitiViews': our weekly product

Spotlight on Pension Funds

CitiViews: 29 Jan 2007

The government's proposal to allow pension funds to invest in stocks is a step forward in developing the pension market in India

On 27 Nov 2007, the PFRDA appointed SBI, LIC and others as fund managers to invest up to 15% of the funds collected under the NPS in stocks

In a move geared to making returns on pension funds more market-driven, the government has notified the investment pattern of its New Pension Scheme[54]. This will allow 5% of funds collected under the NPS to be invested in the stocks, and up to 100% in government bonds (*see table below*). This is an interim measure until the passage of the Pension Fund Regulatory and Development Authority Bill (PFRDA). However implementation is crucial given that the EPFO is not in favor of this new investment pattern

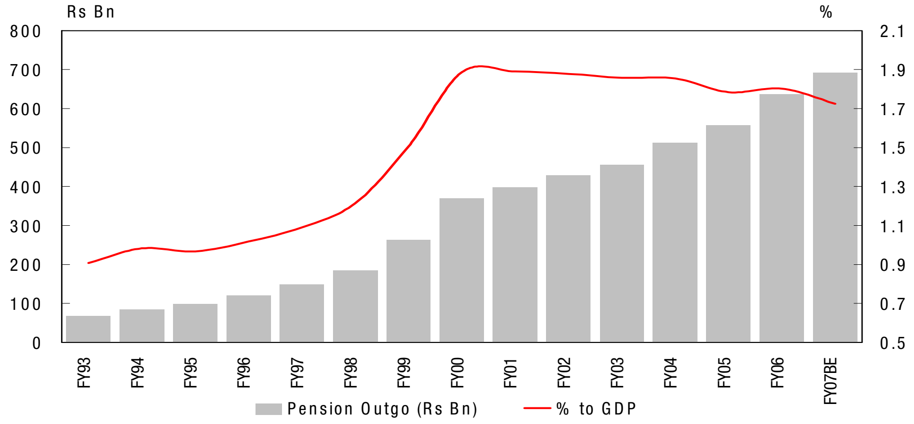
Figure 25. Proposed Investment Patterns for Pension Funds

	Investment Avenue
Option # 1:	
5%	Equity
25%	Government Securities
15%	State Government Securities
25%	Public Financial Institutions
30%	Any non-equity option
Option #2:	
100%	Government Bonds

Source: RBI, Budget Documents

Pensions in India - a Social and Fiscal Issue: Although India's population is amongst the youngest in the world, the number of people over 60 is likely to increase from 71m to 113m over the next 10 years, making the issue of old-age financial security a mounting challenge. However, the pension system in India remains inadequate. *Coverage has been limited*- with just 35m (out of a working population of 400m) having access to a pension scheme. *Fiscal unsustainability* is another issue, with the combined salary and pension bill of the government rising from 1% of GDP in FY93 to 1.7% currently. While government initiatives are positive, the Bill to set up the PFRDA is likely to face roadblocks given the dissent from 3 Left-ruled states.

Figure 26. Trends in Pension Outgos (Centre+ States; Rs Bn, %GDP)



Source: Budget Documents, RBI

[54] **NPS** is a defined contribution pension scheme for *government employees*. **A defined-contribution plan** (DC) is one where the individual makes contributions over the length of his service and the benefit receivable by him depends on the balance in his account at the time of his retirement. The balance includes his contribution and the yield earned on it *For non government employees*, **The Employees Provident Fund Organization** (EPFO) manages both the Employees Provident Fund (a DC scheme) and the Employees' Pension Scheme (a Defined Benefit scheme)

Spotlight on Poverty in India

CitiViews: 12 Mar 2007

With 22% of the population below the poverty line, India is an economy of paradoxes

However, improvements in HDI rankings, coupled with higher rural income levels, are encouraging and bode well for agri performance

Although touted as one of the fastest growing economies in the world, India is also one of the poorest as there are nearly 250m people below the poverty line[55]. Though trends indicate an improvement with the latest National Sample Survey pegging the poverty rate at 22% in FY05, down from 26% seen in FY00; as the Planning Commission points out, this is at best a modest rate of decline given the high absolute levels. This is due largely to the poor agricultural performance as despite its falling contribution to GDP; it continues to remain an important source of livelihood for the rural sector.

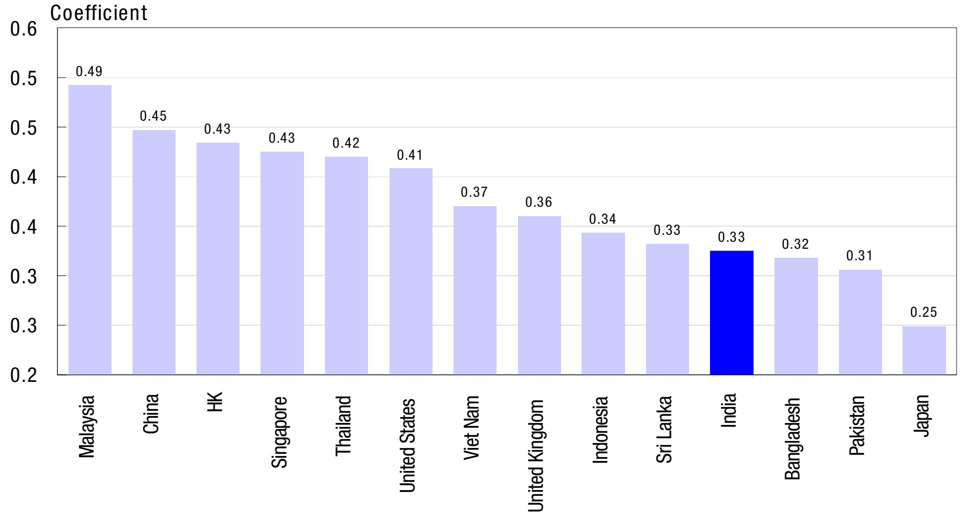
Figure 27. Trends in the Poverty Ratio

	Number of Poor (Mns)	% of Popn
FY74	321	54.9
FY84	323	44.5
FY94	320	36.0
FY00	260	26.1
FY05	~250	22.0

Source: RBI, NSS

On a positive note, the government is taking wide ranging measures to improve the situation. This is reflected in an improvement across social sector indicators, as seen in the rankings of the UNDP's Human Development Index. The '*farm to retail*' model, is also likely to result in higher rural incomes. Moreover, India has a low Gini Coefficient, which is an indicator of income equality; although it is important to note that this is not an efficient yardstick of poverty.

Figure 28. GIni Coefficient - India and Comparative



Source: Human Development Report, 2006;

[55] **Poverty Line**: In India, poverty lines correspond to a total household per capita expenditure sufficient to provide, in addition to basic non-food items a daily intake of 2400 calories per person in rural areas and 2100 in urban areas. Individuals who do not meet these calorie norms fall below the poverty line. In the FY00 survey, the criterion used was monthly consumption of goods below Rs211 for rural areas and Rs454 for urban areas

Spotlight on Water Management in India

CitiViews: 9 April 2007

With water fast becoming a critical constraint for agricultural development, the government has recognized the urgent need to address water infrastructure

This points to emerging opportunities in irrigation, tube-wells, building more dams, as well as water purification facilities

With "inclusive growth" becoming the new mantra of policy makers, water management is an emerging focus area for India, given that both agriculture and the provision of basic services – two basic offshoots of inclusive growth depend on it. Inaugurating the 2007 World Water Day which focused on "*Coping with Water Scarcity*," two interesting comments from PM Singh were that water is now fast becoming the most critical constraint for India's agricultural development and that un-cleaned dirty water is a major cause for child mortality. This issue is further compounded by concerns on climate change which India is most vulnerable to as its monsoon systems and flow of Himalayan rivers are all dependent on current climatic patterns[56].

Water: A growing critical constraint for agriculture. Though total precipitation in India, including snowfall, amounts to 4000bn cubic meter across the country, 50% of the precipitation takes place in 15 days and 90% of the rivers are filled within four months. This makes the availability and distribution of water in India uneven across both space and time. Another concern is that storage facilities are poor – Indian dams can store only 200 cubic meters per capita, as compared to over 1,000 cubic meters in China and 5,000 in the US. All of this has resulted in erratic trends in the agriculture sector. This points to emerging opportunities in irrigation, tube-wells as well as building more dams, as climate change is likely to further increase the variability of rainfall in India.

