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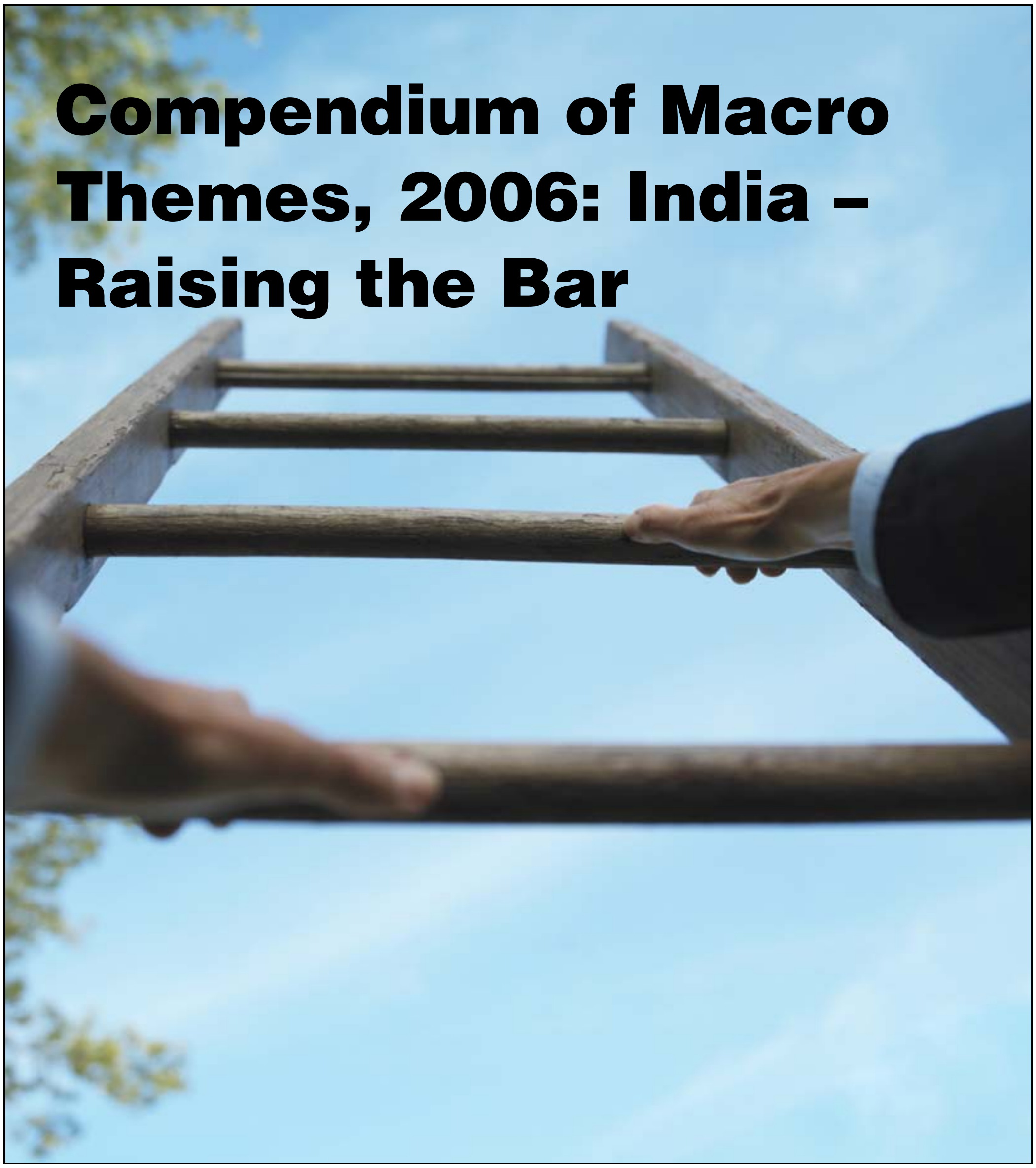
ECONOMIC AND MARKET ANALYSIS: INDIA

Economics

15 December 2006

Compendium of Macro Themes, 2006: India – Raising the Bar



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Compendium of Macro Themes, 2006: India – Raising the Bar

- **2006 was about 'Maintaining the Momentum' – Growth surpassed itself; its breadth opened new opportunities and investment vistas; and it took the blows on its chin**

- **The economic growth bar was raised; 8% appeared a given, capital flowed in, and the India opportunity appears more fact than story**

- **But is the euphoria glossing over some of the stresses – people, prices and politics?**

- **They are real risks, and they beg the question - 'Can India accelerate' above its current growth levels? We believe the odds of India doing so are probably more than even as we usher in 2007**

2006: The Year That Was

Figure 1. Compendium of Macro Themes, 2006 — Contents

Figure 1. (Cont'd) Compendium of Macro Themes, 2006 — Contents

India in 2006

On 9 January 2006, the start of a new year, we looked into our crystal ball and predicted that the three mega themes would continue to remain on track

We also discussed four new trends to watch out for during the year

WE EXPECTED...

- **The continuation of the three mega themes - an investment cycle upturn, strong trends in consumption led by growing urbanization, and outsourcing to further entrench themselves.**
- **The emergence of a new theme – Trickle-down impact – led by initiatives in Food Processing, Micro Finance and Bio Fuels.**
- **Key Risks to the positive outlook – oil, prices, politics and coal shortages – being worthy of caution.**

...AND WHAT HAPPENED

- **GDP growth crossed 9% in 1HFY07. The investment upturn; urban consumption and outsourcing have buoyed overall growth.**
- **The trickle-down impact is slowly coming into play with many corporates building supply chains with the farmers for their retail/export forays.**
- **Though oil touched new highs, the economy displayed resilience given the comfortable forex reserve position.**
- **However, inflation and politics continue to be risks.**

Economy in 2006 – Maintaining the Momentum

2005 could well go down as a benchmark year for India. The economy grew rapidly, returned generously, the average Indian drove and participated in it, and the world noticed. 2005 was also different as growth was structural and cyclical, at the corporate level it was broader, rather than focused; and at the consumer level it was more encompassing than exclusive. For India, 2006 should be about 'Maintaining the Momentum'. We see economic drivers – capex, consumption and outsourcing – further entrenching themselves. And its challengers – oil prices, politics and coal shortages – worthy of caution.

Potential New Themes in 2006:

Food Processing, Micro Finance and Bio Fuels – Likely to aid Trickle down Impact

We believe that 2006 could be a year where the trickle down impact comes into play supported by initiatives in (1) **Food processing** – where India has immense potential given favorable demand and supply side dynamics (2) **Micro Finance** – availability of which will eventually aid the poor to increase incomes and build viable business and (3) **Bio Fuels** - Production of biofuels from crops such as sugar cane, corn and wheat (for ethanol) and jatropha (for biodiesel) will create an additional market for farmers and increase employment.

Renewed Thrust on Infrastructure

We believe 2006 will be a year where the government renews its thrust on infrastructure development. While the progress in telecom, roads and civil aviation is encouraging, power has been disappointing. Ports have seen some improvement while railways are likely to benefit from the proposed freight corridor. This will have a multiplier impact across most sectors in the economy.

Knowledge Process Outsourcing

With India likely to be one of the major future growth markets, global companies are hiring local engineers and researchers to tailor products for the growing market. What is encouraging are further inroads into Knowledge Process Outsourcing (KPO) - outsourcing of skilled functions such as R&D in pharma, bio-technology, engineering design, finance and legal services.

Upside Risk to our FY07 GDP estimates

Our 2006 forecasts for Brent are US$51/bbl, however assuming futures prices as our base case; we incorporate crude prices averaging US$60/bbl in our estimates. As a result our FY07 GDP growth estimate is 7.1%, lower than the 7.5%-8% expected in FY06. If oil prices come off and the growth drivers continue, we expect an upside of at least 100bps to our FY07 GDP estimate thereby resulting in GDP crossing 8%.

Food Processing – Can India be the Food Factory of the World?

One of the new themes we discussed was whether India could be the Food Factory for the World, given that less than 2% of total produce in India was being processed

We believe this would likely facilitate the trickle-down impact and have several economic benefits

WE EXPECTED...

- **That changing lifestyles, rising disposable incomes, coupled with supportive government policy and favorable demand and supply side dynamics would fuel a demand for packaged goods.**
- **That the evolution of the food processing industry would have several benefits in terms of (1) a trickle-down impact resulting in an increase in rural incomes, (2) employment generation, (3) higher exports leading to FX earnings, (4) improvement in quality.**

...AND WHAT HAPPENED

- **The food processing industry has taken off substantially. Moreover, the trickle-down impact of the segment is evident with several corporates (such as ITC, Bharti, PepsiCo, Reliance Retail) attempting to eliminate the middle-man and building supply chains directly with the farmer for their retail/export forays.**

The Food-Processing Industry in India: Poised for Growth

India has 184 mn hectares of arable land and annually is the highest producer of milk (91mn tonnes) and livestock (483mn), the second largest in fruits and vegetables (150mn), the third largest in food grains (210 mn tonnes), the fifth largest producer of eggs and the seventh largest in fish. However the level of food processing remains low - for instance, it is merely 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. In fact, the Ministry of Food Processing estimates the market size for the industry to *treble,* from Rs4,600bn currently to Rs13,500bn by 2015.

Key Growth Drivers

Favorable demand as well as supply side dynamics, coupled with supportive government policy are key factors driving growth in the segment:

- **Strong Domestic Demand:** India's food consumption for FY04 has been estimated at Rs4,760bn, and assuming a 7% growth rate, should grow to Rs8,990bn by 2015 (this is in constant prices). This indicates the immense domestic potential for the market in the country. India's favorable demographic profile, changing lifestyles, rise in incomes and an urban consumption boom, coupled with a demand for health foods, prepared meals and other processed foods should continue to boost the industry.
- **A Strong Raw Material Base:** With agriculture comprising 1/4th of the country's GDP and sustaining 2/3rd of its population, India has vast untapped potential, and a strong raw-material base working in its favor. Data indicates that India

produces 41% of the world's mangoes, 28% of the world's tea, 23% of its bananas, 24% of its cashew nuts, and 36% of its green peas thus suggesting that India has the varied raw material to cultivate a range of agricultural products.

Key Benefits of Food Processing

In simple terms, food processing involves transforming raw ingredients into marketable food products. Despite the declining share of agriculture in GDP (22% currently as compared to 40% in the eighties), it still sustains 2/3rd of the population. Thus growth in the food processing industry will have several positive repercussions:

- **Employment Generation:** Food Processing is an employment-intensive industry and creates 1.8 direct and 6.4 indirect jobs for every Rs1mn invested. Given India's demographic dilemma – wherein with 50% of the population below 25 is creating a market for goods and services, India's growing workforce is posing a major challenge – the employment generation potential of food processing is a significant positive.
- **An Increase in Rural Incomes:** By creating a link between consumers and farmers, and promoting the diversification and commercialization of agricultural products, food processing has the potential to raise rural incomes.
- **A Reduction in Wastage:** A long and fragmented supply chain for food products in India has resulted in wastage and deterioration in quality. Food-processing leads to greater efficiency in the supply chain and streamline production, leading to a marked improvement in quality levels.
- **Higher Exports and FX earnings:** Exports of agricultural products currently amount to US$8bn, or 10% of India's total exports. However, as a share of global trade, this is barely 1.5%. Although there are several constraints to higher exports- such low cost-competitiveness, and a fragmented supplier base- what is encouraging is that the Ministry's Vision Document estimates India's share in world trade of agricultural products to double to 3% by 2015. The document cites a reduction in subsidies by the EU and US, coupled with greater supply chain efficiencies among key factors fuelling an increase in exports.

High Growth-Potential Areas

According to our consumer analyst Madhusudan Bagree, over the past few years there has been a quantum jump in investment into food processing with the corporate world as well as the government making a joint effort. While it is still early days, we see visible signs of change, driven from both ends – consumers earning more and demanding better products (packaged and branded food stuff) and corporates who are sensing a significant opportunity and therefore investing in the space. The elimination of middlemen has resulted in better price realizations for the farmer, and also helps source food stuff at a better price for the processing companies. Moreover, the development of retail chains aids higher levels of value addition

Food grains and cereals: The maximum amount of progress visible in this segment is around staples like wheat and rice. This is visible in extensive branding of processed end products like wheat flour, breads, processed rice among others. Key players who are currently investing in this opportunity include ITC, HLL, Cargill, Adani Group. Other indirect users include Parle, Britannia, GSK Consumer

Beverages: India is amongst the largest consumers of tea and also has a significant coffee drinking population. However, much of it is sold in unpacked or loose form. Given the rise in incomes and quality concerns, we believe the market will move towards branded products. Exports are an added opportunity. Key players involved in the segment are HLL, Tata Tea, Nestle, Williamson Magor Group and several other players as the market is highly fragmented and also localized

Edible Oils: With India being one of the largest consumers for edible oils and the market still largely unbranded, there exists a large opportunity for marketing companies/processing companies. We believe quality issues and increasing affluence over a period of time will help the market move up towards branded products. Key players in the segment are Agrotech Foods, Marico, Bunge, Adani Group

Milk and Dairy Products: At 91mn tonnes per year, India has the largest milk production in the world. However only 14% of milk produced is processed by modern dairies which have resulted in India having a share of less than 1% in global trade for dairy products thus suggesting a high growth potential for this segment. India's low farm gate prices and its proximity to milk-deficit markets is a further positive. Significant investment opportunities include processing milk to get milk powder, value added products like packaged milk, butter, ghee, cheese and RTD milk products. Co-operative societies, which involve setting up appropriate infrastructure at the village, district and state level, have proved highly successful.

Fruits and Vegetables: India is the second largest producer of fruits and vegetables in the world but processes barely 2% of the produce. The segment is still largely unbranded and very localized due to inadequate infrastructure, but several companies are backward integrating requirements, for eg- sourcing tomatoes for paste, sauces and ketchups, potatoes for chips etc. Products that are likely to witness growth include pickles, chutneys, fruit pulps, canned and frozen fruits and vegetables.

Poultry and Meat: This is the fastest growing animal protein in India, with a CAGR of 11% since the past 10 years. In the poultry segment, companies (like Shree Venkateshwara Hatcheries, Godrej) have made initial forays and we expect significant increase in this area.

Government Policy is encouraging

The Ministry of Food Processing aims at increasing the market size for processed food from Rs4600bn in FY04 to Rs13500bn by 2015. This would entail total investments in infrastructure and capacity creation of Rs997bn by 2015.The government has taken several steps to achieve this potential:

- **Priority Sector Status:** Food Processing has been declared a priority sector. With this, licensing for all food and agro-based industries with the exception of beer, wines, potable alcohol, and items reserved for manufacture by the small-scale industry segment) has been abolished, and there is automatic approval for up to 51% for foreign equity.
- **Income Tax rebates** are allowed on 100% of profits for the first 5 years, and 25% for the next 5 years for food processing in fruits and vegetables.
- **Food Parks:** The government's recent proposal to invest Rs25bn in food parks is a big positive. Reports suggest that six major food parks have been proposed

for FY06, and 30 more parks are expected over the 11th five-year plan involving investments worth Rs23bn. The parks are to be set up on a public-private partnership basis, with the government extending up to 75% of the project cost through an SPV.

Constraints to Growth

While potential for growth is immense, the food-processing sector also has its hurdles to clear. Key constraints include:

- **Poor Infrastructure**, particularly in cold storage and warehousing are a major impediment for the industry. Since agricultural produce is seasonal in nature, the need for infrastructure facilities is more acutely felt. In fact, cold storage capacities cater to less than 10% of the total produce. The high cost of packaging[1] machinery, R&D initiatives, and the under-developed nature of India's modern retail format also inhibit growth.
- **A long supply chain** is one of the key hindrances to growth. Particularly in India, where the modern retail format is not fully developed, the marketing and distribution of products is through the unorganized sector. This fragmented supply chain has not only led to a rise in costs but also resulted in a disconnect between producers and consumers.
- **Inadequate Financing**. Key sources for financing for the food processing sector are commercial banks, regional rural banks, NABARD, SIDBI and the Ministry of Food Processing. However, financial assistance is inadequate. Within the priority sector lending target of 40%, banks are mandated to lend 18% to direct and indirect agricultural activities. Food processing falls under the indirect lending sub-category of agriculture for the priority sector and has a cap of 4.5% of the total priority sector lending target of 40%. This sub-category is often over subscribed as it also includes agricultural inputs.
- **Cultural Constraints:** The psychology of most Indians regarding consumption of fresh food has meant that many adopt a guarded approach to processed or packaged foods such as ready meals. Domestic consumers still need to be convinced about the quality of such foods. Moreover, a low percentage of working women, coupled with a preference for cooking foods at home, have constrained the market base within the country.