Water Treatment – An emerging opportunity. Another water-related challenge is provision of basic services which includes the quality of water. The UN estimates that 1.1bn people do not have access to an improved sources of drinking water which is a major cause of child mortality. Child mortality rates in India are still high at 65 per 1000 vs. 30 in China and 6.4 in the US. To this end, companies that have made forays in water treatment/water purification facilities in India include Thermax, Ion Exchange, HLL, Eureka Forbes and WHI[57].

Measures to curb the crisis are encouraging. To its credit, the government has recognized the urgent need to address water infrastructure and has declared 2007 as the Water Year. Further, its National Water Policy recognizes water as a 'national asset' and prioritizes water allocation; encouraging various forms of rain water harvesting. Moreover, the proposed establishment of a water authority for the Brahmaputra along the lines of the Tennessee Valley Authority would combine water infrastructure with modern management approaches to make water a stimulus for growth. One study finds that for every Rs100 of direct benefits, the construction of a dam in northern India generated Rs90 of indirect benefits for the regional economy as well. Government efforts are positive and could help solve the water crisis, provided they are implemented

[56] A **UN Report** recently released predicts that climate change will hit poorer nations first through a decline in crop yields, flooding and water shortages, and sharp changes in temperature. Water scarcity is a key aspect of climate change. Further, a **World Bank study** estimates that 4bn people – or one half of the world's population – will live under conditions of severe water stress in 2025, with conditions particularly severe in Africa, the Middle East, and South Asia

[57] Water Health International will be setting up community based water treatment plants using water from ponds/reservoirs across the country. WHI also has forays into water purification systems and rainwater harvesting.

Spotlight on Clinical Trials – The new wave of Knowledge Process Outsourcing (KPO)[58]

CitiViews: 16 April 2007

Revenues from contract research (of which clinical trials form a large component) continue to be on an uptrend

As these revenues are classified under invisibles, clinical trials bode well for the BoP and the currency

While outsourcing as a concept is not new to global pharma majors, the Indian presence had been sporadic despite its lower cost and strong chemistry skills. However, with India having adopted a more stringent IPR law, there has been growing traction on contract research organisations – firms that assist companies (both domestic and global) in research, testing and the approval processes of products – over the past year. Recent deals such as Merck–Advinus, Eli Lilly–Nicholas Piramal, and BMS–Syngene increase the likelihood that our pharma analyst's estimates on contract research to India might be reached; up from US$4bn currently to more than US$17bn by 2010. This in turn would be positive for the balance of payments and the rupee, as revenues from this are classified under invisibles (*other invisibles include software services and remittances*). A growing niche segment *within* contract research has been outsourcing in clinical trials. With Indian companies also making progress with their own new drug discovery efforts, demand for clinical research services will likely grow further.

Why India is riding this wave: India is today identified as a major resource centre for conducting clinical trials and data management services due to: (1) A large patient population, or patients that are treatment-naïve[59] (2) Besides lower trial costs, the average time to clear a clinical trial in India is 3-9 months compared with 9 months to a year in China. (3) India has well trained investigators and is compliant with global standards on clinical practice. Recent government initiatives to ensure that India remains globally competitive include exempting trials from service taxes, strengthening patent protection, and eliminating 'phase-lags' so that clinical trials can be conducted simultaneously with other markets.

Key players: As evidence of the emerging opportunities in this space, we have seen a number of global players conducting trials in India. Reports suggest that there are currently more than 226 clinical trials in progress in India. These include those sponsored by Pfizer, GlaxoSmithkline and Eli Lilly. Quintiles, one of the largest healthcare and drug-testing firms in the world, is also setting up a lab in Mumbai to support global and regional clinical trials. Domestic players include Vimta Laboratories, Lambda Therapeutics, Clinigene (Biocon's clinical research arm), and Wellquest (Nicholas Piramal's clinical research division).

Key challenges ahead: While India is slowing development as an R&D hub, it faces several challenges. Key among these are poor medical infrastructure, regulatory hurdles and the small size of the Indian drug market by global standards (In September 2006, India accounted for less than 1% of the 763 human clinical trials conducted around the world). Moreover, India does not allow phase I clinical trials on the basis of patient safety and only began allowing phase II trials a couple of years ago.

[58] **Knowledge process outsourcing**: Inroads into this space involve several global companies outsourcing skilled and high-ended functions such as R&D in pharmaceuticals, biotechnology, engineering, and legal services; to domestic engineers and researchers.

[59] This implies that patients have not been subject to drugs for the specific disease that the drug is testing for

Spotlight on Food Security

CitiViews: 11 June 2007

We think the govt's resolve to address the weakness in agriculture to achieve 4% growth in the sector is essential not only to ensure food security, but also to enable inclusive growth

This is of growing importance since inflation in primary products has been due to stagnation in production and productivity of crops under cultivation

While growth in industry and services has accelerated in recent years, with both sectors recording double-digit levels in FY07, agriculture growth has come in much below the governments' optimum desired rate of 4%. At a meeting of the National Development Council (NDC) convened recently, PM Singh remarked on the urgent need to address weaknesses in the agricultural sector, and achieve the Planning Commission's targeted rate of 4% pa - which is necessary not only to ensure food security, but also to enable "inclusive growth." One of the key reasons for weak agri growth is stagnation, not only in area under production but also in productivity. At the same meeting, the FM said that during the period FY99-FY07, area under food-grains has stagnated at between 120-125mn hectares, while productivity of wheat has stagnated at 2,700kgs/hectare and that of rice at 1,950kgs/hectare.

Why is Indian agriculture stagnating? In his speech at the NDC, the PM stated that besides the well-known issues of a weak public distribution and marketing system, fragmented and small landholdings, coupled with poor quality of inputs and seed varieties, together with ***'technology fatigue'***- or the absence of any major breakthroughs in agricultural production technology in recent years are the key reasons behind agricultural stagnation. This is reflected in the divergence between ***'yield gaps'*** (or the difference between actual yield and technologically feasible yield) across states. For instance, for wheat, the yield gap is just 6% in Punjab, but 84% in Madhya Pradesh. Likewise, for maize, the gap is 7% in Gujarat but 300% in Assam. This suggests that there remains potential for wheat production to increase by 8mn tonnes, rice by 10mn tonnes, and pulses by 2mn tonnes by the end of the 11th Plan.

Likely actions? With inflation in primary products still running close to 10% levels, the government is also considering the launch of a Food Security Mission for raising production of wheat, rice, pulses and edible oil. In order to achieve the government's targeted 4% growth rate in agriculture, the PM has suggested that state-specific strategies be developed based on the individual soil, climactic conditions and water availability in each state, to bridge yield gaps. To this end, the government intends to introduce a Central Assistance Scheme, whereby states would receive flexible assistance to support agricultural development plans, provided they meet a base-line expenditure level. Going forward, we expect to hear and see a lot more of news on the agri sector, including on the Bharat Nirman Program[60] in the run-up to the next general elections in 2009

[60] **The Bharat Nirman Program** is a four-year time-bound plan that aims to achieve goals in six areas of rural infrastructure - irrigation, water supply, housing, roads, telephony, and electrification. Key goals include (1) bringing an additional 10mn hectares under assured irrigation; (2) to connect all villages that have a population of 1,000 (or 500 in hilly/tribal areas) with a road; (3) to construct 6mn additional houses for the poor; (4) to provide drinking water to 74,000 uncovered habitations; (5) to expand the reach of electricity in rural areas; and (6) to extend rural telephone connectivity

Spotlight on Bio-fuels and Food Prices

CitiViews: 18 June 2007

A shift towards alternate fuels to counter dependence on other energy sources has been positive so far

However, a key offshoot of this transition is higher prices for agricultural commodities

Faced with the challenge of growing energy dependence and curbing green house gas emissions (GHG), a number of countries have begun to implement the use of alternative fuel sources, specifically bio-fuels- to substitute petroleum for transport[61]. While benefits are plentiful, the growing use of bio-fuels has one serious disadvantage: it is driving up the prices of agricultural commodities and thus taking its toll on food price inflation.