[1] Packaging costs range from 10-64% of total production costs

Micro Finance – Further Aiding the Trickle-Down Impact?

Another theme that we believe would aid the trickle-down impact was the emergence of Micro finance…

…which is emerging as an attractive proposition for banks

WE EXPECTED…

- **That microfinance - or the provision of financial services to poor/low-income households - would continue to emerge as an attractive financial proposition for banks and insurers. This would allow them to expand their geographical spread and tap lower-income households.**

…AND WHAT HAPPENED

- **With Muhammed Yunus – the founder of Grameen Bank – winning the Nobel Peace Prize, 2006 has turned out to be an important year for microfinance.**
- **In India too, several financial institutions – including some major banks – have created separate arms that deal exclusively with credit lending to the poor.**
- **Such initiatives have facilitated the trickle-down impact, which will likely boost rural consumption and growth.**

The Dynamics of Microfinance

Micro credit vs. Microfinance

Microfinance involves the provision of a broad range of financial services, such as deposits, loans, payment services, money transfers, and insurance to poor and low-income households[2]. It works on the basic principle that the poor can save, borrow, and repay- and are indeed creditworthy. While microfinance covers a gamut of products and services targeted at low-income clients, micro credit is a narrower concept, which refers to very small loans given to very poor families to help them engage in productive activities or grow tiny businesses and can be offered often without collateral through group lending.

Figure 2. Microfinance: How India Measures Up

	Population (Mns)	Poverty Ratio (%)	Poor Families (Mns)	Microfinance Clients (Mns)	Poverty Outreach (%)	Coverage of Poor Families (%)
Afghanistan	22	55	2	0.12	50	3
Bangladesh	135	50	11	16	50	73
India	***1,100***	***30***	***60***	***15***	***35***	***9***
Nepal	23	45	2	0.5	45	11
Pakistan	150	33	8	0.5	35	2
Sri Lanka	20	25	1	2.5	25	63
Total	**1415**	**32**	**84**	**35**	**40**	**17**

Source: World Bank, 2005.

[2] 'Finance for the Poor: Microfinance Development Strategy' ; ADB 2000.

How Microfinance Helps

Apart from enabling the poor to increase income, build viable business and reduce their vulnerability to external shocks, microfinance is, more importantly, a critical element of an effective poverty reduction strategy and can be used as a powerful instrument for self-empowerment by enabling the poor especially women to become agents of change. Particularly for a country like India - where although the share of agriculture to overall growth is dwindling, the farm sector is still the source of livelihood for 2/3rds of the population; microfinance is integral to raising overall income levels, significantly influencing rural financial market development, and lifting the country out of poverty.

Types of Delivery Models

In India, there are two basic models of delivering microfinance, however, similar to models worldwide, these operate keeping in mind cash flows of low-income groups and thus strive to provide relatively frequent and small loans. Many target women as primary clientele. Models are classified as:

Solidarity loans, such as with SHGs and the Grameen Model, work on the principle of social pressures from within the group

- **The Grameen Model:** Pioneered by Professor Muhammed Yunus of the Grameen Bank, this model is perhaps the most widely imitated microfinance institute (MFI) world-wide. Each borrower is part of a 5-member group. 8-10 such groups form a centre. Qualifying members are typically very poor, earning less than a dollar a day. Members save regularly, and the centre meets every week to approve loan proposals. Loans are initially made to 2 individuals with the group, who are then under pressure from the rest of the members to repay. Since each borrower's creditworthiness determines the creditworthiness of the group, if borrowers default, the remaining members may forfeit their chance of a loan. Although the Grameen Model has its shortcomings, it has been successful in many parts of the world. An ADB report suggests that extreme poverty declined from 33% to 10% among participants.
- **Self-Help Groups (SHG):** This is among the most dominant models in India. It involves setting up a group of 15-20 people, having the group save and then linking it to a bank. The group has regular meetings, and funds saved by the SHG are placed in a group deposit account in the bank. The group then borrows from the bank, using its savings as collateral. The SHG is based on a *revolving model*, since saving precedes borrowing, and the borrowed funds are rotated through lending within the group. Repayment schedules are generally flexible, and banks typically provide loans that are four times the SHGs savings, but this varies depending on the group's track record and credibility. Fresh loans are issued only once older loans are fully retired.

A Profound Change: Microfinance Then and Now

With its large population of poor, India has for long been practicing microfinance as a tool for poverty alleviation. In 1969, commercial banks were required to open rural branches. These grew rapidly, and today India has a regional rural branch network of over 32,000 branches and a wide network of primary agricultural societies, and Non-Bank Finance Companies (NBFCs). The government's Integrated Rural Development Program (IRDP) has been touted as 'the world's largest microfinance program'. Yet, most programs have remained politically motivated, leading to a misuse of funds. Even today, 80% of India's poor meet their credit needs through informal sources, and more than 65mn poor households are looking for access to affordable financial services.

Why have the poor been marginalized so far?

Despite India's vast rural network, up until recent years, when NGOs and MFIs started mushrooming over the country, the poor continued to have little access to formal finance. This was due to a combination of factors; most importantly the fact that serving the poor is a *high-risk and high-cost investment*. From the perspective of borrowers, formal financing options do not offer products that allow frequent borrowing and repayments in small installations, which are suited to the poor.

Growing commercial viability induces corporate entry

What is encouraging is that microfinance has begun emerging as an attractive financial proposition for large banks and insurers. Over time, the demonstrated financial sustainability and tangible outputs have lured banks to SHGs.[3] As one report[4] points out, banks and insurance companies have begun realizing that by leveraging on their large geographic spread, NGOs and SHGs can enable them to tap lower-income households. For instance, ICICI Bank has established a partnership with SHARE, one of the largest MFIs in India, to securitize the loan portfolios of MFIs. Another instance is BASIX, a microfinance institution in India that offers a range of insurance products, covering life as well as insurance against drought or loss of cattle. The number of SHGs linked to banks has grown from just 500 in the early 1990s, to over 800,000 in 2004; and NABARD aims for 1 million SHGs by 2008.

Another profitable entry point for banks has been by handling remittances- a huge and growing business, that has until now been dominated by transfer agents. An emerging trend has also been agro-based and FMCG companies such as ITC, EID Parry and Hindustan Lever using SHGs as instruments to expand their rural consumer base and enhance cost competitiveness.

Government initiatives have also been positive. For instance, the **Bharat Nirman Program**, which is in essence 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) should greatly unlock the potential of rural India.

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[3] A classic example of microfinance as a profitable area for banks is that of Bank Rakyat, Indonesia (BRI). From a subsidy-driven organization, BRI transformed itself into a commercial organization by reforming its unit desa (village bank) into profitable rural financial intermediation outlets; offering carefully crafted microsavings and microcredit products to low-income people at market rates of interest.

[4] IIMB Management Review, June 2003

Microfinance with a difference: ITC's e-Choupal Network

A widely used case study demonstrating how retail firms are tapping into rural markets is ITC's e-Choupal Network. ITC is a diversified company with interests in tobacco, hospitality, and consumer goods. Under ITC's e-choupal initiative, a computer with an Internet connection is placed in a farmer's house, and serves an average of 600 farmers in 10 surrounding villages. Farmers use the computer to access daily closing prices in local markets and during harvest time, they 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 middleman is thus effectively eliminated, and the system also ensures a transparency in prices that both the farmer and the company benefit from. More recently, ITC has also established the Choupal Sagar, which is a rural hypermarket, offering all products under one roof, including seeds, fertilizers and other services such as soil testing, banking, and medical facilities.

The Road Ahead- Challenges and Constraints

While India has seen impressive accomplishments in microfinance over recent years; there remain major hurdles to be cleared.

- **Poor Geographical Spread:** Most institutes and groups tend to be skewed in their geographical distribution, with very few of them in the central, eastern, and northeastern states, where a majority of the poor live. As a consequence there remains a large number of untapped poor. Further, the geographical spread of the programs adversely impacts their operational efficiency
- **Inherent Inadequacies in Delivery Models:** The basic delivery models of microfinance are not without their shortcomings. For instance, the Grameen model often places too much social pressure on members, while the SHG, which comprises of heterogeneous members, sometimes disintegrates after a period of time.
- **Government Policy**: restructuring RRBs, removing caps and floors on interest rates, and incentivizing the entry of private banks in to rural finance are key policy changes required to boost the segment
- **Poor Staff Quality:** Uncompetitive remuneration results in mediocre staff quality, and a high turnover.
- **Inadequate Physical and Financial Infrastructure:** Most MFIs have poor internal audit mechanisms and financial control systems in place. Lack of basic member and borrower information results in unsatisfactory management information systems and an overall poor portfolio quality. Liquidity management is also an area of concern. As the ADB correctly points out, inadequate investments in physical infrastructure in rural areas also increase the risks and costs of microfinance, thus significantly discouraging private investments.

Bio Fuels: An Answer to India's Energy Dependence?

A pressing need for energy security led us to believe that environment-friendly Bio-Fuels could soon be an answer to India's Energy Dependence…

…which again aids the entire trickle-down impact

WE EXPECTED…

- **That India's growing energy dependence would continue to be a major challenge for the economy given that India imports 70% of its crude oil requirements.**
- **Given the urgent need to improve energy security, there would be a shift in emphasis from transport fuels towards environment-friendly, renewable sources, or biofuels such as ethanol and biodiesel.**
- **The production of bio-fuels from crops such as sugar cane, corn, wheat, and jatropha would create an additional market for farmers and increase employment.**

…AND WHAT HAPPENED

- **The deadlines to introduce a mandatory ethanol blend remain unclear due to lack of consensus on ethanol pricing among the oil manufacturing companies and sugar producers.**
- **However, corporate and government initiatives toward bio-diesel are positive, with several key players – including D1 Oils, Reliance, and Godrej Agrovet – entering this segment.**

Towards Greater Fuel Efficiency - The A to Z of Biofuels

The attempt to displace the use of petroleum for transport has led to the emergence of several alternative fuels, such as compressed natural gas (CNG) and liquefied petroleum gas (LPG), over the past few decades. However, biofuels have been most well accepted in this regard, since they are liquid fuels, compatible with current vehicles and blendable with current fuels as opposed to CNG and LPG, which require modifications to vehicles and the development of separate fuel distribution and vehicle refueling infrastructure. To explain, biofuels are simply renewable liquid fuels used for transportation, derived from biological sources i.e cereals, crops, plants and organic waste. The main forms of biofuels are currently bioethanol and biodiesel. These are blended with gasoline or diesel respectively to form clean fuel alternatives.

Ethanol-Based Biofuels

The key feedstock to produce ethanol is sugar, so ethanol can be produced from any biological raw material that contains appreciable amounts of sugar. These fall into three major groups (1) sugar cane, (2) starch products and (3) cellusic biomass

- **Sugar Cane and Sugar Beets:** This is the simplest way to produce ethanol, and involves fermenting the sugar components in these products to ethanol, which can then be blended with gasoline. Using sugarcane to produce ethanol is most popular in India, due to the country's large sugar cane industry

- **Starch Products:** The process is similar to that of the sugar-ethanol one, but since only the starchy component of wheat, barley, corn, potato is used, a considerable amount of waste product is left behind.
- **Cellulosic Biomass**: These include agricultural residues (such as the stalks, leaves, husks of crops), forestry wastes (chips and sawdust from lumber mills, dead trees, tree branches), municipal solid waste (household garbage and paper products), food processing and industrial wastes, and energy crops(fast-growing trees, shrubs, grasses). These products comprise of cellulose and lignin components and ethanol is produced by converting the cellulose into sugar.

Bio-diesel

The term "biodiesel" refers to a mixture of fattyacid methyl ester made from vegetable oils, animal fats, recycled grease or non-edible oil through a process of transesterification[5]. In India, biodiesel is more commonly made from non-edible oil extracted from plants, such as the *Jatropha Curcas* (also called Ratanjyot) or *Pongamia Pinnata* (Karanj). Biodiesel can be used in compression ignition diesel systems, either in its 100% 'neat' form or more commonly as a 5%, 10% or 20% blend with petroleum diesel.

The **Jatropha** bush, which is easy to maintain and begins yielding output from the fourth year, is found most suitable for producing biodiesel. It grows on lands that are largely unproductive for other uses and located in degraded forests. It may also be planted on fallow lands, and in public areas along railways, road, and irrigation canals. Studies estimate[6] that under irrigated conditions, jatropha results in an output of 3 tonnes of seeds per hectare, which in turn yields 1 tonne of oil.

Weighing the Costs and Benefits of Biofuels

Figure 3. The Pros and Cons of Biofuels

Potential Benefits	Potential Costs
• Energy security • Balance of trade • Lower GHG and air pollution emissions • Waste reduction • Vehicle performance • Higher rural incomes • Employment Creation	• Higher fuel costs • Increases in some air emissions • Higher crop (and crop product) prices • Other environmental impacts, such as land use change and loss of habitat

Source: IEA, Citigroup.

Biofuels for transport have the potential to displace a substantial amount of petroleum around the world. However as the market price of biofuels can't really quantify the benefits; the high production cost is currently posing an entry barrier to its commercial development in developed countries. However what is encouraging in developing economies such as Brazil and India, lower labor costs and suitable climates, production costs continue to drop. Benefits include:

[5] Bio fuel production is 2-stage process: (1) raw materials such as oilseeds, are crushed to physically expel the oil, leaving behind manure. (2) A chemical reaction called *transesterification* takes place, where the oil is treated with alcohol to convert it to fuel.

[6] " Is biofuel the energy of the future? ', *Hindu Business Line,* dated September 20th, 2005

- **Improved Balance of Trade**: Oil accounts for 25% of India's import bill. A reduction on oil dependence will improve India's BoP, and also contribute to greater levels of energy security.
- **Environmental Benefits:** On a global scale, vehicle emissions contribute to 20% of energy-related greenhouse gas emissions (GHGs) Ethanol and biodiesel provide significant reductions in GHG emissions compared to gasoline and diesel fuel. Biofuels also improve air quality with lower emissions of carbon monoxide, sulfur dioxide, and particulate matter. Moreover, they reduce wastes through recycling of agricultural waste-products.
- **Agricultural Benefits**: Production of biofuels from crops such as sugar cane, corn and wheat (for ethanol) and jatropha(for biodiesel) provides an additional product market for farmers and brings economic benefits to rural communities. For India, where agriculture comprises nearly 20% of GDP and provides employment to 2/3rds of the population, an increase in rural incomes is a big positive
- **Creation of Employment:** More specifically in rural communities, growth in the biofuel industry creates domestic jobs through plant construction, operation, and maintenance. For instance, the biodiesel program, will give employment to 313 man-days over 1 hectare of land and of 41 man-days per year through the life of the jatropha plant. The production of ethanol is also likely to boost employment in the sugarcane industry.
- **Improved Vehicle Performance**: Biodiesel can significantly improve the performance of conventional diesel fuel even when blended in small amounts (i.e. 5%) Ethanol has a high octane number and can be used to increase the octane of gasoline. Indeed, in terms of performance and reliability, ethanol vehicles are comparable with gasoline-fueled vehicles and are operable without any special modifications.

Supportive Policy & Commercial Viability Spell Success

Government policy has been particularly supportive to the development of biofuels in India. As one study correctly points out, initiatives are targeted at: (1) Reduce dependence on imported fossil fuels by replacing them with renewable, domestic source (2) To provide the a demand for crops and support rural economies and (3) Using cleaner fuels to prevent environmental degradation.

Jatropha Farming- An Emerging Trend

The cultivation of jatropha has clearly emerged as a preferred option to yield biodiesel in India. Jatropha farming has taken off in a big way, with several corporates approaching the government to carry out contract farming of the plant. Public enterprises, such as the Indian Railways, are also seeking to exploit this potential. The Railways, which are the single largest user of fuel in the transportation sector, hope to utilize nearly 900,000 hectares of available land for the cultivation of biofuel crops.