Bio-fuels and government initiatives: In order to encourage the use of bio-fuels, a number of countries have imposed regulations requiring a shift towards greener fuel. The EU recently approved a directive requiring member countries to use 10% bio-fuels for transport by 2020, while the US is required to use 132bn liters of bio-fuel by 2017. In India, the government has proposed a rise in ethanol blend with petrol to 20% by 2012 though there is little progress on this front as the oil and sugar companies have failed to arrive at a consensus on pricing. To augment supply, many countries, including Brazil and the EU, are providing subsides to farmers to encourage them to grow crops that will aid the development of alternate fuels. A point worth noting is that India proposes to use bio-diesel produced from jatropha which is grown on waste-lands

Trade-Offs- Higher food prices: While benefits abound, the growing use of bio-fuels is driving up the prices of agricultural commodities with prices of corn and wheat – the key feedstock for ethanol - have reached their highest levels in over a decade this year. This is despite expectations of strong global grain production in FY08 which in turn has impacted prices of processed goods. Satisfying the EU's new regulations would require the entire region's rapeseed oil production as feedstock as well as put immense pressure on production of wheat and sugar beet which in turn will keep up the pressure on prices of wheat, edible oils and oilseeds.

How will India be impacted? To compensate the shortfall in domestic wheat production, India resorted to wheat imports after a gap of nearly six years. Higher food prices remain one of the key reasons for the rise in primary product inflation which has a weightage of 22% in India's WPI basket. While the latest headline inflation number has come in at 4.8%, primary product inflation remains high at 8.2% with wheat prices (weightage of 1.4%) rising 8.5% while oil-seeds (weightage of 2.7%) rising 28% YoY. Thus to minimize the domestic impact of rising global prices, India would need to enhance agricultural production and productivity to minimize imports of primary articles

[61] Bio-fuels are renewable liquid fuels used for transportation of two main forms- bio-ethanol and bio-diesel. **Ethanol-based bio-fuels** can be derived from sugarcane, wheat or corn, while **bio-diesel** is commonly derived from bio-mass from rapeseed and from non-edible oil extracted from plants, such as *jatropha. For more details please see India in 2006 – Maintaining the momentum- dated January 9, 2007.*

Spotlight on India's Strategic Oil Reserves

CitiViews: 25 June 2007

India's decision to build strategic petroleum reserves is a major step towards ensuring energy security

However, at just 20 days of annual imports, the size of SPRs would need to be increased if it were to truly serve as a hedge for supply disruptions

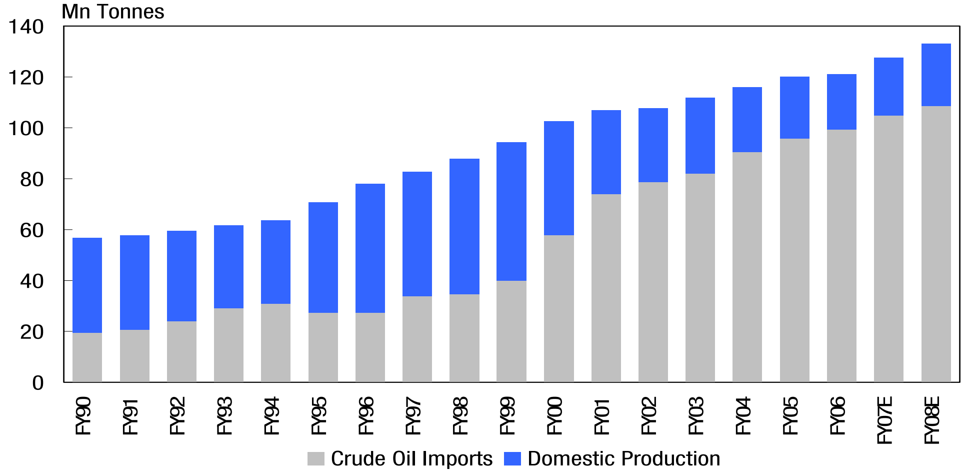
Recent reports[62] indicate that India will shortly commence work on building its 5mt strategic petroleum reserves (SPR) — crude-oil inventories held as a hedge for supply disruptions. The government plans to build reserves to the tune of 36.7m barrels or 5MMT by 2010, equivalent to 20 days of annual imports or less than the 5% of annual consumption. The overall construction cost is estimated at US$0.6bn and will result in the overall import bill rising US$3bn at current oil prices. Building SPRs is a step in the right direction, but we believe the size of SPRs would need to be increased if it were to truly serve as a hedge for supply disruptions. (*For instance, the largest reported SPRs are those of the US which if filled completely could hold 700mn barrels of oil – sufficient to offset 60 days of imports).*

Strategic Petroleum Reserves – Ensuring energy security: In brief, strategic reserves are crude-oil inventories held by the government as a hedge against supply disruptions (these can be in the nature of price volatility due to wars, competitive pressures, or regime changes in OPEC countries). While it is compulsory for the 26 International Energy Agency (IEA) member countries to hold SPRs equal to 90 days of their oil imports, most other nations including China and India are taking steps to build SPRs.

India's SPRs — Construction to commence shortly: Late last year, the Indian government decided to build SPRs to the tune of 36.7m barrels or 5MMT by 2010 at Mangalore (1.5mmt), Vizag (1.0mmt) and Padur (2.5mmt). Of the total reserves to be built, 7.3m barrels (1 mmt) are to be built during the first stage but this could be higher as the marginal cost of raising reserves to 9.8m barrels is minimal. For this, the government set up an SPV in 2006 – the Indian Strategic Petroleum Reserves Ltd (ISPRL) – as a wholly owned subsidiary of the Oil Industry Development Board to build the reserves.

At 5MMT, India's SPR would be less than 20 days of current oil imports

Figure 29. Trends in India's Crude Oil Imports and Domestic Production (Mn Tonnes)



Source: CEIC Data Company, CMIE

[62] See "*India to form Crude Oil Reserve of 5mmt*" Economic Times, dated June 20 2007.

Spotlight on Defense

CitiViews: 2 July 2007

We discuss potential for greater private sector participation in defense given that indigenization is barely 30% vs. the govt's target of 70%

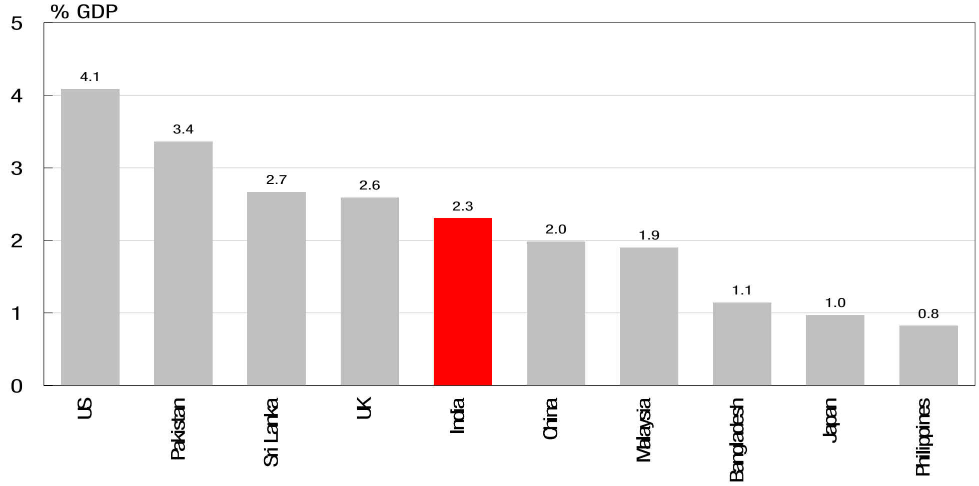
This coupled by the 30% offsets clause should eventually help reduce India's import bill as India is currently one of the largest arms importers in the world

India's defence expenditure has risen by 10% on a CAGR basis in the past ten years with military expenditure currently amounting to 2.3% of GDP. The uptrend in expenditure continues with the FY08 budget estimating expenditure at Rs960bn (US$24bn); up 12% from FY07. The industry which was reserved for the public sector was liberalized in 2001 with the government permitting (1) 100% investment to private firms and (2) FDI to the tune of 26%. However, despite this, only 30% of production is indigenized making India one of the **largest arms importers in the world**, consequently being one of the factors behind India's high trade deficit. (FY07 = 7.1% of GDP).

What's new regarding Indian Defense Expenditure? In a step that will ensure greater self-reliance in defense production, it is reported[63] that India may open the segment to greater private sector participation with the government considering allowing select private sector companies to compete for R&D and production projects at par with the public sector. To this end, a selection committee recently submitted a report identifying '*Tier-I industries of proven excellence…depending on their technical, managerial and financial strength*.' Such firms will be accredited with the status of '***Raksha Udyog Ratna's***' – defence industry jewels.

Scope for Private Sector Participation: While private sector participation has been permitted since 2001, the key players in the Indian defense space continue to be the 8 Defence Public Sector Undertakings and the 39 ordnance factories. However, this could change given the fact that current indigenization levels are at just 30%, compared with the targeted 70% levels and thus leaves immense scope for further private sector participation. The current domestic participants in the defense space players include majors such as Mahindra & Mahindra, Tata Group, L&T, Kirloskar Brothers, and Max Aerospace & Aviation; while in the international space, we have seen interest from players such as Lockheed Martin, Raytheon, General Electric, Pratt and Whitney, BAE Systems etc.

Figure 30. Military Expenditure (% GDP): A Comparative View



Source: World Bank's World Economic Indicators

[63] See page 57 of the FY07 Annual Report of the Ministry of Defense http://mod.nic.in/reports/welcome.html

Spotlight on Floriculture

CitiViews: 9 July 2007

A key beneficiary of the government's thrust on agriculture is floriculture

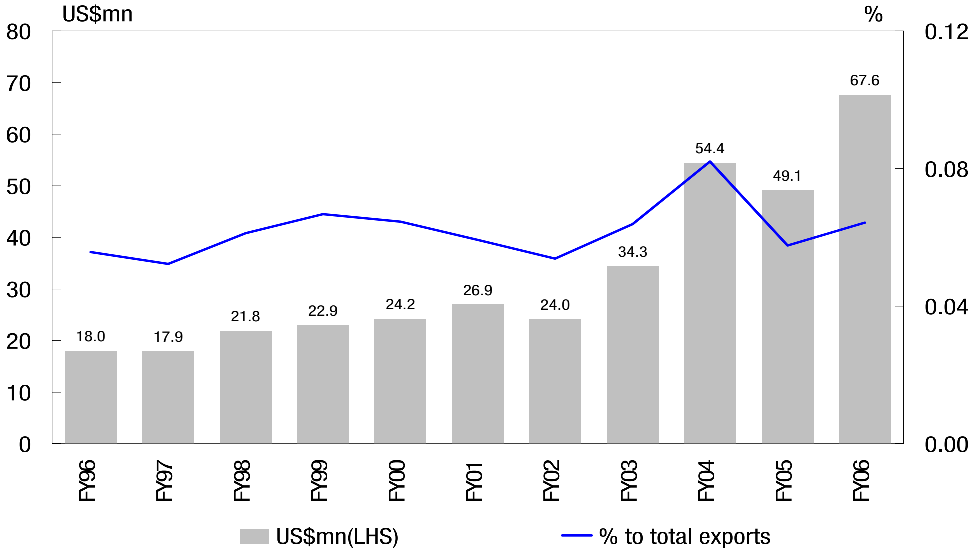
Evidence of this sector's potential is George Soros's recent investment in Karuturi Networks, India's largest floriculture company

Despite having the second largest area under cultivation for floriculture, and favorable climatic conditions, India contributes barely 0.5% to the world's flower trade of about US$8bn. Currently, exports from India – primarily to the US, Netherlands, UK, Germany and Japan – amount to just about US$67m, as compared with the Netherlands's exports of over US$5bn[64] (*the Netherlands is the largest exporter of flowers*).

Constraints to growth: Although floriculture has been granted 100% EOU status as well as 100% FDI, the existing units are operating at low capacity utilization levels. This is due largely to: 1) Inadequate infrastructure, including air space and storage; 2) global factors – such as high import tariffs during peak months and falling prices of cut roses; and 3) an absence of crop diversification given that most Indian units have been so far been focusing on roses. The flower industry is among the most sensitive regarding time-to-market (*for instance, with air-conditioning, roses survive only 5 days while orchids go on for 15 days*).

Recent initiatives and how to play this segment: Given the government's new mantra of inclusive growth, floriculture, which is a sub-set within the agri space, is also likely to benefit. Initiatives include providing subsidies on airfreight and pre-cooling/cold storage units, reducing import duties, and setting up 11 model floriculture units and 20 tissue culture units across the country. The APEDA reports that the government has invited proposals to set up floriculture units from corporates such as ITC, Reliance and the Bharti Group. A recent initiative is the Essar Group's Essar Agrotech, which exports herbs, vegetables, and flowers to Europe, the Middle East, and Australia (part of Essar's trial shipment of marigold exports will be to the UK retail chain Tesco).

Figure 31. Trends in Floriculture Exports (US$mn, % to total)



Source: Agricultural and Processed Food Products Export Development Authority (APEDA)

[64] A key feature of the world flower trade as identified by the ILO is the high degree of concentration by product and sources. Roses are the main traded product. The main exporters are the Netherlands (this includes crops that are grown domestically and crops that are imported, brokered, and then resold).Columbia, Ecuador, Spain and Kenya; while the main importers are Germany, the Netherlands, the US, France, Italy and Japan

Spotlight on Aviation and the MRO Industry

CitiViews: 16 July 2007

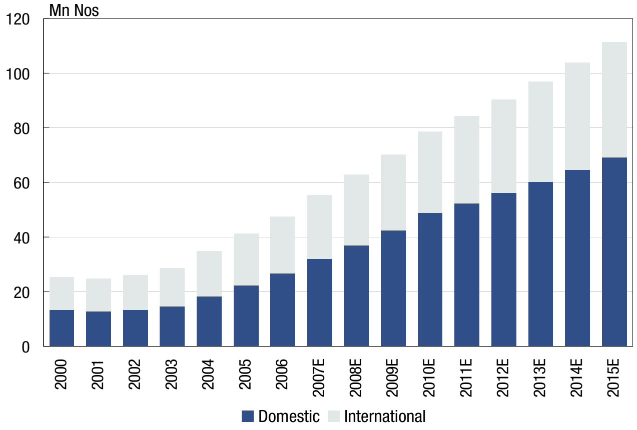
In the aviation space, we see an emerging opportunity in the Maintenance, Repair and Overhaul (MRO) segment, which is witnessing increased corporate interest. This also augurs well from an employment generation perspective

India's aviation sector has witnessed a rapid transformation in the last few years – a result of buoyant growth, rising disposable incomes, higher corporate profitability, supportive government policies, as well as the entry of low cost carriers. This trend is expected to sustain or move up given growing liberalization, price competition, and the continued entry of new players. The rise in air traffic and the resultant increase in fleet utilisation, coupled with the fact that the Indian fleet of 200 planes is likely to more than double given that there are 430 planes on order, augurs well for the maintenance research and overhaul (MRO) industry.

Maintenance Repair and Overhaul (MRO) - An Emerging Opportunity: A growing opportunity within the aviation space that many players have begun to explore is Maintenance, Repair and Overhaul (MRO) - which includes engine maintenance and component repair functions to sustain an active aircraft fleet. The MRO market in Asia, which currently totals over US$9bn, is estimated to touch US$13bn by 2011; and is estimated to grow at 8%pa in India. The three largest MRO operations in India are run by Indian, Air India and Hindustan Aeronautics Ltd. However, given the increase in fleet utilisation, Airbus, Boeing[65], Lufthansa Technik and SIA Engineering are in the process of establishing joint ventures for maintenance facilities. From a macro view point, the MRO industry will provide an additional boost for employment generation.

Constraints to the MRO Business in India: While industry prospects are good, constraints include the weak airport infrastructure[66] and the availability of land. In addition, the 12% service tax is also a hindrance.

Figure 32. Trends and Forecasts in International and Domestic Passenger Traffic



Source: Planning Commission, Confederation of Indian Industry (CII)

Figure 33. Projected Induction of aircraft till 2012

	Current Ownership	Total in principle proposals for the next 5 years
Air India	38	68
Indian Airlines	58	43
Jet Airways	55	32(55)
Sahara	29	10
Air Deccan	32 (35)	62(60)
SpiceJet	6	12
Kingfisher	13 (16)	105 (58)
Paramount	2	3
Go Air	3	2
IndiGo	1	78
Total	**237**	**415**

* Figures in brackets indicate statistics provided independently to CII by select airlines

[65] While the Airbus and Boeing MROs are part of the offset agreements in exchange for orders for Air India and Indian, Jet has announced plans to set up its MRO arm in collaboration with Lufthansa Technik, while LCC GoAir has said that it would partner with Singapore Airlines Engineering.