Companies also expressing an interest in this arena include D1 Mohan Bio Oils Limited – a joint venture between DI oil and Chennai based Mohan Breweries, Reliance Life Sciences, the Emami Group, and oil companies such as IOC, ONGC, and HP. Biodiesel made from jatropha has already been successfully tested on three

Mercedes-Benz vehicles, by Daimler Chrysler in collaboration with the Central Salt and Marine Chemicals Research Insititute (CSMCRI).

National Mission on Biodiesel:

India recently implemented a new program to encourage a rise in ethanol production for use in the transport sector. The *National Mission on Biodiesel*, aims at encouraging a rise in the ethanol blend with petrol to 20% by 2012. In the first phase, nine Indian states and four union territories began phasing in a 5% ethanol blend in gasoline. The second phase, which is still to be initiated, will spread the programme nationally. A third phase will then see the blend increased to 10%.

In addition the government has set up a *National Biofuel Development Board* to oversee a plan blending ethanol with diesel. This plan is likely to stimulate growth in the domestic sugar industry as the government ensures a fixed price to sugar millers for every litre of ethanol they produce. With this, the number of sugar plants opting for ethanol production is likely to increase significantly. For instance, Praj Industries currently produces ethanol from molasses and plans to produce it from corn and maize as well.

Knowledge Process Outsourcing: Clinical Trials – The next big wave

A gradual transition from Business Process Outsourcing to Knowledge Process Outsourcing was yet another wave that would hit India in 2006. Here, we believed Clinical Trials would have significant potential

WE EXPECTED…

- **That the outsourcing story would see a shift from Business Process Outsourcing to more skilled or high-end functions such as Knowledge Process Outsourcing.**
- **A major area with significant growth potential was clinical trials, or the process of trials that a product must go through before it enters the market. Here, India's labor cost advantage coupled with a skilled workforce and a large pool of treatment 'naïve' patients was positive.**

…AND WHAT HAPPENED

- **There has been greater traction in outsourcing of manufacturing and research to India by Big Pharma, with companies such as Glaxo, Pfizer and Eli Lilly stepping up clinical trials for their drugs in India.**
- **However, India needs to address issues related to acceptance of data by US/EU regulators and inadequate clinical research capabilities in order to realize its true potential.**

R&D in Healthcare Looks Poised for Growth

According to our pharma analysts – Madhusudan Bagree and Prashant Nair, around 30% (around US$15-20bn) of the manufacturing activity by Big Pharma[7] is currently being outsourced. Besides that, key areas where MNCs have begun exploring India's potential as a KPO hub are in the healthcare and pharma sector. Contract research, laboratory testing, and clinical trials are niches where Indian companies are winning pieces of the global pie.

Why the rapid growth? As with the BPO boom, the KPO boom is in part due to India's labor cost advantages. In addition, India has inherent strengths which include a highly skilled set of doctors, linguistic advantages, and strong infrastructure in the healthcare segment. To boot, recent regulatory changes in patent laws have given a further boost to this industry.

Clinical Trials Services

Within the pharmaceutical sector, contract research organizations that assist companies in research, testing and approval processes of products or technologies continue to mushroom. These companies cater to both domestic as well as global firms. However, a niche segment *within* this that has been experiencing burgeoning growth of late, has been outsourcing in clinical trials – i.e the process of trials that a product must go through before it enters the market. Studies estimate outsourcing for this segment to India to grow from US$70mn in 2001 to US$1.5-2bn by 2010.

[7] This is a broad term encompassing intermediates, active pharmaceutical ingredients (APIs) and formulations.

Steps in Clinical Trials: For any molecule, it typically comprises of four phases, however, before a drug may be tested on humans, pre-clinical studies must be conducted on animals to determine that the drug is safe.

Phase I: These are designed to establish the effects of a new drug in humans. These studies are usually conducted on a small number of healthy humans (20-100) to specifically determine what happens to the drug in the human body- its toxicity, absorption, distribution and metabolism.

Phase II: After the successful completion of Phase I trials, the drug is then tested for safety and efficacy in a slightly larger population (several hundred patients) of individuals who are afflicted with the disease or condition for which the drug was developed. This process lasts from several months to two years.

Phase III: The last pre-approval round of testing of a drug is conducted on a large number (several hundred to several thousand) of afflicted patients and lasts for several years. It usually tests the new drug in comparison with the standard therapy currently being used for the disease in question. The results of these trials usually provide the information that is included in the package insert and labeling.

Phase IV: This comprises of follow-up activities after the introduction of the product in the market.

What does India have to offer?

India is today identified as a major resource centre for conducting clinical trials and data management services. This is due to large patient population, well trained investigators and significantly lower trial costs as compared to developed nations. Regulations pertaining to clinical trials in India are governed by Schedule Y of the Drug and Cosmetic Act. Apart from the move to product patents, a recent regulatory change is that clinical trials can be carried out in India concurrently with trials abroad unlike the past where trials could be conducted after a phased lag. However phase 1 trials are not allowed in India unless the molecules originate from India.

Global players such as Quintiles, and most MNCs such as Pfizer, Novartis, and Eli Lilly are already established in India. Domestic players include Vimta Laboraties, Lambda Therapeutics, Clinigene (Biocon's clinical research arm), and Wellquest (Nicholas Piramal's clinical research division). We believe that India is poised to benefit from the clinical trial research outsourcing wave due to:

- **Labor Cost Advantages:** Clinical trials comprise of 70% of the cost of developing a new drug. Lower labor costs in India could result in a cost reduction of 60%.
- **A Large Pool of Patients:** Trials are required to be carried out on patients that are treatment 'naïve'[8]and afflicted with the particular disease that the drug is testing. India has a sizeable population of patients that fit these criteria and also possesses a rich biodiversity and gene pool, which is a major positive.
- **Skilled Workforce:** A favorable doctor-patient ratio and a large number of skilled chemists is an added positive. The labor pool is well qualified, often

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

comprises of foreign graduates, and acclimatized with alternative medicinal fields as well.

- **Compliance with Global Standards:** India's compliance to International Conference on Harmonization - Good Clinical Practice (ICH-GCP)[9] norms further enhances its reputation as a base for conducting clinical trials.

Regulatory Changes are an Added Positive

It's All About Patents!

Since January 1, 2005 India has shifted from process patents to product patents, in compliance with WTO regulations on Trade-Related Intellectual Property Rights (TRIPS). To explain, the process patents - that India earlier followed - allowed domestic companies to reverse engineer and launch versions of drugs as soon as they were launched in international markets. This created a large market for low-cost drugs in the country. However, with the shift to product patents, molecules patented after 1 January 1995 receive patent protection for a period of 20 years. Since the time frame for clinical trials and other approvals is approximately 10 years, this leaves patent protection for the remaining window of 10 years. This is likely to be an added comfort factor for MNCs, who have thus far been concerned about copycat products.

No More 'Phase Lags'

In January 2005, the government also allowed clinical trials to be undertaken in India simultaneously with other markets. Up until then, trials were required to have a 'phase lag'[10]. For instance, Phase I would be allowed to commence in India only once it had been completed and Phase II had begun in other countries, and so on. This would put India back one step as compared with competitors. With the phase lag removed, clinical trial outsourcing is likely to get a further boost.

But Hurdles Remain:

While India is slowing developing as an R&D hub there are many challenges it faces. While the medical infrastructure in India includes more than 600,000 physicians, 15,533 hospitals, and more than 700,000 hospital beds, on a comparative basis, these statistics trail those of other developing countries. For instance, the number of beds per thousand population in India is very low, at 0.9 — much lower than China's 2.5 beds and Brazil's 2.7. Moreover, although India trains a large number of medical staff, the numbers produced have barely kept pace with population growth. Even if the government increases expenditures by 6-7% from the current base, it is likely to meet only 15-20% of the investment required in hospital beds. Besides the poor medical infrastructure, other hurdles include that research traditionally has been unfunded in India and the age-old perception on intellectual property rights. In addition, we believe there needs to be proper good clinical practices guidelines which need to be adhered to as well as formulated - which would eventually help in the data generated in India to be accepted in the developed world. We believe the entire process could take some time but will eventually materialize as more players make forays into this area.

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[9] The ICH has been developed through a collaboration between the US, Japan and EU authorities to harmonize regulatory pharmaceutical practices in these countries. GCP is an international ethical and scientific quality standard for designing, conducting, recording and reporting trials that involve the participation of human subjects. Compliance with this standard provides public assurance that the rights, safety and well-being of trial subjects are protected, and that the clinical trial data are credible.

[10] This is stipulated under Schedule Y of the Drugs and Cosmetics Rules

Politics: Re-examining Two Issues – Ability to Reform and Stability

On the 15th of February, several disquieting political incidents - including the return of the Oil-for-Food Scandal and the Bofors deal - led us to reexamine two issues - the government's ability to reform and its stability

WE EXPECTED…

- **That coalition politics could slow the pace of reforms. While our base case was that of the UPA completing its full term, we anticipated that state-elections would be a time to be cautious since the Congress and Left would contest the same seats.**

…AND WHAT HAPPENED

- **The reforms score-card has been negative with the divestment set-back, fracas on reservations and price-control measures. On the stability front, the state election results indicate the Left Parties' growing stronghold. A new concern is growing dissonance not only between the Left and the Congress, but within the Congress as well.**

Indian Politics: Re-examining Two Key Issues

To provide a quick recap, with outside support from the Left, the UPA came to force in May 2004, defeating the incumbent National Democratic Alliance (NDA). What needs to be noted is that the UPA comprises a *16-member coalition*, where the Left parties have close to 60 seats and for the first time wield enough power to make their presence felt. This has not only been a source of uncertainty for the government, but has also slowed the reform process to a considerable extent.

Ability to Reform and Stability

Soon after the election results, we remarked that both (1) the stability of the government; and (2) its ability to carry out reforms- would be key considerations for its success. In retrospect, while the government has managed to push through some reforms previously thought unpalatable, we believe the government's stability will be put to test during the state elections in West Bengal and Kerala in May-June 2006, when the Congress and the Left will be contesting the same seats. While the Left is expected to win in West Bengal, the outcome in Kerala is uncertain. A Congress win in Kerala would aid stability at the centre, but a worst-case scenario could be a big win by the Left parties that encourages the formation of a third front.

Figure 4. Structure of the Government at the Centre

Total Elective Seats are 543; 272 seats are required to form a majority

TOTAL UPA= 224+96=320				TOTAL OPPOSITION=221	
Congress + Allies		Outside Support		NDA	
Congress	145	Left : CPI-M	43	BJP	138
RJD	21	Left : CPI	10	BJD	11
DMK	16	Other Left	7	Others	32
NCP	9	Samajwadi Party	36	**Total**	**185**
PMK	6			Other Opposition	
TRS	5			BSP	19
Others	22			Others	19
Total	**224**	**Total**	**96**	**Total**	**36**

Source: Election Commission.

Triumphs and Setbacks

A few unsavory episodes...

Through its tenure so far, the UPA has been embroiled in several disquieting incidents:

Key Setbacks:

Bihar debacle, oil for-food, and Bofors

- **Bihar:** In May 2005, a hung parliament during state assembly elections in Bihar[11], resulted in the imposition of President's Rule, with fresh elections being held in November last year. Unlike the result in May, Lalu Yadav's RJD (a key coalition partner of the UPA government) lost to Nitish Kumar's JD (U) by a huge margin for state elections. However, this election outcome may be beneficial for long-term stability of the central government, as given the drubbing at the state level, despite having the largest number of seats in the coalition after the Congress, the RJD will be less supportive of any moves that may destabilize the UPA coalition. However, the resignation of Buta Singh, the governor of Bihar, following the negative verdict by the Supreme Court for recommending dissolution of the Bihar Assembly was negative for the Congress
- **Oil-for-Food Scandal:** Another setback for the UPA was the resignation of India's Minister for External Affairs, Natwar Singh, after the Volcker Report[12], which probed into the Oil-for-Food program, named him among other 'non-contractual' beneficiaries of Iraqi oil allocations.
- **Bofors Back in the Headlines:** After a lull, the controversy surrounding the Bofors arms deal scandal[13] nearly two decades ago re-surfaced, when the CBI unfroze the London accounts of someone previously connected with the investigation. The opposition parties will likely keep this issue alive for sometime.

...but overall growth momentum continues

However, these setbacks have not stalled the economy's strong growth trajectory:

Major Triumphs:
Infrastructure reforms, improving public finances and overall positive economic sentiment

- **Positive Economic Sentiment**: Growth has averaged 8% during the last three years while the stock markets have crossed the 10,000 level. Even while sticking to its maxim of 'reforms with a human face', the government managed to push through FDI in construction and real estate last year, and in single-brand retail early this year, along with significant easing of restrictions in other sectors; despite opposition from the Left.
- **Infrastructure Reform:** Although the implementation of deadlines for the power sector has been delayed, the telecom sector has been one of the biggest beneficiaries of market-oriented reforms. In civil aviation and airports as well, liberalization has led to greater encouragement for privatization and also generated competition. For railways, plans to build a freight corridor are under way, while progress on the NHAI continues to be positive for road development.

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[11] To recap, prior to elections held in February 2005, the RJD was the ruling party in the state. However, elections in May resulted in a hung assembly because the RJD and the LJP, which are aligned at the Centre, failed to align at the State level. Meanwhile, despite hectic politicking, negotiations between the parties failed to reach a majority and a government could not be formed. Consequently, President's rule was imposed and the Bihar House dissolved.

[12] An Independent Inquiry Committee, headed by Paul Volcker, cites more than 2000 companies involved in illicit payments to Iraq For more details and to read the Volker Committee Report, please visit http://www.iic-offp.org

[13] The Bofors scandal erupted nearly two decades ago, when the CBI charged a senior Indian civil servant, an Indian arms agent and an Italian businessman [Ottavio Quattrocchi] with accepting a US$50mn bribe from the Swedish arms company Bofors to secure a contract for a US$1.4bn sale of field guns to the Indian army. The scandal created a political uproar in India, and tarnished the image of Rajiv Gandhi, leading to the Congress's defeat in the 1989 elections, two years before his assassination.