[66] Growing strain on aviation infrastructure points to an urgent need for modernization and up-gradation of India's civil aviation facilities. While reforms in civil aviation are on the right track, with the modernization and expansion plan for the Delhi and Mumbai airports on a PPP basis is already underway much more needs to be done.

Spotlight on Milk and Dairy Products

CitiViews: 30 July 2007

As India is the world's largest milk producer, we think there is immense potential for organised dairy segment growth…

…supported by rapid growth in milk production, the entry of private retail and growing domestic demand

At 100m tonnes, India is the world's largest milk producer[67]. However, the organised dairy industry accounts for less than 15% of the milk produced and less than 1% in global trade for dairy products. We believe both these are likely to change. Supporting this is the 4% annual growth in the milk production – *three times the world average*; the entry of private retail, India's low farm gate prices and its proximity to milk-deficit markets and finally growing domestic demand – a result of rising incomes.

Global milk prices and India: The FAO's index of international dairy prices has risen over 50% in the last few months – a result of both short term and structural factors which include successive droughts in Australia, lower stocks in New Zealand, reduced subsidies in Europe, lower availability of livestock feed due to the growing shift to bio-fuels, coupled with strong demand from Russia, China, SE Asia, and the Middle East. As India is self sufficient in milk, it is relatively insulated by global price fluctuations. But this is slowly changing. For instance, the rise in global prices resulted in higher domestic prices of skim milk powder (SMP) leading to a temporary ban on exports to rein inflation.

Corporate forays in the Indian dairy space: Given the low level of processing, several players are making forays in the dairy market. Besides the liquid milk segment, other areas of interest include probiotic dairy products, milk powder, packaged milk, butter, cheese and ready to drink/flavored milk products. New players evincing interest in this space include the global majors such as Danone, LandoLakes and Kraft Foods. Among the existing players, besides Nestle ramping up its dairy business, Coca-Cola, Pepsico, Reliance Retail and Bharti intend to foray into the liquid milk market, while the domestic co-operatives- GCMMF (Amul) and NDDB (Mother Dairy) are looking at possibilities in *global markets* to improve profit margins.

Figure 34. Top 10 Milk Producing Countries (Mn Tonnes)

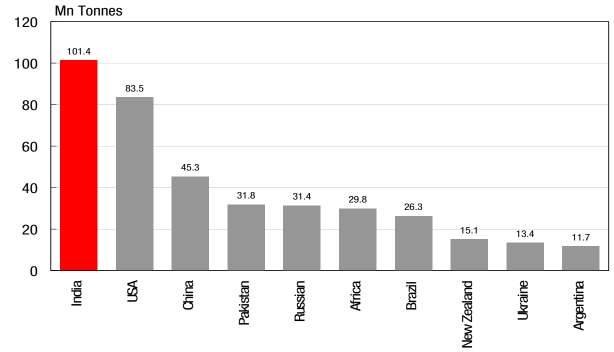
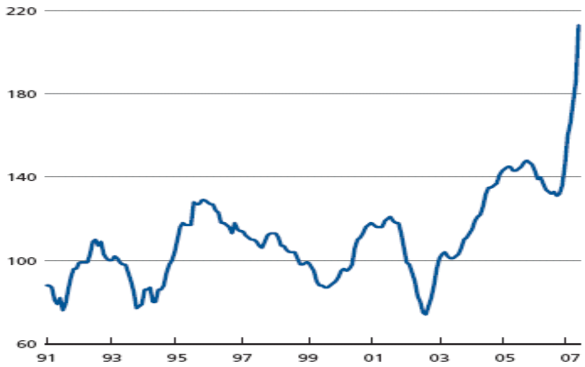


Figure 35. FAO's Monthly Index of Prices for Selected Dairy Products



Source: National Dairy Development Board, FAO

[67] **India's Dairy sector** has seen a transformation since the 1950s- emerging from a milk deficient country to being one of the largest milk producers. This is a result of the dairy-cooperative movement that began in 1965, where under the auspices of the National Dairy Development Board (**NDDB**) and Operation Flood, dairy cooperatives were connected through a National Milk Grid, which eliminated middle-men and reduced price variations. Today, the dairy cooperative network includes 170 milk unions operating in 346 districts (58% of the total) with Anand Milk Union Ltd (**AMUL**) is among the most successful dairy co-operatives in the world.

Spotlight on Wood Products

CitiViews: 14 Aug 2007

Growth in wood products averaged 100%+ between Jan-Jun 07. This piece discusses whether the surge in wood products is for real or just another data discrepancy

Latest data on industrial production pegged growth at 9.8% in June[68]- below the double-digit mark for the first time in 11 months. With the investment side of the story largely intact as reflected in sustained buoyancy in capital goods production – up 29% in June, the slowdown in growth was due to the moderation in the rate-sensitive sectors – consumer goods and transport equipment. However, what has been puzzling is the extraordinary surge in production of wood and wood products – where growth has averaged 100% for the sixth month in a row, with latest numbers pegging growth in June07 at 104%yoy.

Housing may be the driver behind the rise... Production of wood and wood products comprises two key components- plywood and particle board production. Of the two, it is the latter that is contributing to the rapid growth in this segment (*see chart*) as particle boards are a cheaper substitute of wood, particularly used in the manufacture of furniture such as table tops, door/window panels, show cases, etc. While current trends in wood production could be a result of the negative base during the previous year or maybe even written off as a data error, we think a possible explanation could be the result of rising housing demand which in turn has created greater demand for interior wood and value-added wood products. Looking ahead, on the back of the current shortage in housing, the demand for wood products could likely sustain. Key companies in this space include Century Plywood, Greenply Industries, Kitply Industries.

…but higher imports of raw materials need a close watch: A key factor to watch out for, however, is imports of wood products, which amounted to US$114mn in Mar07 (+47%yoy). Following the implementation of the National Forest Policy in 1988 which banned the felling of trees in forests located above 1000 meters, the wood industry in India has faced severe shortages in raw materials. Higher demand for production is thus met by increased imports of unprocessed lumber- which must be discounted from the rise in production.

Figure 36. Trends in Production: Wood and Wood Products (%YoY)

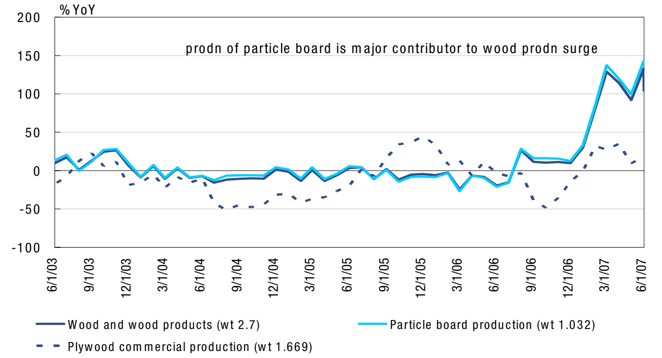
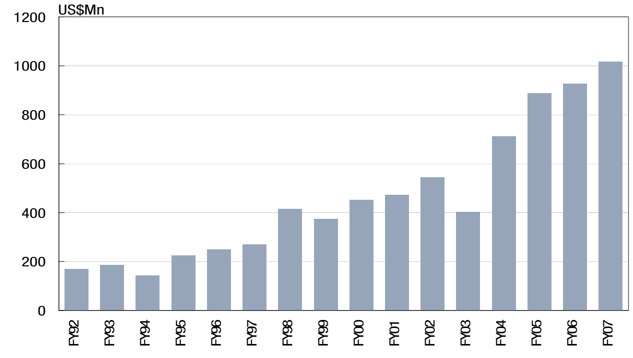


Figure 37. Trends in Imports of Wood Products (US$mn)



Source: CEIC, Ministry of Statistics

[68] Please see "*June industrial production decelerates to 9.8%, with rate-sensitive sectors continuing to impact headline numbers* " at https://www.citigroupgeo.com/pdf/SAP08121.pdf