➤ **Enhanced Transparency:** What is positive is that the government presented an ***Outcome Budget*** for the first time in August 2005. This serves as a performance-measurement tool, indicating not only what each ministry has done with outlays allocated to it and thus strengthening the citizens' Right to Information; but also enhancing fiscal discipline. ***The Right to Information Act***, implemented in October 2005, gives any citizen of the country access to information in the control of public authorities; as such, it promotes transparency and accountability

Economic Scorecard

Figure 5. Intention Vs Implementation: Proposals and Implementations of the UPA's Common Minimum Program

Proposed CMP	Our View	What's been done so far
Fiscal policy: Proposals include eliminating the revenue deficit of the center by 2009 and better targeting of subsidies. The UPA government said that it would initiate measures to increase the tax–GDP ratio such as implementation of VAT, widen the base of taxpayers and increase compliance	↑	On the fiscal front, the implementation of VAT has been a major step toward enhancing revenues and increasing the efficiency of the tax system. Despite initial hiccups, nearly all states have implemented VAT, which should improve state finances to a considerable extent. Due to buoyancy in revenues and a strict watch on expenditure, the government is likely to meet its fiscal deficit target of Rs1,511bn or 4.3% of GDP for FY06
Industry and FDI: FDI will be encouraged since the country can easily absorb at least 2-3x the present level of FDI inflows. Credit, technology and market support to the small-scale sector will be extended, while public-sector banks will be given full managerial autonomy	↑	The government has managed to push through FDI in various sectors despite opposition from the Left. These include 100% FDI in construction and real estate; and 51% in single-brand retail. While restrictions in civil aviation, insurance and telecom have been eased, notifications are yet to be issued. Moreover, RBI has been issuing directives to banks to extend greater credit support to SSIs
Privatization: Privatization will be considered on a case-by-case basis, but profit making state-run companies would not be privatized. Loss-making companies could be but only after obtaining workers' assent.	↓	Divestment targets were conspicuously absent in the FY06 Budget. Although a National Investment Fund has been set up to channel revenues from PSU divestments, it has been a non-starter so far. However, minority stakes in non-navratna PSUs (such as Nalco, Balco, Hindustan Zinc) may be divested next fiscal.
Capital markets: FII investments would be encouraged, though the inappropriate use of double taxation agreements would be prevented and the vulnerability of the financial system to speculative flows would be reduced. Small investors will be given new avenues for safe investment of their savings and SEBI will be further strengthened	↑	The government has avoided knee-jerk reactions on the double-taxation treaty with Mauritius and has generally kept the growth momentum and feel good factor alive
Employment: The United Progressive Alliance proposes to enact a National Employment Guarantee Act, which is expected to guarantee at least 100 days of employment on asset-creating public works programs every year at the minimum wage for every rural household	↑	The Employment Guarantee Act was approved by the Parliament in August 2005. The scheme which has an outlay of Rs345bn (US$7.8bn) enables one member of every rural household to 100 days a year of work. Given the large number of people entering the workforce, implementation will be a big positive for the rural poor, aid infrastructure development, but financing remains a concern
Labor: No automatic hire and fire policy. The welfare and wellbeing of all workers is to be ensured, particularly those in the unorganized sector who constitute 93% of the workforce	↔	Employee Provident Fund Rates for FY05 were hiked to 9.5% for FY05 with retrospective effect, but for FY06 the EPF rate hike was rolled back to 8.5%. The govt also proposes to introduce quotas for private sector employment.
Agriculture: Public investment in agriculture and irrigation is to be stepped up significantly, rural lending and coverage of small and marginal farmers to be ensured	↔	Efforts to strengthen the farm sector have been made, and range from encouraging microfinance initiatives, agricultural research, and developing the agricultural marketing infrastructure. However much more needs to be done
Education and health: Public spending on education is to be raised to at least 6% of GDP, and on health to 2-3% of GDP. Funding would be through a cess on central taxes.	↔	Allocations for funding the 'Sarva Siksha Abhiyan' program have been increased to Rs72bn for FY06. The National Rural Health Mission – aimed at strengthening primary healthcare – is to be launched in FY07.
Infrastructure: The government proposes public-private partnerships in the expansion of infrastructure. All existing irrigation projects will be completed within three to four years. The CMP proposed a review of the Electricity Act 2003	↑	While deadlines set by the National Electricity Policy continue to face delays, reforms have fuelled growth in civil aviation and telecom. For railways, proposals to build a freight corridor are under way. Progress on the NHDP continues at a satisfactory pace, the implementation of Phases IV-VII is an added positive.
Defense, Foreign Policy: The UPA says there will be no compromise in the fight against terrorism. Priority will be given to building closer relations with SAARC nations, while trade and investment with China will be expanded.	↑	Key political developments over the year include a treaty with Singapore, agreements with China on trade, border issues, and the development of new energy sources; and the recognition of India as a Nuclear Weapons State by the US. The last agreement, however, continues to face controversy as it involves the separation of civilian and strategic nuclear facilities.

Source: National Common Minimum Program of the UPA Government, Citigroup.

India's Resurgence and the Road Ahead

When the sleeping giant awakens, the world gets up to watch…

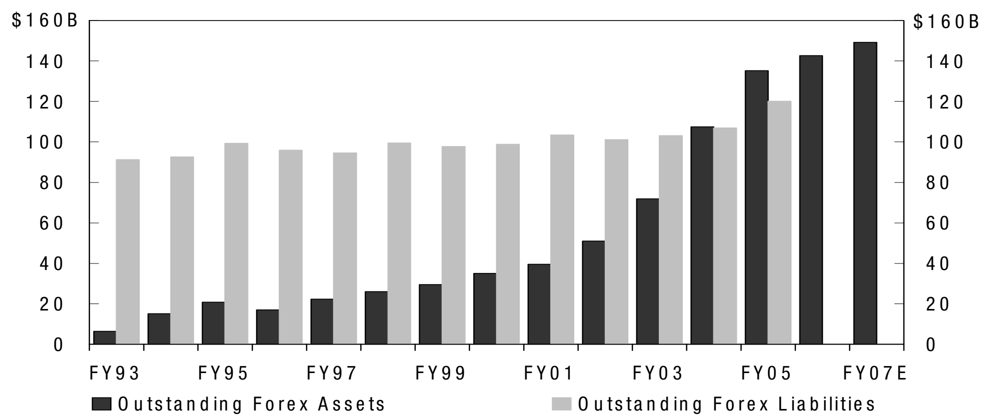
On March 3rd, we commented on India's resurgence, and the Road Ahead along with Don Hanna, head of EM Economics, in the International Market Roundup

- **A dismantling of regulation, a simplified tax structure, and an opening to the world have pushed India to the global economic forefront.**
- **Staying at the forefront will likely require another round of reforms that focus on improving fiscal policy and furthering economic flexibility.**

India in the early 1990s was a sleeping giant...

The India that Prime Minister Singh represents as he hosts President George Bush this week is markedly different from the India he faced as Finance Minister in 1991. Then, Indian GDP growth had slumped to 0.9%, collapsing under the weight of efforts to boost growth without freeing the economy from the shackles of pervasive licensing and government regulation. Inflation had climbed to almost 14% from under 5% four years earlier. The 1990 current account deficit of nearly US$10 billion was only about 3% of GDP, but more than 50% of exports, generating an external crisis.

Figure 6. India — External Assets and Liabilities (U.S. Dollars in Billions), FY93-FY07E



Source: CEIC Data Company Limited.

...but has been transformed into one of the fastest growing economies.

Today, India's growth has averaged over 8% in the last three fiscal years, and inflation is hovering near 5%. The current account, while 2.5% of GDP in 2005, and rising, is easily met by capital inflows that have pushed international reserves to a comfortable US$143 billion and made India's public sector a net creditor in external markets (see Figure 1).

India's has undergone a social metamorphosis over the past decade.

Since the 1990-91 crisis, India has cut the number of citizens living in extreme poverty by 87 million, doubled its GDP per capita, raised life expectancy by five years and increased the literacy rate by 13 percentage points (from 52% in 1991 to 65% in 2001). Together with China, the macroeconomic and social performance of

India since the crisis of 1991 has contributed to, arguably, the fastest improvement in living conditions for the poor the world has ever seen.[14]

Reform efforts have focused on liberalizing industry.

The key elements of India's reform efforts focused on freeing industry from the grip of excessive government licensing and regulation. Cuts in external tariffs and quotas introduced more competition and choice to Indian producers and consumers. Moves to strengthen the banking system provided greater financial resources at less distorted prices. Weaning the government from easy finance from the central bank, the Reserve Bank of India, helped stabilize inflation. More recently, the concrete example of India's global success in the tech sector, long "neglected" by government regulators, reinforced the wisdom of the reform efforts and support for their continuation.

The Road Ahead: Righting Government, Fostering Flexibility

Reining in the widening fiscal deficit is key.

While India's success has prompted evident gains and the world attention that President Bush's visit epitomizes, obstacles to meeting the government's new targets of keeping GDP growth over 8% persist. Chief among these is a need to shrink the fiscal deficit while recasting spending to a pattern that better aids the poor and promotes growth. Improving the quality and flexibility of key inputs like labor or land and the predictability of the business climate through reducing corruption and strengthening the legal and regulatory environment are also important challenges.

High savings and external capital controls have prevented a fiscal crisis…

Despite buoyant economic growth and government efforts to instill fiscal discipline, the combined deficit is among the highest in Asia at over 8% of GDP, while the public debt exceeds 75% of GDP.[15] India's ability to sustain such high levels of debt and deficits is largely due to a benign macroeconomic environment, a high savings rate, and external capital controls that keep savings at home.

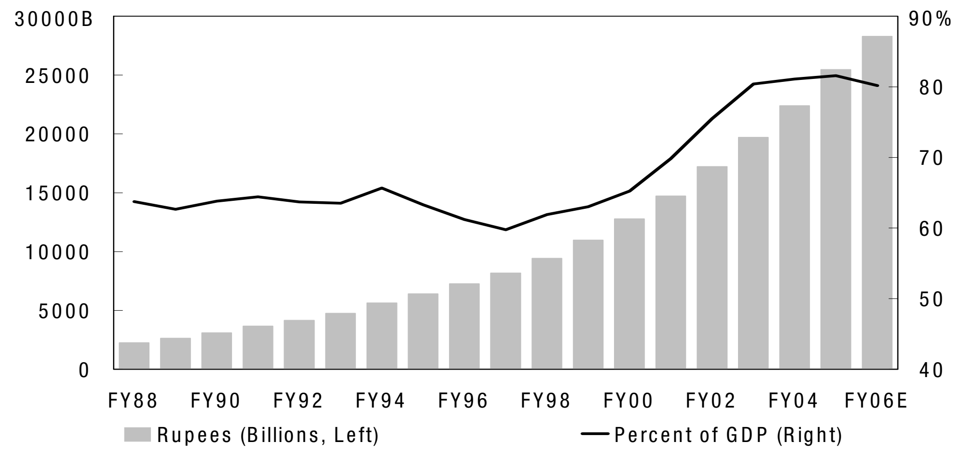
…but a rising debt-to-GDP ratio suggests India will have difficulty outgrowing its debt burden.

However, the rise in India's debt-to-GDP ratio, despite buoyant GDP growth and low real interest rates, indicates that India will have difficulty outgrowing its debt burden (see Figure 2). It seems unlikely that 8% real GDP growth will remain coupled with 2% long-term real bond rates (roughly their current level). This issue is even more important as banks, which remain a key source of finance, hold some 37% of their portfolios in government bonds, but are likely to reduce these holdings. Rapid credit expansion (31% in the 12 months to January) will likely ultimately pressure bond yields and overall interest rates higher.

[14] On the reduction in global poverty and its link to China and India, see Xavier Sala-i-Martin, "The World Distribution of Income: Falling Poverty and . . . Convergence, Period", Draft , Oct 2005 available at http://www.columbia.edu/~xs23/papers/pdfs/World_Income_Distribution_QJE.pdf.

[15] In 2004 India passed the Fiscal Responsibility and the Budget Management Act (FRBM) that mandates annual reductions in the central government's fiscal deficit to 3% of GDP by 2009.

Figure 7. India — Trends in Combined Government Liabilities (Rupees in Billions), FY88-FY06E



Source: Reserve Bank of India.

What can the government do to contain the deficit?

The needed policy efforts for improving fiscal sustainability include better management of both revenue and expenditure. The Ministry of Finance put it this way: "High deficits, unproductive expenditure, and tax distortions have constrained the economy from realizing its full growth potential."[16]

Efforts are being made to broaden and deepen the tax base…

On the revenue front, the authorities are moving to broaden and deepen the tax base. Currently, India's tax revenues account for only 16% of GDP, among the lowest in the world. Low revenues constrain the government's spending on social programs and infrastructure. One key solution is improving tax collection in the service sector where the upcoming fiscal year budget (beginning in April) proposes a two-percentage-point hike in the tax on a broad array of services. Today, services account for 50% of GDP but contribute less than 7% of total tax revenue.

…but expenditure management is key.

Rationalizing and targeting spending is another key to better fiscal management. Three contentious fiscal issues are explicit subsidies on food, fertilizers, and petroleum; high interest payments on small savings schemes; and burdens from unprofitable, state-owned companies (termed public sector units [PSUs]).

Subsidies need to be targeted better.

Subsidies, both direct and indirect, amount to over 15% of GDP. International experiences often suggest that such subsidies are much less efficient at improving income equality than direct income support. Indeed, India's Planning Commission estimates that only 27% of spending on direct food subsidies reaches the poor.

Realignment of small saving rates to market conditions would help.

The small-savings scheme, a means of generating funding for India's states, still pays above-market interest rates, which not only puts banks at a competitive disadvantage, but also accounts for 30% of the government's total interest burden. A realignment of rates to market conditions would help lower the fiscal burden.

Privatization could resolve the issue of loss-making PSUs.

Finally, losses by PSUs have bled the government's finances steadily over the years. In many cases dividend income on the government's investment is far less than the interest it pays on the PSU-linked debt. In the past, India has relied on privatization as a means of resolving this issue, but the current coalition government is having trouble pushing through further deals.

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[16] Ministry of Finance, *Economic Survey, 2006,* Chapter 2, paragraph 2.1. Available at http:/indiabudget.nic.in

India's challenges are very similar to the problems China faced at the beginning of 1990s.

India's challenges are very similar to the problems China faced at the beginning of 1990s, when its tax revenues accounted for only 11% of GDP. In the remaining years of the 1990s, the Chinese government stepped up efforts to collect taxes. It improved the business information system, cracked down on tax evasion and, in some cases, increased the number of taxation officers. By 2000, tax revenues already accounted for close to 20% of GDP. During that period, tax rates never increased.

Fiscal rationalization may free up Infrastructure funding.

With successful rationalization of fiscal expenditures and increases in revenues, the government may be able to fund needed infrastructure projects, which would support India's long-term growth. Long gestation periods and a lack of financial viability make funding unattractive for the private sector. To overcome this, the government has been promoting public-private partnerships through "viability gap funding."

Labor reform remains a key challenge.

Reforming labor market institutions is another key challenge. India's demographic advantage of a growing workforce is only an advantage if jobs are created. The Rural Employment Guarantee Bill, which provides 100 days of work to every rural Indian worker, is a step in the right direction. Other labor laws, though, need a reassessment. With labor costs already competitive, freeing the labor market from red tape will likely bring in greater foreign direct investment and boost the manufacturing sector.

A further push for FDI inflows...

India holds an important advantage in its long history of markets and of the rule of law[17]. Laws, regulations, and their adjudication, though, have not always kept pace with the burgeoning, opening economy. A recent report indicated that more than 23 million cases are pending in the courts that, on average, would take 20 years to be settled.[18]

...point to a need to reduce bureaucracy and red-tape.

Bureaucracy and red-tape are perhaps still among the biggest obstacles to development in India. Although the "license raj" was abolished a decade ago, studies suggest that it still takes 270 days and 20 steps to comply with business licensing and permit requirements. [19] While this is some ten steps less than what is required in China, India still needs to see considerable improvement if it is to rise from a dismal rank of 116 (among 155 countries) when it comes to the ease of doing business.

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[17] India's Bombay stock market was founded at the beginning of the 20th century.

[18] See the *ADB Review* at http://www.adb.org/Documents/Periodicals/ADB_Review/2005/vol37-2/paying-justice.asp

[19] "Doing Business Indicators," World Bank, 2005.

India's Place in the Changing Geo-Strategic World Order

On 20 March 2006, with an increased frequency of visits from heads of state…

…, we remarked that India's Place in a changing geo-strategic world order would bode well for energy security and investment flows

WE COMMENTED…

➤ **That the recent trend in visits by heads of state from across the world was evidence of India's emerging role in a changing geo-strategic world order and would be positive for energy security, trade, and FDI.**

…AND WHAT HAPPENED

➤ **India continues to be an important destination on the agenda of many heads of state. Besides the Indo-US Nuclear Deal being approved by the Congress, a visit by Chinese President Hu Jintao ended with 13 agreements including those related to enhanced trade flows and energy security being signed.**

Subtle geo-strategic shifts taking place

A significant increase in visits by heads of state indicates India's rise to prominence

Over the last two months, India has been a destination for the world's most powerful heads of State beginning with Saudi King Abdullah followed by French President Jacques Chirac, US President George Bush, the Australian Prime Minister John Howard and more recently the Russian PM Mikhail Fradkov. While enhancing economic, trade and energy ties were topmost on the agenda, these recent events epitomize India's emerging role in the changing geo-strategic world order. Another key factor contributing to India's emerging significance on the world map are efforts to move towards free-market economics and its participation in the international knowledge economy thus making it prime economic real estate that is difficult to ignore.

US Quadrennial Defence Review: Shaping the Choices of Countries at Strategic Crossroads

The QDR, released last month by the US Department of Defense

Interestingly, while India's role in global affairs has been a culmination of several intricate factors, both economic and political; this has become perceptible with the release of the United States' Quadrennial Defence Review[20] (QDR) Report 2006, last month. Mandated by Congress, the QDR is a white paper defining Washington's defense strategy that projects a twenty-year program for implementation.

…Only underscores India's emerging role as a 'strategic partner' to the US

Since 9/11, US defense policy also involves identifying powers that will determine the international security environment. In the section '*Shaping the Choices of Countries at Strategic Crossroads*' the QDR cites India as a 'strategic partner' to the US, while China has the greatest 'potential to compete militarily' and Russia is seen as a potential threat only if it moves in an authoritarian and nationalistic direction

Diplomatic re-positioning in the Indian sub-continent

Another subtle change is India's diplomatic repositioning with reference to Pakistan. Historically, foreign policy in the sub-continent tended to club India and Pakistan together, but recent developments suggest that this may no longer hold true, with the US maintaining that 'the two countries have different needs and different histories'.