Spotlight on Gold: A 72% rise in gold demand in 1H07

CitiViews: 3 Sept 2007

India's gold demand has been fuelled by sales and promotion of branded jewellery and growing rural incomes

Mkt deregulation has also resulted in gold emerging as an investment option. While this has translated into rising imports…the govt is likely to propose a new gold mining policy

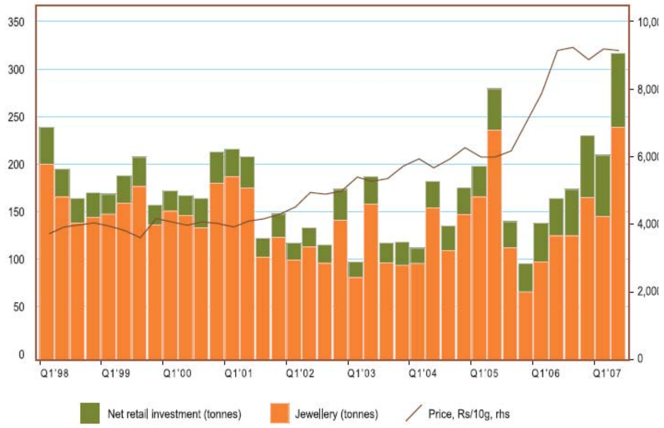
Latest data by the World Gold Council indicates that Indian gold demand (i.e., jewellery and retail investment) was 528 tonnes during 1H07 up 72% YoY, accounting for 36% of total world demand. *In fact India's Q2 gold demand was 317 tonnes – equivalent to half the global mine output in the quarter*. What is interesting is that demand has been buoyant despite prices remaining at US$660/oz – the reason being that a bulk of Indian demand is jewellery, which is relatively price inelastic.

Factors behind the rise in jewellery demand: While Indians have had a strong affinity to gold for decades[69], the rise in jewellery demand has, in turn, been led by robust economic growth, increased sales and promotion of branded jewellery and growing rural incomes – due to a good winter harvest and the trickle-down impact coming into play. However, a part of this demand has translated into rising imports – gold comprised nearly 8% of total imports in FY07, up 29% yoy – one of the factors behind India's high trade deficit of 7% of GDP.

Gold is now also an important investment option: In addition to jewellery demand, market deregulation has resulted in gold being traded on the Multi Commodity Exchange of India (MCX) and the National Commodity and Derivative Exchange (NCDEX). After the FY06 Budget proposed the introduction of **Gold Exchange-Traded Funds** that use gold as the underlying asset, Gold-linked debentures are also emerging as an investment option.

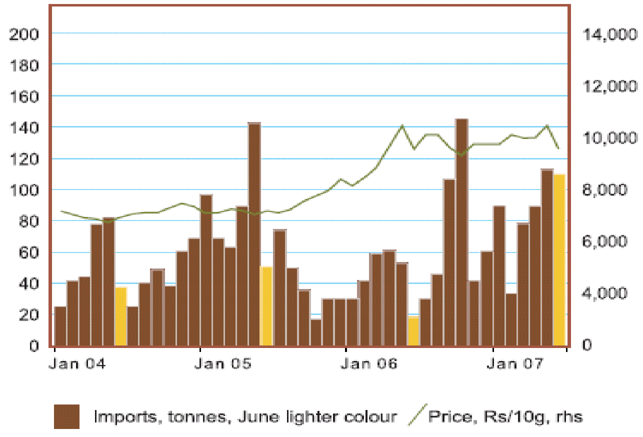
Government proposing a new Gold Mining Policy: Lack of investment in the gold mining space has resulted in India dependence on imports. In a bid to change this, the government is proposing the opening up of the sector and has already asked the Geological Survey of India to explore additional reserves in the states of Karnataka, MP, W Bengal, Bihar and Chattisgarh which would enable it to attract foreign investment to the tune of US$25bn over three years.

Figure 38. Trends in India's Gold DEMAND (Tonnes; Price)



Source: World Gold Council

Figure 39. Trends in India Gold IMPORTS (Tonnes; Price)



Source: World Gold Council

[69] Gold has been an integral part of Indian society for decades, and has significance not only as a form of savings and investment, but also of religious, medicinal and historical importance resulting in India having over 14,000 tonnes of gold deposits. The **Gold Control Act**, which forbade the holding of gold in bar form was repealed in 1991

Spotlight on Financial Savings

CitiViews: 10 Sept 2007

A clear uptrend in savings has helped spur GDP growth to 9%+

However, while gross financial savings have risen, net financial savings have remained constant given the rise in financial liabilities

Latest data released by the RBI in its annual report indicates a continued uptrend in gross financial savings of the household sector, to 18.4% of GDP in FY07, up from 16.7% last year and 13.9% in FY05. However, **net** financial savings have remained constant at 11.6% - a result of an increase in financial liabilities (loans) to 6.8% in FY07, up from 5.1% in FY06 and 3.9% in FY05. The composition of financial savings indicates:

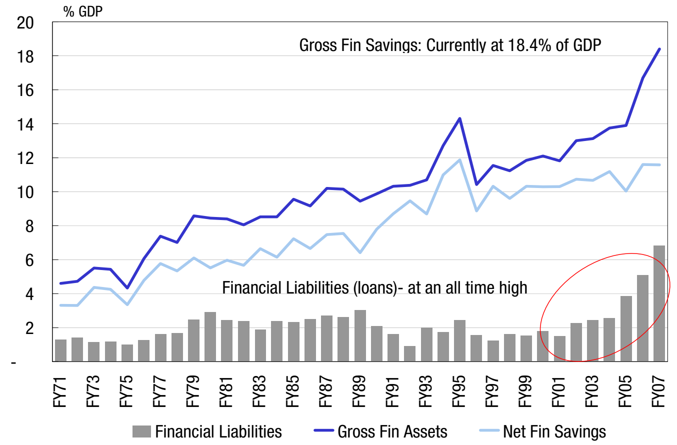
1. **Bank deposits have been on the rise.** On the back of rising interest rates, coupled with the spread of banking and financial services across the country, bank deposits as a percentage of total financial assets rose to 56% in FY07 up from 47% in FY06 and 37% in FY05. This has been at the expense of investments in small savings schemes, which saw a sharp decline to 4.9% of total financial assets in FY07, from 12.2% in FY06 and 19.6% in FY05.

2. **Savings going to equities also rises:** Interestingly, while savings in bank deposits have risen, so have those in shares and debentures, at 6.3% of total financial assets – up from 5% in FY06 and 1.1% in FY05. This can be attributed to the upturn in the capital markets and the spread of the mutual fund industry.

3. **Insurance Products**: Finally, growing de-regulation has resulted in the entry of new players and greater competition in the insurance industry. This is reflected in the insurance funds continuing to occupy 15% of the pie, higher than the 9.2% investment in provident/pension funds. Looking ahead, as insurance penetration deepens; we expect to see more investments coming into this area.

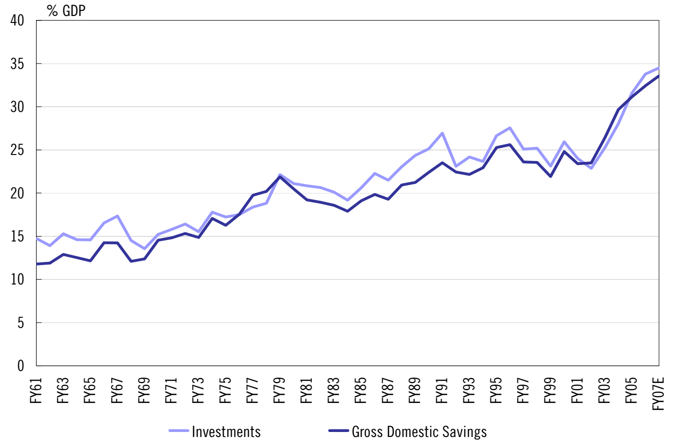
Overall Savings Rate likely to remain high – Positive for Growth: India's savings have been on a clear uptrend with a spurt in the last few years from 23.5% of GDP in FY03 to 32.4% currently. The household sector continues to be the biggest contributor to total savings (69%) while the shares of the corporate and public sector stand at 25% and 6%, respectively. Moreover given favorable demographics, the uptrend in savings is likely to continue and is positive given the 11th Plan is targeting GDP growth of 9%+.

Figure 40. Trends in Gross, Net Household Financial Assets and Liabilities (%)



Source: RBI

Figure 41. Trends in Savings and Investment (% GDP)



Spotlight on Govt's Onion Affair

CitiViews: 22 Oct 2007

We examine the repercussions of rising onion prices, given that they have historically spelled disaster for the government

While government measures have helped quell prices, a longer-term solution lies in improving agri production and productivity

While politics and p-notes are the issues playing on most minds, high onion prices have raised their ugly head once again. Onion prices have risen from Rs13/kg to as high as Rs27/kg in less than 2 weeks, but recent measures have resulted in prices stabilising at Rs22/kg. This, coupled with export bans on wheat, wheat flour, non-basmati- rice, has resulted in primary product prices rising 5.7% yoy (from 9%+ a few weeks ago), thus resulting in headline inflation (WPI) remaining low at 3.07%.

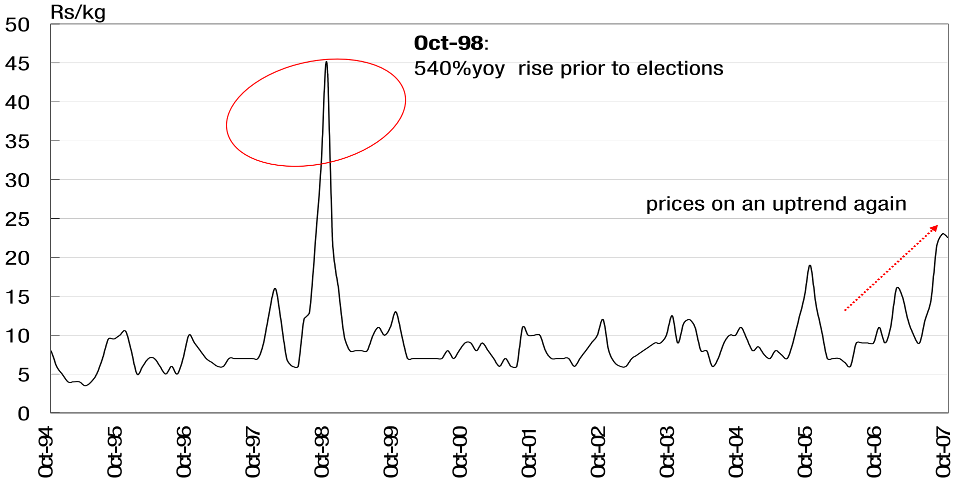
Onions play a vital role in Indian politics: Given that onions are a staple Indian vegetable, higher prices impact the common man and historically have spelled disaster for the government. In 1998, higher onion prices (+600%) resulted in the BJP losing the assembly elections in the two key states of Delhi and Rajasthan. Even before this, as early as 1980, the Janata Party lost a general election partly due to rising onion prices.

What is the government doing? In a bid to quell rising prices, the government while not coming out with an all-out ban has been discouraging exports by raising the Minimum Export Price of onions from US$225/tonne in May to US$495/tonne currently. Further, it has made it mandatory for exporters to obtain licenses before exporting the vegetable. Exports have already dipped 36% during 1H FY08; and with domestic production already up 30% during the kharif season, we expect the prices to soften further. In the interim, fair price shops such as Nafed and Mother Dairy are selling onions at lower, controlled prices.

What is the real solution to the Onion Crisis? While government measures will help quell prices in the short term, the real solution in fact lies in improving agricultural production and India's poor public distribution system. Supply-side inefficiencies and stagnant production, coupled with poor targeting, has been the reason behind rising prices across all commodities. Resolving these issues and improving rural infrastructure is thus a longer-term solution to the onion crisis.

India is the world's second-biggest producer of onions, accounting for more than 22% of the world's total area under onion cultivation. Production in FY06 was 8.7m tonnes, up 35%yoy

Figure 42. Trends in Retail Prices of Onions (Rs/Kg)



Source: Ministry of Agriculture

Spotlight on Rising Fertilizer Subsidies –Another off-balance-sheet item

CitiViews: 19 Nov 2007

Rising fertilizer subsidies are a worry since part of the payment to offset the subsidies are not reflected in the headline deficit number

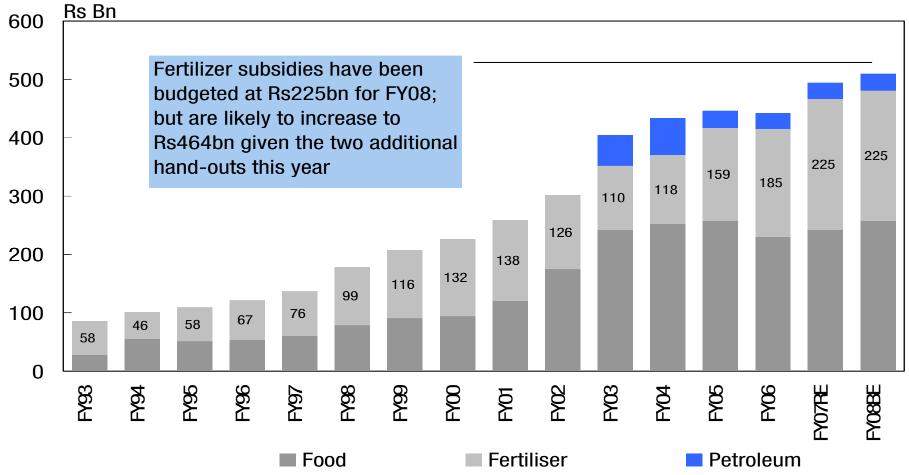
While proposed changes in the fertilizer subsidy policy could help improve agri productivity, effective targeting and reducing cross subsidization are key

Last week, the government announced a further Rs90bn increase in fertilizer subsidies. This follows the Rs150bn increase made earlier this year largely in lieu of the FY07 arrears. Together, this will result in the overall fertilizer subsidy bill rising to Rs464bn for FY08, up from Rs280bn last fiscal. While part of this payment will be in cash, a substantial chunk will be in the form of ***"fertilizer bonds"*** – similar to the ***"oil bonds***[70]***"*** that have been issued to the oil marketing companies. A key point to note is that these bonds are off-balance sheet items and thus will not impact the headline deficit number. *(If included, these bonds would raise the fiscal deficit to 4.4% of GDP vs. the budgeted target of 3.3%).*

Fertilizer policy – the story so far: In a bid to encourage usage and increase crop productivity, the government regulates prices of nitrogen (N), phosphorous (P) and potassium (K) fertilizers. But with prices being unchanged since 2002, the fertilizer subsidy bill is estimated to touch Rs464bn in FY08 up from Rs110bn in FY03. Since nitrogenous fertilizers are the most heavily subsidized, usage is tilted towards this compound, impacting agri productivity. A new policy is on the anvil wherein the ministry proposes to include subsidies on sulphur which would improve the fertilizer mix and contain soil erosion of nutrients.

Fertilizer subsidies – How helpful are they? Fertilizer subsidies are beneficial only to the extent that they aid productivity/output increases in the agri sector. But, so far, they have not included sulphur – one of the most important ingredients in improving soil fertility. With fertilizer subsidies at 41% of total subsidies, plugging leakages, effective targeting, and reducing cross subsidization between nitrogen and other compounds should be the government's priority.

Figure 43. Trends in Major Subsidies (Rs Bn)



Fertilizer subsidies have been budgeted at Rs225bn for FY08; but are likely to increase to Rs464bn given the two additional hand-outs this year

Source: Budget Documents

[70] **Oil Bonds:** Given that domestic oil prices are not in line with international prices, since FY06, the government has been issuing oil bonds in order to compensate oil companies for marketing losses. The government has decided to issue oil bonds to the tune of Rs235bn in FY08 as compared with Rs241bn in FY07 and Rs115bn in FY06

Spotlight on Real Estate Investment Trusts (REITS):

CitiViews: 26 Nov 2007

While REITs appear to be an attractive investment option for even the small investor, issues would have to be addressed

A major grey area – Permitting REITs at this stage looks like a policy dichotomy given that the RBI is concerned about asset bubbles in the real estate sector

Late last week, SEBI announced that it was considering proposals to allow real estate investments trusts - REITs to open up in India. While this will open up another asset class for investment, it will enable property developers raise funds domestically instead of off-shore. While **real estate funds** (REMF) began operations in 2005, the approval of the REIT guidelines had been delayed. This, coupled with the fact that the Reserve Bank has tightened lending norms for the property sector, resulted in several domestic property companies (these include DLF, Unitech, India Bulls Real Estate and the Embassy Group) looking to list in Singapore/Gulf as REITs or launch realty trusts.