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[20] Please refer to Quadrennial Defence Review Report dated Feb 6, 2006 at http://www.defenselink.mil/pubs/pdfs/QDR20060203.pdf

Economic implications for India

Economic factors coupled with shifting geopolitics have contributed to India's emerging significance

For the Indian economy, this geopolitical shift is likely to have several positive implications from a longer-term perspective. Given that the shift is happening at a time when interest in the country is on an upswing, we believe it will not only aid initiatives already in the pipeline, but also help generate interest among other countries/corporates who have not yet been considering India. This also bodes well for the Indian economy and is positive for energy security, enhanced trade and FDI flows, all of which will help sustain the growth momentum.

Trade: Integration likely to increase India's share in world trade

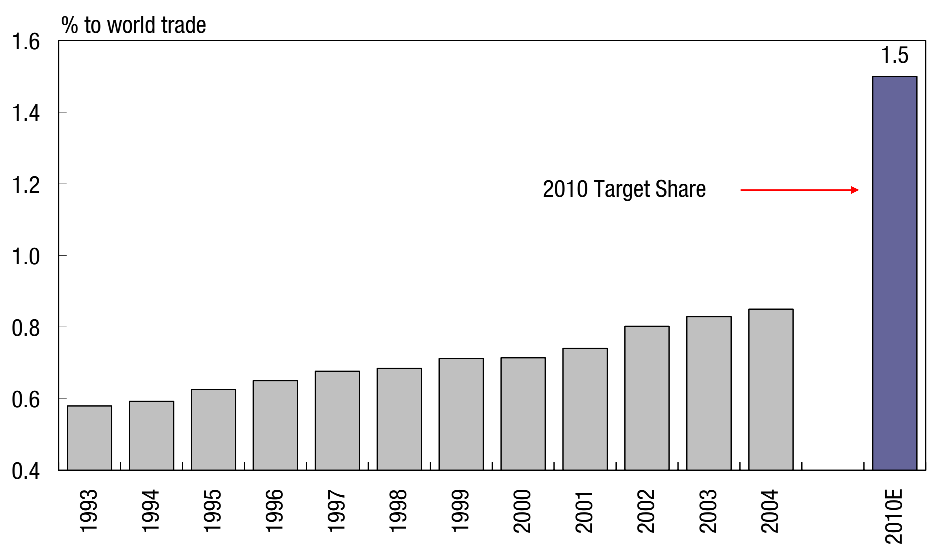
An improvement in trade flows through regional and bilateral agreements are another key outcome of India's global integration

India's share in world trade is currently 0.8%, with the government targeting a share of 1.5% by 2010. We believe regional and bilateral trade agreements will be a key force driving enhanced trade flows and prompting India's integration with the world economy. For instance, following the visit of Chinese Premier Wen Jiabao's to India last April, there has been a concerted effort to improve bilateral trade between India and China from US$13.6bn currently to US$30bn by 2010.

Other bilateral trade agreements include those with Sri Lanka, Thailand, Chile, Bhutan, Japan, Singapore, the US, and Australia. India is also part of several Regional Trade Agreements, such as those with SAARC, ASEAN and the Gulf Cooperation Council. Trade agreements are seen as a means to expand market access, and enhance labor and technological competitiveness.

FDI: While FDI flows into India currently pale in comparison with those into China (US$4.5bn in India vs. US$60.3bn to China in 2005), trade agreements are likely to help secure FDI flows. This, coupled with recent government initiatives[21], suggests immense growth potential for FDI to India.

Figure 8. India's Place in the World (Percentage of India's Trade to World Trade)



Source: WTO.

[21] The government has continued its policy of encouraging FDI. Today, 100% of FDI is allowed for most sectors, while some are subject to ceilings. Recent policy initiatives have included the discontinuation of Press Note 18, a steady easing of caps for most sectors, liberalized norms for FDI in real estate and construction as well as FDI in single-brand retail with a cap of 51%

This is likely to have implications for energy security, given India's growing energy dependence

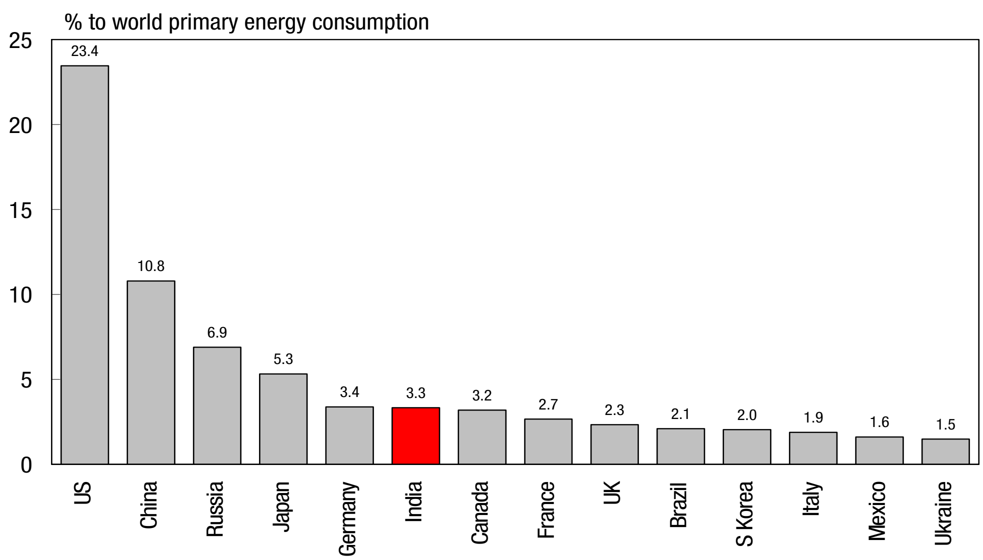
Energy security: Crucial for long-term growth

India is the sixth-largest consumer of energy in the world and imports 70% of its crude oil requirements. Given its current growth momentum, it is likely to grow increase its energy dependency. As yet, India has not been able to secure access to energy resources from its gas-rich neighbours such as Bangladesh and Myanmar. In addition, plans for a gas pipeline originally proposed from Iran and now Turkmenistan seem unlikely to become reality, given that the pipeline would need to pass through Pakistan.

Thus, the Indo-US nuclear deal[22], which is near closure, should eventually alleviate India's energy burden. Although the impact will likely be felt only over a much longer term, the deal is positive for India since it will allow the development of nuclear facilities for electricity generation and other civilian uses. Currently, India's nuclear facilities are operating at sub-optimal capacities due to a lack of uranium. Consequently, nuclear energy comprises just 3% of total installed energy capacity as poor uranium reserves have led to plants operating at sub-optimal levels. A steady increase in this share will only help narrow India's widening energy deficit.

Recent efforts to access nuclear energy resources in Russia, France, the US, and Australia are also positive. However, India's energy diplomacy has not remained restricted to nuclear energy. Saudi King Abdullah's visit to India earlier this year saw the forging of a "strategic energy partnership", with assurances that Saudi Arabia would continue to be "a trusted and reliable source of oil".

Figure 9. Consumption of primary energy to world total – The top 15 countries



Source: EIA International Energy Outlook 2005.

Conclusion: Given India's emergence as an attractive market across all sectors, we believe that business interests in developed nations are likely to encourage governments to have closer economic and political ties with India.

[22] PM Singh's visit to the US last year resulted in an agreement whereby India could acquire the same benefits and advantages as a Nuclear Weapons State (NWS), provided it would separate civil and strategic nuclear facilities and allow inspection of its civilian facilities

SEZs: A Possible New Catalyst for Growth

The notification of a new SEZ Act and fresh government initiatives…

…Led us to comment on 20th April 2006 that SEZs could be a possible new catalyst for growth

WE EXPECTED…

- **That the government's renewed thrust on SEZs would help buoy trade and investment flows for the country as long as they did not foster unbalanced growth.**

…AND WHAT HAPPENED

- **The new SEZ policy has attracted several players with 237 projects being formally approved so far.**
- **However, there has been much debate on the issues of revenue losses on account of tax exemptions. We believe that once fiscal leakages are plugged, the benefits in terms of infrastructure, trade, employment generation and investment will offset the fiscal impact.**

SEZs in India – Implementation is Finally Underway

SEZs in India were first proposed in the 2000-01 Exim Policy, but now appear to be a reality given the recent notification of the SEZ Act 2005 and its rules, which came into force in February 2006. Unlike an Export Promotion Zone (EPZ), which is an industrial estate, the scope of an SEZ is wider and its links to the domestic economy much stronger. This is because SEZs, besides providing benefits in terms of duty-free imports of raw materials, minimum government red-tape, tax holidays/fiscal exemptions also provide supportive infrastructure such as housing, ports, roads and telecommunications.

SEZs: Then and Now

Due to the conversion of some EPZs into SEZs, there are 14 SEZs in India. While their collective share in total exports has remained stagnant (in the 6% range), we believe with the entry of new players and regulations, this could change due to:

- **Fiscal Incentives**: SEZ units enjoy special tax incentives as they are exempt from customs and excise duties as well as income and sales taxes. Under the new SEZ rules, benefits include a 100% tax holiday for the first 5 years, 50% during the next 5 years, and for the last 5 years, 50% of profits will be exempt from tax. However, conditions do apply: (1) Units must be net forex earners over the first 5 years; and (2) the minimum area must cover 10 hectares of contiguous land.
- **Streamlined Regulations:** The new guidelines have brought into effect a uniform set of regulations for setting up SEZs, with single-window clearance on matters relating to state as well as central governments. A developer can set up the following types of SEZ: sector specific – whereby the zone caters exclusively to a particular sector; multi-product – where units within the SEZ fall within two or more sectors, port/airport based; or free-trade zones. Reports indicate that given the high fiscal burden of SEZs , as well as concerns on overcrowding, the

government may issue stricter norms for SEZs[23]. These could include raising the minimum area for units to discourage smaller real-estate players.

- **Greater Credibility:** In sharp contrast to the past, many of the 148 developers that have recently received approval to set up SEZs are well-established private corporates[24], including Bajaj Auto, Mahindra and Mahindra, TCS, Wipro, and Ranbaxy. These corporates, either by themselves or in partnership with public agencies, will be responsible for setting up infrastructure facilities or would thus be in a position to ensure enhanced service quality and reliability. The earlier SEZs were solely managed by the public sector where assurances on facilities didn't have much credibility.

- **Labor Flexibility and Eased Restrictions**: Rigid labor laws are among the biggest deterrents to higher investment levels in India. Consequently, labor market flexibility is perhaps among the biggest benefits that accrue to SEZ units. While the extent of exemptions to labor laws in an SEZ is a decision of the state government, an encouraging development is that the state government in W. Bengal has already said that trade unions would not be allowed in SEZs. We believe this move will likely be adopted by most other states as well.

Capital Account Convertibility will further fuel growth

Recent comments by the PM and the RBI on capital account convertibility are encouraging. We believe introducing CAC in SEZs will encourage the setting up of offshore banking units in these areas. While the liberalization of the capital account, even in SEZs is likely to be carried out in a phased manner, we believe such a move will encourage investment flows to the country.

Impact on the Economy

In most economies, SEZs act as catalysts to growth by offering several benefits such as world class infrastructure, reducing the cost of doing business, making industry competitive, thereby enabling an improvement in the BOP and fueling overall growth. Recent reforms on SEZs represent a focused initiative on the part of the government to promote industrial activity and enhance forex earnings, and will help sustain the growth momentum.

- **Higher Forex Earnings**: One of the main benefits of an SEZ is higher exports resulting in an improvement in the BOP. In India, exports from SEZs were estimated at US$4bn (FY05) comprising barely 6% of total exports.

- **Greater Foreign Investment:** SEZs offer foreign investors an opportunity to circumvent restrictions that are applicable otherwise. Higher FDI in turn brings with it knowledge spillover effects, and facilitates the transfer of technology. The implementation of CAC in SEZs would further encourage investment inflows.

- **Employment Opportunities:** Given that India's demographic dilemma is among the biggest risks to growth in India, benefits in terms of job creation are a

[23] For information on current SEZ norms, please see the SEZ Rule 2006 at http://www.sezindia.nic.in/sez-rules2006.pdf . This website also provides a general overview on SEZs in India, available at http://www.sezindia.nic.in/sez.asp

[24] For more details, please see http://www.business-standard.com/common/storypage.php?storyflag=y&leftnm=lmnu4&leftindx=4&lselect=2&chklogin=N&autono=222470

significant positive. Currently, the SEZs provide employment to 100,650 people. The government estimates that the recently approved SEZs would be able to generate employment to the tune of 500,000 people over the next 3 years.

- **Materials Consumption set to Rise:** Our cement and metals analyst Abhay Laijawala believes that the participation of Indian corporates in SEZ development imparts credibility and reinforces expectations of India entering a materials intensive phase of growth.

The negative side of the SEZ story

Despite their appeal, critics claim that SEZs foster unbalanced growth in an economy by offering distortionary incentives rather than building overall competitiveness. One World Bank report points out that the provision of SEZ incentives creates a fiscal burden on the taxpayer and results in a stunted liberalization policy. However, we believe that SEZs are beneficial to economic growth so long as they do not remain 'enclaves of prosperity' and help foster new investment rather than encourage the diversion of investment on account of fiscal concessions.

Special Economic Zones in China

One of the most successful experiences with SEZs has been with those in China. In 1980, China established three SEZs – Shenzhen, Zhuhai and Shantou in the Guangdong Province (adjacent to Hong Kong) – and one in Xiamen in the Fujian Province (across the straits from Taiwan). Infrastructure in these zones was built through government funding and preferential measures were adopted regarding taxation, foreign capital and import of raw material. These zones served as a model for reform and opening for other regions and were followed by SEZs in Hainan (the island province), Hunchun (adjacent to North Korea) and the Pudong Development Zone (in Shanghai). Since then, China has 15 free-trade zones, 32 state-level economic and technological development zones, and 53 high-technology industrial development zones established in large and medium-sized cities. Key distinguishing features of the Chinese SEZs are its unique location, large size (each SEZ is well over the minimum area of 1000 hectares with the Shenzhen SEZ at 33,000 hectares), decentralization of power in favor of provinces and local authorities in administering the zones and flexible labour laws. Contributing close to 12% of China's GDP, SEZs have played an important role in generating foreign exchange, fueling economic growth, and facilitating China's integration with the rest of the world.[25]

Can India Replicate the China Story?:

Supportive government policy, attractive infrastructure and investment incentives suggest that SEZs in India are on the right track. However, the Indian SEZs are much smaller in size than their Chinese counterparts, sectorally focused and separated from surrounding communities and have no natural gateway. For example, the SEZs in Guangdong initially acted as the manufacturing base for Hong Kong enterprises while Hong Kong acted as the trading house. Flexible labor policy is also an issue, and a formal relaxation in labor laws is likely to influence investment decisions.

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[25] Wikipedia provides a useful overview of SEZs in China. For details, see http://en.wikipedia.org/wiki/Special_Economic_Zone

India's Labor Advantage – What Needs to Be Done to Sustain It?

...As the year progressed, on 18 May, we were worried about India's talent pool not being as deep as estimated...

... and attempted to find solutions to what needed to be done to sustain it

WE EXPECTED...

- **That India's talent pool – or its supply of university graduates and engineers – would pose a problem as the country moves to a higher-growth path, with sectors such as IT, engineering, textiles, aviation, telecom and retail facing a shortage.**

...AND WHAT HAPPENED

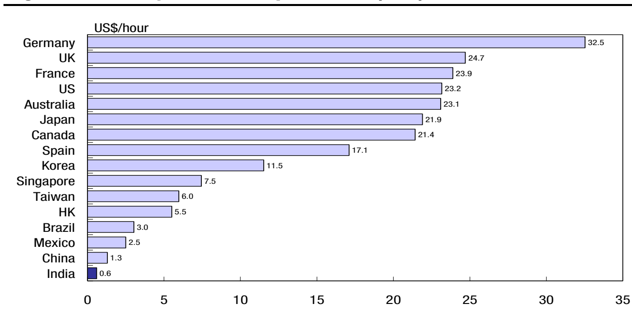
- **The talent crunch has indeed reared its head. The most apparent evidence has been its ensuing impact on wages, salary increases at 22% during 1HFY07, the highest in over three years.**
- **The biggest jump comes from banks, airlines, IT, and telecom companies. This may be a temporary phenomenon that government policy and enhanced skill sets could offset.**

India's current labor advantages: A well-known story

As India shifts to a higher growth trajectory, an oft-cited advantage working in the country's favor is its demographics. While China's favorable demographic profile has enabled it to sustain strong manufacturing growth, India's demographics have fuelled an off-shoring and service-sector boom. 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.

On the services front, an advantage that India has is its vast talent pool – i.e., the supply of university graduates and engineers who have strong English-speaking skills. Perhaps what is most encouraging is the consistent effort by the government to augment this talent pool that has resulted in a steady increase in the number of fresh graduates (around 3m a year).

Figure 10. Hourly Labor Compensation (US$)



Source: Bureau of Labor Statistics, India Labor Bureau.

Figure 11. 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.

Is the emerging talent shortage a risk to India's current labor advantage?

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 recent report by NASSCOM[26]- McKinsey states that while close to 3mn students 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. Chief handicaps include an uneven quality of primary education and the fact that India lacks workers who are fluent in French, German, Japanese, and Spanish. NASCOMM's projects a shortfall of nearly 0.5mn skilled employees by 2010, 70% of which will be concentrated in the BPO industry. 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.

Impact of the talent shortage

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[27] suggest that overall salary increases in India (across ranks) averaged 13.5% over 2005 – the highest among all Asia Pacific countries. As a result, while several corporates are in expansion mode, they are finding it difficult to bridge the talent crunch.

What can be done?

Given that India has a vast pool of untapped labor, we believe the shortage of skilled staff is only a temporary setback that can be addressed in various ways:

- **Improved education:** Key measures towards strengthening the education system include re-orienting classroom teaching to focus on practical techniques rather than theory, providing greater autonomy to universities, enhancing the quality of faculty members, and greater de-regulation for the country's higher-education system.
- **Corporate efforts:** 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. 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.

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[26] **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%

[27] **The Hewitt Global Salary Planning Report: 2005 and 2006** compiles salary increase information in 34 countries, covering over 4,400 for the following employee groups: (1) Top executives (2) Middle management (3) Professional and supervisory (4) Clerical and administrative; and (5) Manual. The full report is available at http://was4.hewitt.com/hewitt/resource/rptspubs/subrptspubs/global_salary_planning.pdf

Knowledge Commission: A step in the right direction

An encouraging development is the setting up of the National Knowledge Commission (NKC) last year. 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. The Commission is guided by a National Steering Group, chaired by the Prime Minister and involves working in close collaboration with Central and State governments, professionals, academics, scientists, regulatory bodies, national think-tanks and industry representatives. It has been given a three year time frame (from 2nd October 2005 to 2nd October 2008) to achieve its objectives.

So far, the NKC has submitted its recommendations on e-governance and also constructed a National Knowledge Index that aims to measure India's performance as a knowledge economy. 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.

Labor policy needs a re-think

Despite a possible talent shortage in some areas, we believe that given India's untapped labor potential, a shortage would be a temporary phenomenon. More important is the need to reform India's labor laws.

Labor policy today is among the chief impediments to doing business in India, with the country ranking among the highest in the World Bank's Rigidity of Employment Index. What is more disconcerting is that labor legislation has seen little change in the past few decades. Current laws still say that any company employing more than 100 workers cannot fire people without government permission, and the labor commissioner in the government has to be notified of every single person working on the night shift. In fact, policy seems to be regressive, with recent proposals to introduce reservations for Other Backward Classes in the private sector[28]. This would reduce opportunities and once again lead to a brain drain which had been stemmed in the recent past.

Figure 12. Labor Flexibility: A Regional Perspective

	Difficulty of Hiring Index	Rigidity of Hours Index	Difficulty of Firing Index	Rigidity of Employment Index	Hiring cost (% of salary)	Firing costs (weeks of wages)
Bangladesh	11.0	40.0	20.0	24.0	0.0	47.0
China	11.0	40.0	40.0	30.0	30.0	90.0
India	***56.0***	***40.0***	***90.0***	***62.0***	***12.3***	***79.0***
Pakistan	67.0	40.0	30.0	46.0	12.0	90.0
Sri Lanka	0.0	40.0	80.0	40.0	16.3	175.7
United States	0.0	0.0	10.0	3.0	8.5	0.0

Source: World Bank Doing Business Indicators.

[28] For more details on quotas in the private sector please see page 18.

A Macro Health Check for India Post the EM Sell-Off

...But soon we were confronted with bigger worries.

In the heat of summer, on 14 June, the markets faced a meltdown in the wake of a waning risk-appetite for emerging markets; this led us to carry out an emergency Macro Health Check for India

WE EXPECTED...

- **That the sell-off in emerging markets would not derail the growth story given comfortable FX reserves, sufficient liquidity condition, and relatively underleveraged Indian consumers and corporates.**

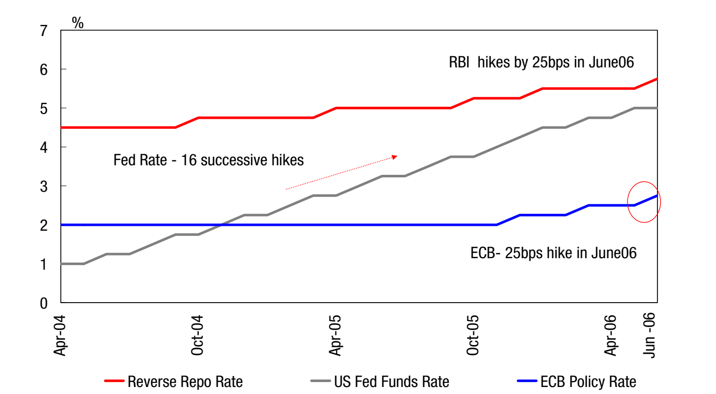
...AND WHAT HAPPENED

- **The EM sell-off has had little impact on India's BoP and trends in growth. Growth during 1HFY07 has crossed 9% levels, while forex reserves have increased by over US$23bn during the current fiscal.**

Global macro environment: What has changed?

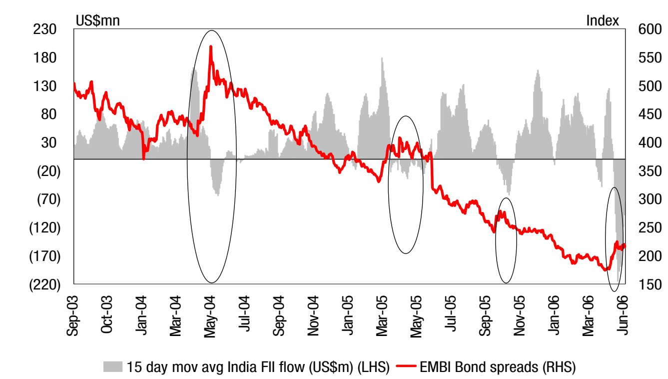
During the last month, on the back of concerns on further interest rate hikes in the US coupled with the yen carry trade being less attractive, EMBI[29] spreads widened from 178bps in April to 215bps by end-May. Compared with long-term trends the spread widening is minimal. However, the reversal in global risk appetite has resulted in a correction in emerging market (EM) assets, which our regional and Indian strategists believe was long overdue given the sharp decline in risk premium. As seen in Figure 3, portfolio flows to India are increasingly linked to global risk appetite.

Figure 13. Trends in Key Policy Rates



Source: Citigroup Investment Research.

Figure 14. EMBI Spreads v/s India FII inflows



Source: RBI, ECB, US Federal Reserve.

EMBI spreads and India

Until early May, most EMs, including India, saw a significant rise in stock prices. Apart from fundamentals, the rise can possibly be explained in terms of a higher global risk-appetite for emerging market equities as reflected in EMBI spreads narrowing to as low as 174bps in early May. Interestingly, portfolio flows into India

[29] **EMBI Spreads – A quick overview:** In simple terms, Emerging Market Bond Index (EMBI) spreads measures the difference between interest rates on US treasury bonds and those issued by emerging market economies (EMs). A narrowing of this spread reflects an increase in global risk-appetite which indicates that investors are more sanguine about risks in EMs and willing to put money in EM assets.

have been increasingly linked to global risk-appetite, with spikes in EMBI spreads causing a short-term dislocation in fund flows. For instance, the recent spike in EMBI spreads resulted in outflows of US$1.6bn and stock market correcting nearly 25% from a peak of 12,612 to 9,000 currently. Another example was in October 2005, when USD moves caused a spike in EMBI spreads, resulting in US$848m outflows during the month and a quick 12% correction in the Indian market.

India's external account: How vulnerable is it?

The EM sell off, which has resulted in Indian stock markets correcting 25% and portfolio outflows to tune of US$1.6bn in the current fiscal, has raised concerns on the vulnerability of India's external account, especially due to the fact that India's current account, which moved into a deficit in FY05, is likely to widen further to US$22bn in FY06.

Current account deficit: Reading the tea leaves

Despite the continuing buoyancy in exports, we believe that India's trade deficit in FY07E is likely to cross US$60bn, or 7% of GDP, as compared with US$53bn in FY06E. The rise in the trade deficit is due largely to high oil prices (our numbers are based on Dubai crude prices averaging US$65/bbl) as well as non-oil imports. An analysis of non-oil imports in FY06 indicates that 70% of this is due to capital goods and industrial inputs – which, in our view, is justified given that India has moved to a higher growth trajectory. What differentiates India from most countries is the rise in invisible earnings (4.5% of GDP) led by software exports and remittances. Thus, though the trade deficit should touch 7% of GDP, India's current account deficit is likely to come in around 2.5% or US$22bn in FY07.

Figure 15. Trends in Trade Deficit and Invisible Flows (US$bn, % to GDP)

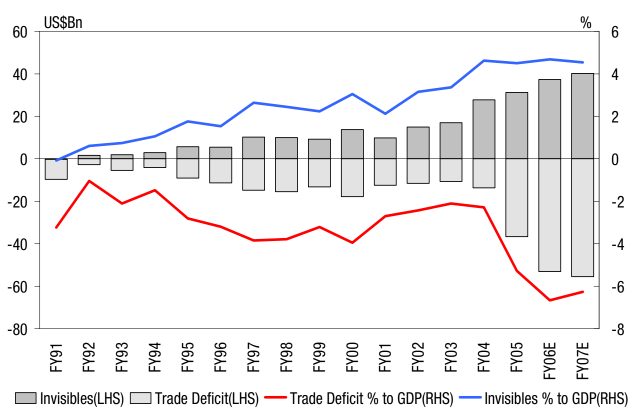
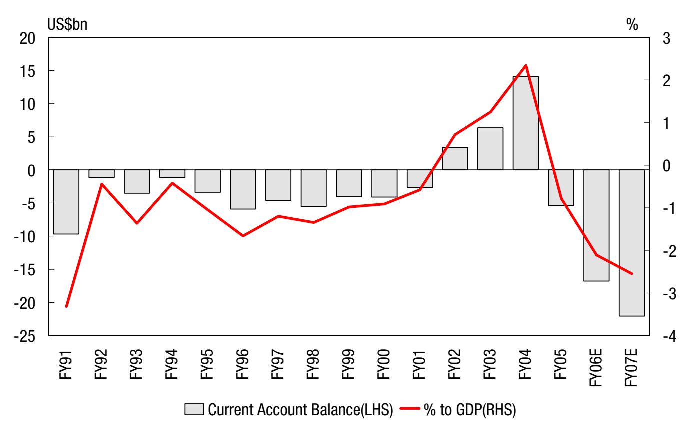


Figure 16. Trends in Current Account (US$bn, % to GDP)



Source: RBI; Citigroup estimates.

India's capital account: What if flows reverse?

Our base-case scenario: For FY07, we see the CAD widening to US$22.1bn, while capital flows are expected to come in at US$28.6bn, with portfolio flows estimated at US$8.5bn. In this scenario, total reserve accretion would stand at US$6.5bn and the rupee would average Rs45.8/US$. This scenario, coupled with comfortable FX reserves (currently at US$165bn) and the fact that the CAD is largely due to higher non-oil imports, leads us to maintain our positive stance on the external sector.

If negative sentiment continues: Leaving the current account deficit numbers unchanged at US$22bn, if sentiment continues to be negative, we expect capital flows to come in lower at US$18.1bn. This incorporates lower numbers for overseas loans, NRI deposits, FDI and assumes no portfolio investment. Under this scenario, we expect a drawdown of US$4bn to reserves and the rupee to touch Rs47/US$

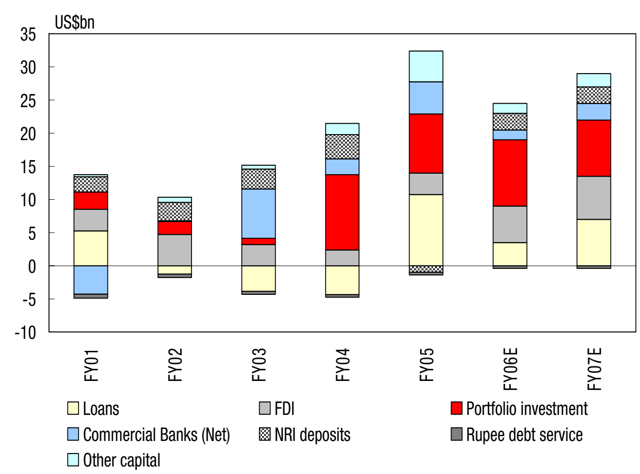
Worst case: Again leaving the CAD unchanged at US$22bn, a worse-case scenario, besides incorporating even lower numbers for loans and FDI, assumes outflows on account of both portfolio flows and NRI deposits. Under these circumstances, we would expect to see a draw-down of US$14.5bn and the rupee weakening to Rs49/US$.

Figure 17. Overall BoP - A Scenario Analysis

		FY07E: Scenario Analysis		
	FY06E	Base Case	If current sentiment continues	Worst Case
a. Trade Balance	-53.1	-62.3	-62.3	-62.3
b. Invisibles	36.3	40.2	40.2	40.2
1. Current A/c (A+B)	**-16.8**	**-22.1**	**-22.1**	**-22.1**
c. Loans	3.5*	7.0	4.0	3.0
d. FDI(Net)	5.5	6.5	5.5	5.0
e. Portfolio Investment	**10.0**	**8.5**	**0.0**	**-4.0**
f. Banking Capital	4.0	5.0	3.5	1.0
Commercial Banks (Net)	1.5	2.5	2.0	2.0
NRI Deposits	2.5	2.5	1.5	-1.0
i. Rupee Debt Service	-0.4	-0.4	-0.4	-0.4
j. Other Capital	1.5	2.0	2	2
2. Capital A/c (c:j)	**24.1**	**28.6**	**18.1**	**7.6**
Overall balance (1+2)	**7.3**	**6.5**	**-4.0**	**-14.5**

* Estimates for Loans include US$7.1bn redemption of IMD Deposits. Source: RBI, Citigroup.

Figure 18. Trends and Components in the Capital Account (US$bn)



Source: RBI, Citigroup.

Our verdict: Sentiment on equities; foreign flows wounded - but India macro story is for real

While the RBI has sufficient ammunition (in terms of FX reserves, a possible CRR cut and/or unwinding market stabilization bonds) to prevent sharp volatility in the currency and interest rate market, we believe a drawdown of reserves will impact the currency and interest rates. Rates will move higher not only due to a possible increase in policy rates but also due to the drying up of liquidity on account of lower dollar inflows. However, given that both the Indian consumer and corporate sectors are less leveraged than those in most other countries, and the fact that there are more powerful factors at play such as rising incomes, favorable demographics and outsourcing, we believe that the fundamental growth story for India will continue.

Why India Should Be More Resilient than Other Countries Facing a CAD

Following the EM sell-off, there was concern that India could soon be the next Turkey...

... But we remained confident that India was in fact more resilient than other countries that faced a current account deficit. On 18th July, we explained why.

WE EXPECTED...