REITs as an investment option – The positives and negatives: REITs provide a method of financing for the capital-intensive real estate sector and will thus help aid infrastructure development. It is an attractive investment option since they allow even small investors to gain from real estate booms. On the flipside, investments involve a long gestation period, and funds can prove risky if assets are not sufficiently diversified. Key issues that would have to be addressed by SEBI guidelines include rationalizing stamp duties, which differ from state to state and are as high at 15% for the property market; and resolving current rent control provisions, which prevent rental values to be determined by market dynamics.

How are REITs different from REMFs? A REIT operates on the concept of pooling money to acquire properties and then distributing the rental income amongst investors. While REMFs are structured similar to REITs, they are different in that schemes can either invest *directly* in property or *indirectly* through funds invested in mortgage-backed securities or shares/bonds of listed/unlisted companies that deal in properties.

REITs – The grey area: While domestic REITs would result in a shift from off-shore to on-shore financing, permitting REITs at this stage looks like a policy dichotomy given that the RBI is concerned on asset bubbles in the real estate sector.

Statistical Snapshot

Figure 44. India – Macroeconomic Summary, FY98- FY09E (Percent unless otherwise indicated)

Year -end 31 March	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08E	FY09E
National income indicators												
Nominal GDP (Rs bn)	15,272	17,512	19,520	21,024	22,811	24,581	27,655	31,266	35,672	41,257	46,621	52,868
Nominal GDP (US$ bn)	411	415	450	460	475	509	603	695	805	919	1,160	1,391
Per Capita GDP (US$)	418	409	437	440	447	472	550	673	769	864	1,075	1,270
Real GDP growth (%YoY)	4.8	6.5	6.0	4.4	5.8	3.8	8.5	7.5	9.0	9.4	9.3	9.4
Agriculture growth	-2.4	6.2	0.5	-0.2	6.3	-7.2	10.0	0.0	6.0	2.7	3.0	2.8
Industry growth	4.3	3.7	4.1	6.3	2.7	7.1	7.4	9.8	9.6	10.9	10.0	10.4
Services growth	9.8	8.4	10.8	5.7	7.2	7.4	8.5	9.6	9.8	11.0	11.0	11.0
By Demand – Real (%YoY)												
Consumption	3.5	7.0	6.5	2.2	5.4	1.8	6.2	5.4	7.2	6.6	6.8	7.8
Pvt Consumption	2.3	6.1	5.3	2.6	6.0	2.2	6.9	5.4	6.7	6.2	7.0	8.0
Public Consumption	11.2	12.2	13.1	0.5	2.0	-0.4	2.5	5.4	9.8	9.0	6.0	7.0
Gross Fixed Capital Formn	6.0	7.4	11.2	0.3	4.5	8.7	13.1	11.8	15.3	14.6	15.0	16.0
Cons; Invst, Savings (%GDP)												
Total Consumption	74.6	76.4	77.2	76.4	76.5	74.7	73.0	70.6	69.2	67.7	67.4	66.6
Total Investments	25.3	23.3	25.9	24.3	22.9	25.2	28.0	31.5	33.8	35.0	37.2	39.4
Gross Domestic Savings	23.6	21.9	24.8	23.4	23.5	26.4	29.7	31.1	32.4	33.6	34.7	36.0
Real indicators (%YoY)												
Cement dispatches	10.6	6.4	14.1	0.1	8.6	11.1	6.5	9.3	10.3	10.0	10.0	0.0
Commercial vehicle sales	-33.2	-11.2	22.0	-11.9	-4.5	27.9	38.1	24.0	13.0	24.0	7.0	10.0
Car sales	1.1	-0.9	54.9	-6.9	4.5	7.6	32.8	18.7	7.0	15.0	12.0	12.0
Two-wheelers	-3.7	5.0	-5.4	-28.1	-3.1	-13.1	10.6	16.8	15.0	14.0	0.0	0.0
Diesel consumption	3.5	3.7	5.5	2.0	-3.5	3.0	4.5	5.5	3.0	5.0	5.0	0.0
Tele-density	1.9	2.2	2.8	3.5	4.3	5.2	7.4	9.4	12.7	16.2	17.2	18.2
Monetary indicators(%YoY)												
Money supply	18.0	19.4	15.0	16.4	14.1	14.7	16.7	12.3	21.2	18.0	18.0	18.0
Int rate PLR - year end	13.0	12.0	12.0	11.5	11.5	10.8	10.5	10.5	10.5	12.3	12.3	11.0
Inflation – WPI	4.4	5.9	3.3	7.2	3.5	3.4	5.4	6.5	4.5	5.3	4.5	4.3
CPI	6.8	13.1	3.4	3.8	4.3	4.0	4.0	4.5	4.0	6.0	6.0	6.0
Bank credit growth	16.4	13.8	18.2	17.3	15.3	23.7	15.3	30.9	37.0	27.6	20.0	20.0
Deposit growth	18.4	19.3	13.9	18.4	14.6	16.1	17.5	13.0	24.0	23.0	15.0	15.0
Fiscal Indicators(% GDP)												
Centre's fiscal deficit	4.8	5.1	5.4	5.6	6.2	5.9	4.5	4.0	4.1	3.7	3.5	3.2
State fiscal deficit	2.9	4.3	4.7	4.3	4.2	4.2	4.5	3.5	2.5	2.7	2.5	2.4
Combined deficit (Centre+State)	7.1	8.9	9.4	9.5	9.9	9.6	8.5	7.5	6.7	6.4	6.0	5.8
Combined domestic liabilities	61.8	62.6	66.6	71.0	76.4	80.7	81.5	82.4	80.6	77.3	74.1	71.9
Combined o/s guarantees	9.7	9.8	11.1	12.2	11.5	11.2	11.1	10.0	8.1	7.7	7.5	7.3
External Sector												
Exports (US$bn)	35.7	34.3	37.5	45.5	44.7	53.8	66.3	85.2	105.2	127.1	146.2	168.1
% YoY	4.5	-3.9	9.5	21.1	-1.6	20.3	23.3	28.5	23.4	20.9	15.0	15.0
Imports (US$bn)	51.2	47.5	55.4	57.9	56.3	64.5	80.0	118.9	157.0	192.0	229.2	259.0
%YoY	4.6	-7.1	16.5	4.6	-2.8	14.5	24.1	48.6	32.0	22.3	19.4	13.0
Trade deficit (US$bn)	-15.5	-13.2	-17.8	-12.5	-11.6	-10.7	-13.7	-33.7	-51.8	-64.9	-83.0	-90.9
Invisibles (US$bn)	10.0	9.2	13.7	9.8	15.0	17.0	27.8	31.2	42.7	55.3	67.6	75.3
Current Account Deficit (US$bn)	-5.5	-4.0	-4.1	-2.7	3.4	6.3	14.1	-2.5	-9.2	-9.6	-15.4	-15.6
% to GDP	-1.3	-1.0	-0.9	-0.6	0.7	1.2	2.3	-0.4	-1.1	-1.0	-1.3	-1.1
Forex reserves (excl gold) (US$bn)	26.0	29.5	35.1	39.6	51.0	71.9	106.1	135.1	145.1	191.9	240.0	263.5
Months of imports	6.1	7.5	7.6	8.2	10.9	13.4	15.9	13.6	11.1	12.0	12.6	12.2
Exchange rate												
Rs/US$ - annual avg	37.2	42.2	43.4	45.7	48.0	48.3	45.9	45.0	44.3	44.9	40.2	38.0
% depreciation	4.8	13.4	2.8	5.3	5.0	0.6	-5.0	-2.0	-1.6	1.4	-10.5	-5.5
Rs/US$ - year end	39.52	42.4	43.6	46.5	48.9	47.5	43.6	43.8	44.6	43.5	39.0	37.0
% depreciation	10.4	7.3	2.8	6.7	5.2	-2.9	-8.2	0.3	2.0	-2.5	-10.3	-5.1

Source: CSO, RBI, Ministry of Finance, Citigroup estimates.

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