- **That the *composition* of India's current account deficit (CAD), favorable debt ratios, forex reserves, and pro active monetary management would make it more resilient than other countries facing a CAD.**

...AND WHAT HAPPENED

- **These factors have indeed pulled India through the sell-off that impacted several countries facing a CAD. As mentioned earlier, growth during 1HFY07 has crossed 9% levels, while forex reserves have increased by over US$23bn during the current fiscal.**

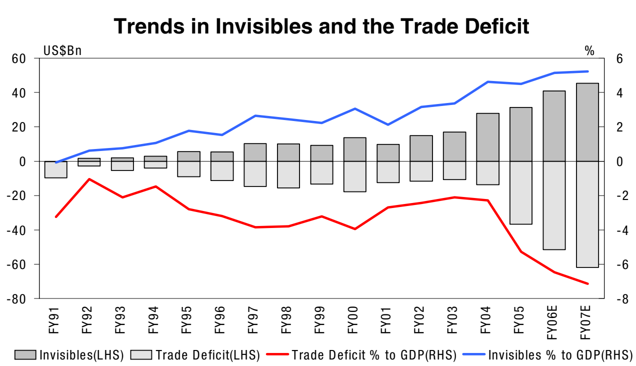
India and the recent EM sell-off

The May 2006 EM sell-off can be summarized as a correction that reflects both a higher level of global interest rates and a more appropriate level of risk in emerging markets. India was one of the EMs affected with equity markets correcting 25% from peak levels, and equity outflows to the tune of US$1.6bn. Many investors had amber lights on for India given its current account deficit (CAD) and dependence on portfolio flows.

Health check on the economy

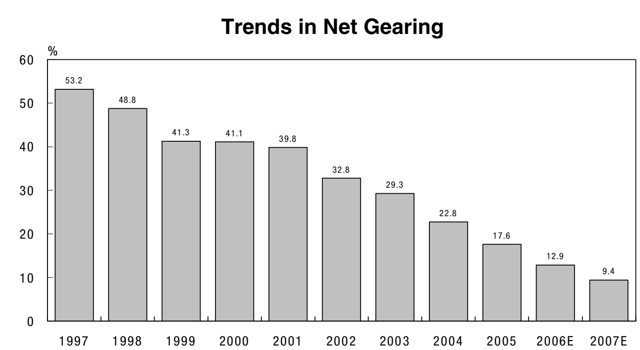
India passed our 'health check' since (1) India's CAD is largely due to imports of capital goods and industrial inputs, which, in our view is positive given that India has moved to a higher growth trajectory, (2) capital flows were more than sufficient to finance India's deficit and even in a worse-case scenario, the draw-down in reserves would be a maximum of US$14bn which amounts to less than 10% of total reserves, (3) the growth story looks fundamentally strong, led by investment upturn, positive income and age demographics and a high savings rate, and (4) a 50-100bp increase in rates should not derail growth, as both the Indian consumers and corporates are less leveraged than those in most other countries.

Figure 19. Given that India's trade deficit is offset by invisibles, and that the deficit is mainly due to imports of capital goods and industrial inputs- essential to move to a higher trajectory…



Source: RBI

Figure 20. …Coupled with the fact that Indian consumers and corporates are less leveraged than in many countries, we believe the recent sell-off will not impact growth to a significant extent.



Source: Company estimates, Citigroup Investment Research estimates.

Why we believe India won't be the next Turkey

Despite India's current-account deficit coming in better than expectations at US$10.6bn or 1.3% of GDP in FY06, many investors continue to club India with the other countries facing a CAD – such as Turkey, South Africa, New Zealand and Iceland. In this follow-up piece, we size up India's resilience to the other countries.

The sell-off and monetary measures

A quick recap: The reversal in global risk appetite in May resulted in a sharp correction in EM assets. Worst hit were Turkey, where equity markets saw a decline of nearly 20%, Argentina (-21%), and Russia (-36%). In India too, indices fell by nearly 22% between May10-22. Given the sharp sell-off in forex and equity markets alike, coupled with price pressures, monetary authorities in many of these EMs responded by hiking policy interest rates. For instance, in Turkey, overnight lending rates were raised by 600bps in three hikes in a span of less than a month — to 22.25%. Similarly in South Africa, monetary authorities stepped in to stem the sliding currency in early June, hiking rates by 50bps after a span of nearly four years. In India, the RBI raised reverse repo rates by 25bps to 5.75%, continuing along the path of monetary tightening that began in October 2004.

Figure 21. Stress Tests: How India Measures Up

	GDP		Current Balance	Inflation	FX Reserves	External Debt	Fiscal Deficit	Equity Mkts	Equity Mkts	Currency App/Dep
	US$bn	%YoY	% GDP	% YoY	US$bn	% GDP	% GDP	Sell Off*%	YTD%	YTD%
Argentina	176	9.2	2.8	9.6	28	109.7	1.8	-21.2	6.5	-1.7
Brazil	802	2.3	1.8	6.9	53.6	21.1	-3.3	-15.5	5.7	4.2
China	2,264	9.9	7.1	1.8	819	14.8	-1.1	-10.8	43.3	1
India	**797**	**8.4**	**-1.3**	**4.5**	**162**	**15.7**	**-4.1**	**-21.8**	**12.8**	**-2.8**
Indonesia	281	5.6	0.3	10.5	33	49	-0.5	-17.6	12.5	8
Korea	789	4	2.1	2.7	210	24.1	0.6	-8.4	-9	6.4
Malaysia	131	5.2	15.2	3.1	78	43.5	-3.8	-4.4	2	3.3
New Zealand	109	2.2	-8.9	3.0	27	105.9	5.9	-2.3	7.4	-9.5
Philippines	98	5.1	2.4	7.6	16	72.4	-2.7	-7.3	5.4	1.5
Russia	759	6.4	11.1	12.5	137	29	7.5	-36.4	46.9	6.7
S Africa	239	4.9	-4.2	3.4	24	13.3	-0.6	-9.3	15.1	-12.8
Turkey	301	7.4	-6.4	8.2	60	53.6	-2.0	-19.9	-13.7	-14.8

Sell-Off refers to dates between May 10-22 2006. Source: Bloomberg, Citigroup.

Key factors that should keep India afloat

Most investors continue to still have amber lights on India amid concerns that India is particularly vulnerable due to its CAD and dependence on portfolio flows. While our worst-case scenario entails a drawdown of less than 10% of forex reserves[30], we highlight key factors that differentiate India from other EMs.

The Current Account Deficit: Most countries that have faced the wrath of the EM sell-off have typically been ones with weak current accounts. Turkey's CAD at US$23bn or 6.3% of GDP, is far higher than India's CAD, which currently stands at US$10.6bn - merely 1.3% of GDP. South Africa, which saw a sharp currency depreciation[31] (over 7% between May 10-22), also has a large CAD, at 4.2% of GDP,

[30] See page 15 for a scenario analysis of India's BOP

[31] South Africa is the largest exporter of gold. A firming up of gold prices could help stabilize its currency

while in Iceland, the CAD stands at an alarming 16% of GDP. A chunk of imports in both South Africa and Turkey has been towards consumer goods and electronic items. In Turkey[32], a larger deficit has also been used to finance a housing boom. CADs have pressured sovereign ratings in New Zealand and Iceland[33]. In contrast, apart from oil, India's imports have largely comprised capital goods and industrial inputs used to expand capacity and aid growth. But a caveat to this is whether these capital- goods imports can generate further export growth. If not, the CAD may continue to widen because of stronger growth which can then pose a challenge. However, a key differentiating factor for India is the rise in invisibles earnings led by software exports and remittances that have partially offset the trade deficit.

High Debt Ratios: External debt comprises over 50% of Turkey's GDP, and close to 30% in Russia and Brazil resulting in a reliance on external financing. In New Zealand too, high external debt-GDP ratios have been a key concern. This, coupled with the redemptions of the Uridashi[34] bonds that have been used to finance its 9% CAD, have put pressure on the currency causing it to weaken further. While the level of external debt in India is high at US$119bn, debt indicators have been improving with external debt as a percent of GDP at 16%. Encouragingly, 35% of the debt is concessional having low interest rates and long maturity profiles. Though India's government debt ratio remains high at 75% of GDP, a key point to note is that all of it is domestically financed. But this could be a concern if interest rates rise by more 100bps.

FX Reserves: Reserves in Turkey stand at US$60bn, and can finance 5.5 months of imports. Indeed, reserves in most other EMs that have faced sharp sell-offs have been low. India's FX reserves at US$162bn, or over 12 months of imports, coupled with the possibility of RBI intervention to prevent volatility act as a strong cushion against external shocks. Yet one should keep in mind, that often when confidence is eroded, reserves can dwindle rapidly, as seen in Thailand in 1997.

Inflationary Pressures: Perhaps a key reason behind the sharp sell-off in several countries is that monetary authorities failed to adequately respond to mounting price pressures in time. An example of this is Turkey, where 10% inflation levels (as compared to a 5% year-end target) saw policy rates being raised by 600bps which could have a knock on impact on growth. Monetary authorities in India began policy tightening as early as 2004, with the result that higher rates have been priced in. At less than 5% levels currently, we believe inflation will average 5.3% in FY07 though the base effect will likely take it to 6% by year-end. Given that Indian consumers and corporates are still underleveraged and that real interest rates are relatively benign, a further rise of 50-100bps should not derail growth.

To conclude, an important factor which could support optimism on India is that its growth story is domestic-oriented, which provides better insurance (than many other Asian neighbors) at a time when global growth begins to moderate. This, combined with its relatively sound external positions, should help sustain investor confidence.

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[32] Other hurdles that **Turkey** faces include intensifying political conflict between the incumbent Islamist party and the secular opposition; and the EU accession issue, where Turkey continues to face pressure to recognize Cyprus
33 **Iceland** which has a CAD of 16% of GDP saw its currency depreciate by 12%, while equity markets have also witnessed a sell-off. Last month S&P revised its sovereign outlook from stable to negative, on the 'increasing likelihood of a hard landing for the economy' and citing rising interest rates as increasing the risk of a 'disorderly unwinding of imbalances in the economy'.
[34] Japanese-issued bonds denominated in Australian or NZ dollars

Insurance – Benefits Beyond Growth

On 21 August, we explored the insurance segment…

…and found that it could have far-reaching benefits for the economy, as it channeled savings into long-term investments

WE EXPECTED…

➤ **That on the back of growing de-regulation, favorable demographics, and robust economic growth, India's insurance sector presents promising opportunities.**

…AND WHAT HAPPENED

➤ **Growth in the life insurance segment continues to burgeon with first year premiums increasing 163% yoy during Apr.-Oct. of the current fiscal. The de-tariffing of non-life insurance has encouraged competition and rationalized tariffs, while trends in bancassurance have also seen an uptick.**

Measuring India's Potential

The insurance sector in India has come a long way since the Insurance Regulatory and Development Authority (IRDA) Bill was passed in 1999. Till the passage of this Bill, insurance was essentially a government monopoly, with the Life Insurance Corporation (LIC) and the General Insurance Corporation (GIC) handling life and non-life insurance businesses. The IRDA Bill prompted liberalization and private sector participation. Today, 14 private life insurers and 8 general insurance players have entered the market. Since the entry of private players, premiums have increased from Rs275bn in FY00 to over Rs1trillion in FY06– a CAGR of 25%. We expect growth to remain buoyant due to:

➤ **Low penetration levels:** Penetration, i.e., volume of premiums as a percent to GDP, is 3.1% of GDP in India compared with the world average of 7.5%.

➤ **Low Insurance Density:** Insurance density, i.e., the per capita premium, is US$22.7 in India as compared with the world average of US$519.

➤ **Favorable income and age Demographics:** With half the population below 25, rising incomes coupled with the fact that 90% of the workforce is not covered by any pension scheme, India is a promising insurance market.

➤ **High Savings Rate:** This has resulted in greater risk awareness and a focus on protection-oriented products. With the insured population around 70m, initiatives toward bancassurance and product-innovation are likely to enhance penetration.

Figure 22. Insurance Penetration- % to GDP

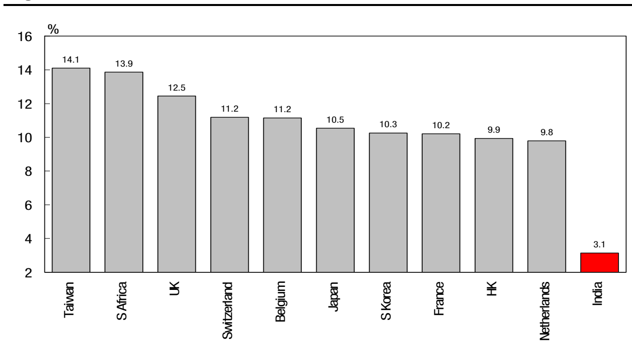
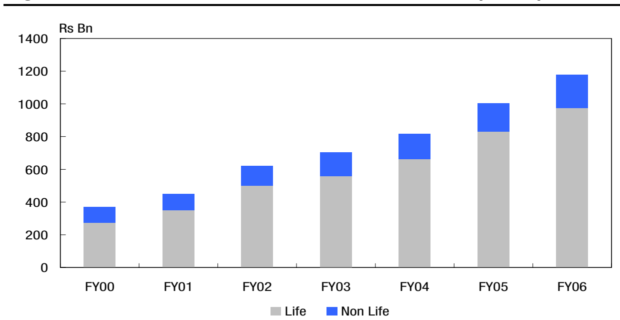


Figure 23. Trends in Premium- Life and Non-Life (Rs Bn)



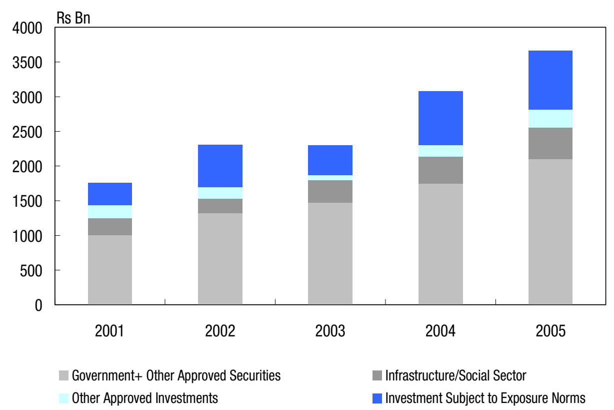
Source: Swiss Re, IRDA

Macro Impact of the Growing Insurance Sector

The insurance sector has far-reaching benefits for the economy, since it channels savings into long-term investments and infrastructure projects. Besides providing benefits to the consumer, it also helps fund the government borrowing program.

- **Higher Savings:** Due to the contractual nature of the payment of premiums, the level and stability of personal savings is higher, compared to a discretionary payment system. Private sector participation has enabled the growth in household savings in insurance from a little over 13% of gross financial assets in FY00 to nearly 20% in FY05.
- **Increase in Investible funds:** By pooling savings, insurance companies have been able to invest in a wide range of investments. As the time horizon for investment is long term, this complements the lending practices of the banking system. Another positive has been the impact on infrastructure development, which has long gestation periods. Latest data indicates that over 12% of life insurance funds were invested in infrastructure and social sector projects.
- **Government borrowing program**: The insurance market has made a sizeable contribution to the government borrowing program. For instance, data indicates that in FY05, life insurers invested over 57% of their funds in central and state government securities as compared to 51% in FY01. This has helped deepen the market for long-term debt securities as well as equities, stabilized interest rates and prevented the crowding-out effect.
- **Benefits to the consumer:** With increasing competition and product innovation, consumers gain in terms of cost efficiency, transparency and product range.

Figure 24. Fund-Wise Pattern of Investments- Life Insurers[35] (Rs Bn)



Source: IRDA, CSO

Figure 25. Trends and Components of Household Savings(Rs Bn)

	FY00	FY01	FY02	FY03	FY04	FY05
Household sector	**4,167**	**4,463**	**5,027**	**5,654**	**6,486**	**6,871**
% to GDP	21.3	21.2	22.0	23.1	23.5	22.0
of which						
Gross Fin Assets(GFA)	2,066	2,152	2,475	2,533	3,164	3,208
% to GDP	*10.5*	*10.2*	*10.8*	*10.3*	*11.5*	*10.3*
% to GFA:						
Currency	10.1	7.3	11.4	11.3	12.9	12.2
Bank deposits	25.0	33.6	28.7	29.0	29.1	16.2
Life Insurance Fund	**13.4**	**15.2**	**18.6**	**16.3**	**15.7**	**19.8**
Prov, pension funds	26.1	22.3	18.8	19.0	16.3	17.4
Claims on Govt	13.5	17.6	20.6	22.1	24.8	31.9
Shares & debentures	11.9	4.1	1.8	2.3	1.3	2.6
Total Savings	**4,873**	**4,963**	**5,380**	**6,490**	**7,975**	**9,074**
% to GDP	24.9	23.5	23.6	26.5	28.9	29.1

[35] **Fund wise investment Pattern:** As prescribed by the IRDA, funds are invested as follows: (1) ≥50% in govt securities and other approved investments; (2) ≥15% in infrastructure/social sector investments; (3) ≤20% in others governed by exposure prudential norms; (4) ≤15% in investments other than approved investments.

The Road Ahead: Challenges and Emerging Trends

Government regulation: Current regulations restrict foreign ownership in insurance companies to 26%. Budget 2005 had proposed to raise this to 49%. While this is still pending, if passed it would result in capital infusion, essential in expanding growth.

Tariff control: Currently, 70% of the non-life insurance business is under tariffs. (fire, engineering and motor insurance). These tariffs are below market-clearing levels, resulting in cross-subsidization across different lines of business. The government proposes to completely phase out tariffs in 2007. This will result in a correction of cross-subsidies and lower rates, which could expand the market.

Growth in non-life insurance: While motor, fire and marine insurance contribute over 65% of premium income; new growth areas include liability, health, crop and micro-insurance. Liability insurance covers the financial consequences arising out of the insured's obligation to pay compensation for harm caused to third parties. This is beneficial for industries that can be subject to litigation, such as healthcare, pharma, logistics, IT and outsourcing – all sectors where India continues to make inroads.

Bancassurance: Unlike LIC, which has over one million agents, the private sector insurers have also adopted the bancassurance route – which refers to the distribution of insurance products through a bank's distribution channels. Today, insurance accounts for a major part of banks' fee-based income and has facilitated job creation

Corporate Entry: The private sector insurance companies have seen a CAGR of over 100% as compared to 25% for the industry as a whole. All new life insurers would have to list their companies within 10 years of commencement. Most have a strong parentage, and thus capturing the embedded value of the insurance business would be important. For instance in FY06, Bajaj Auto and Aditya Birla Nuvo got a third of their consolidated revenue from insurance. Insurance accounts for a big proportion of revenues in financial services companies such as Sundaram Finance, ICICI Bank, Kotak Bank, J&K Bank, Reliance Capital and the Murugappa Group.

Interest rates and markets: Rising interest rates create competition with alternative investment channels for household savings. Similarly, equity market performance could impact unit-linked products, which have grown significantly in the recent past.

Figure 26. Premiums Earned by Key Players in the Life and Non-Life Segments (Rs Mn)

Life Insurers			Non-Life Insurers		
	FY04	FY05		FY04	FY05
LIC	631,676	709,019	New India Assurance Company Ltd	35,895	37,672
ICICI Prudential Life Insurance	9,893	23,638	National Insurance Company Ltd	23,878	26,641
Bajaj Allianz	2,208	10,017	United India Insurance Co Ltd	21,366	21,627
Birla Sunlife Insurance Co	5,375	9,155	The Oriental Insurance Co Ltd	19,725	21,232
SBI Life	2,257	6,012	Bajaj Allianz	2,306	3,709
Tata AIG	2,535	4,970	Tata AIG	1,436	2,276
Kotak Life	1,507	4,662	ICICI Lombard	791	2,156
Max New York Life Insurance	2,153	4,134	IFFCO-TOKIO	1,002	1,754
ING Vysya	885	3,389	Royal Sundaram	1,322	1,733
Aviva Life Insurance	815	2,534	Cholamandalam	238	710
AMP Sanmar	311	1,066	Reliance	263	480
Metlife	287	815			
Sahara*	-	17			
Total	**662,880**	**786,294**	**Total**	**108,622**	**121,182**

* Commenced operations on FY05. Source: IRDA

Entertainment and Media – A Kaleidoscope of Opportunity

On 15 Sept, we remarked on the ongoing success of India's Entertainment and Media industry…

… which has been positively impacted by robust growth, favorable demographics, and low penetration rates

WHAT WE EXPECTED…

➤ **That with technological advances and growing corporate interest, momentum in the media and entertainment industry would persist. While film and television segments would dominate the sector, radio and print media would follow a close second.**

…AND WHAT HAPPENED

➤ **Attractiveness of this sector has resulted in growing corporatization across segments. Migration to CAS and DTH are also encouraging.**

The Indian Entertainment and Media (E&M) Industry:

The size of the Indian entertainment and media industry comprising of television, films, cable networks, DTH, radio and print media is estimated at Rs353bn[36] and is expected to register a CAGR of close 20% till 2010. The key drivers behind this are:

➤ **Robust Economy and High Income Elasticity**: Given its high income elasticity, growth in the E&M industry generally outpaces overall economic growth (i.e when incomes rise, more is spent on leisure and less on necessities). Today, recreation accounts for 4% of private consumption up from 2.5% in '81.

➤ **Government Regulation:** Favorable government initiatives such as easing of FDI caps have helped spur growth. With Conditional Access System (CAS) rules coming into place, we see further potential for television while tax incentives for multiplex theatres have already had a positive impact on filmed entertainment.

➤ **Low Penetration Levels, Ad Spends:** Besides media penetration levels being low, advertising spends are barely 0.3% of GDP but growing. Higher advertising will strengthen broadcaster revenues and in turn content producer's revenues.

➤ **Technology:** The overlap between entertainment, telecom and IT is resulting in the emergence of value-added features for consumers and revenues for players. In addition, the move towards digitalization is influencing viewer-ship patterns

Figure 27. India: FDI Guidelines for the Media and Entertainment Industry

Segment	Limits
Advertising	100%
Films	100%
TV Software Production	100%
Cable Networks	FDI+FII Investment up to 49%
Direct-to-Home	49% (but FDI component not to exceed 20%)
FM Radio	FDI+FII Investment up to 20%
Print	100% for scientific magazines, specialty journals, periodicals; 26% for newspapers and periodicals dealing with current affairs

* The Ministry is currently finalizing FDI limits for the satellite radio policy. Reports suggest limits may be lowered, to 49% from 100% currently, in order to bring it at par with limits for cable networks. Source: Ministry of Commerce and Industry

[36] Price Water house Coopers, in their report titled "The Indian Entertainment and Media Industry – Unraveling the Potential" estimates the size of the E&M industry at Rs353bn with television accounting for 40%, film (19%), print media (31%) and radio, music, live-entertainment the rest

Key Segments That Will Spur Growth

Films: Multiplex Boom and Digitalization to Improve Revenues

India's insatiable appetite for films makes this segment amongst the most profitable in the entertainment industry. With over a thousand films produced each year, box office collections account for nearly 85% of total revenues as compared to 27% in the US[37]. Government support has been encouraging, with industry status for film making granted in FY01. This has resulted in growing corporatization and opened 'Bollywood' to financing from banks and corporate sponsorships. Moreover, with 100% FDI allowed by automatic approval for the industry, a number of international studio houses have evinced an interest in the country. Going forward, rapidly mushrooming multiplexes and growing digitalization are likely to sustain growth.

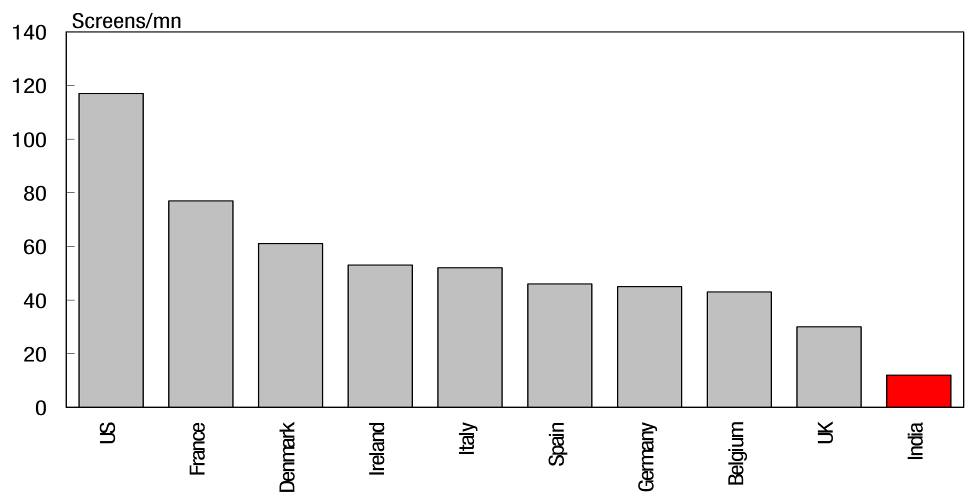
The Multiplex Boom and Digitalization

With only 12 screens per million people, as compared to 117 in the US, screen density in India remains amongst the lowest in the world. However, this is set to change with a growing number of multiplexes continuing to capture latent demand. Currently, majority of theatres in India are single-screen and use celluloid prints. This has resulted in poor quality, low occupancy despite low ticket prices, and thus lower revenues. Now, with government tax incentives[38] encouraging conversion to multiplexes, a number of corporate players such as Priya Village Roadshow (PVR), Inox Leisure, Adlabs Ltd and Shringar Cinemas have entered the market.

Digitalization of cinemas will improve occupancy rates, enhance quality and reduce piracy

Apart from the growing number of multiplexes, digitalization of cinemas will also spur growth in the segment. Upgradation to digital cinema reduces piracy and print duplication costs, enhances quality, and increases occupancy rates. By year-end 2006, there will be approximately 1,000 digital screens, up from 200 in 2005. We believe multiplexes and digitalization will ensure higher occupancy rates, enable higher ticket prices thus generating higher revenues.

Figure 28. Number of Screens/Million population



Source: CII-KPMG

[37] PwC Global Entertainment and Media Outlook, 2006-2010

[38] Multiplex theatres constructed between FY02 and FY05 in any of the four metros enjoy tax deductions of 50% of profits derived for a period of 5 years from the initial assessment year.

Television: More Channels, Growing Subscriber Base

Television, which accounts for 40% of the E&M industry, has immense growth potential due to the growing number of television households (100mn) and cable networks. Despite close to 300 channels in existence, the demand for variety in content has resulted in more channels including those catering to regional demand and showing 'dubbed foreign content' (such as ESPN-Star Sports and the Disney Channel). Besides demand for content software companies (Balaji Telefilms, Pritish Nandy Communications), a key offshoot of the growing television market is a steady uptrend in advertising revenues. Higher advertising will strengthen broadcaster revenues and in turn content producers' revenues. Going forward, subscription revenues are likely to be the key growth driver.

Conditional Access System (CAS): Positive; Once Initial Hurdles are Cleared

In the move towards digitalization and improved service quality, CAS - a digital mode of transmitting TV channels through a set-top box (STB) - will boost the cable and satellite subscriber base. Since it differentiates between channels, users can decide what channels they wish to watch and pay for only these, making CAS more cost-effective than the current system. So far, it has been the subject of controversy due to the high cost of the STB. But given the threat from Direct-to-Home[39] operators, coupled with the proposed digitalization plan by TRAI, cable companies are prompting customers to invest in STBs. Once economies of scale kick in to result in lower STB costs, CAS will widen the subscriber base and benefit broadcasters (ZEE, TV18, Sun TV).

Radio: A bigger role for the private sector

This sector has seen explosive growth since de-regulation in 2000 when the government decided to open up FM broadcasting, and auctioned 108 frequencies through an open auction bidding process. Another growth enabling factor was the shift from a fixed license to a revenue sharing regime. In 2005, the government allowed foreign participation and early this year, the government has auctioned 338 new licenses, across 91 cities. International players, including the BBC have already teamed up with local companies. This should lead to a rapid expansion not only in listenership but also generate growth in radio advertising. Key players include Mid-Day (GO 92.5FM) and Entertainment Network India Ltd (Radio Mirchi).

Print Media: Low Readership Levels = Immense Potential

The National Readership Survey 2006, indicates that the reach of the press media has risen from 216mn to 222mn over the last year; but as a percentage, readership continues to remain low – with a 45% penetration[40] in urban and a 19% reach in rural India. There is still room for further growth as far as vernacular publications are concerned, with 359mn literate people not reading any publication. Hence, low media penetration, rising incomes and improving literacy should improve circulation and revenues for the print media. Key players include HT Media, Jagran Prakashan.

What remains to be done: The hurdles to be cleared in the E&M industry include the rationalization of entertainment taxes and reducing piracy.

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[39] Direct-to-Home (DTH) is reception of satellite programmes with a personal dish in an individual home. DTH was proposed in India in 1996 but did not clear approvals until 2000.

[40] Number of people who read magazines and dailies as a percent of the total reading population (15 years and above)

UMPPs – A likely Panacea for the Power Sector

As the year progressed, on 16 Oct., we grew optimistic about the impact of Ultra Mega Power Projects as a Pancea for the Power Sector…

…we believed the UMPPs could help the government achieve its 'Power for All by 2012' vision

WE EXPECTED…

- **That the implementation of Ultra Mega Power Projects (UMPPs) would aid the government achieve its 'Power for All by 2012' target. We expected 2 of the 7 projects – Sasan and Mundra – to fructify.**

…AND WHAT HAPPENED

- **Bidding for the Sasan and Mundra UMPPs is already under way, with final bidders to be announced by the end of this year.**
- **In order to make financing easier, the goverment plans to relax ECB norms and bring out long-tenor infrastructure bonds.**

Power Sector Review: A quick update

India's installed capacity at 127,056MW, is dominated largely by the public sector (states have a share of 55%, while the centre accounts for 32.5%), with the private sector accounting for only 12% of total installed capacity. Burgeoning demand coupled with high transmission and distribution losses (at 32.5%) has resulted in a huge demand-supply gap in power. During FY06, the energy deficit was 12.5%, while the peak deficit was 8.3%. As a result, per capita consumption of power remains a poor 606KwH, far lower than the global average of 3000KwH.

Policy initiatives could result in a turnaround

There have been a number of government initiatives in the power sector during the last three years. These include the Electricity Act 2003[41], establishment of a regulatory framework for the sector, coupled with schemes for the settlement of dues of State Electricity Boards[42] (SEBs) all of which have resulted in an improvement in the financial position of SEBs. Also encouraging is the government's resolve toward power sector reform (as seen in the Dabhol issue).

While this is resulting in a turnaround in the sector, there remains slow progress on the privatization of distribution. In addition, there is lack of an adequate payment security for independent power producers (IPP) setting up generation capacity. However, given the PM's focus on power sector, the implementation of Ultra Mega Power Projects (UMPPs) could be a key harbinger of change

Ultra Mega Power Projects

The Ministry has set the target of providing 'Power for All' by 2012. This entails capacity creation to the tune of 100,000MW during 2002-12 of which a capacity addition of 40,000MW was targeted for the 10th plan (2002-07) while 60,000MW was targeted for the 11th Plan (2008-12). As the 10th plan is likely to fall short of its

[41] Power sector reforms in India have been underpinned by **the Electricity Act, 2003**, which calls for the de-licensing of power generation and frees up the distribution sector, allowing the direct sale of power to consumers (open access). It also permits private sector participation in Transmission and Trading; and makes it mandatory for states to unbundle the State Electricity Boards (SEBs).
[42] Under the **One-Time-Settlement Scheme**, losses of SEBs were securitized through the issue of tax-free bonds (bearing 8.5% interest and maturing in stages from Oct 2006 to Apr 2016)

target by 7,000MW, the 11th Plan would need to see 67,000MW being built for the government to achieve its target of 'Power for All.'

In order to achieve this target, the government has announced the setting up of seven major Ultra Mega Power Projects (UMPPs) with capacities of 4000MW each which would entail investment to the tune of Rs150bn. This would be done through tariff based competitive bidding via a two stage process featuring separate requests for qualification (RFQ) and requests for proposal (RFP).

UMPPs- Key distinctive features

Size: UMPPs are large-sized power projects (4000MW) that are likely to use environmentally friendly super-critical technologies, thus meeting the power needs of a number of states through transmission of power on regional and national grids.

Cost of Power: The cost of power in these plants is expected to be lower on account of (1) economies of scale; (2) competitive bidding for tariffs; and (3) carbon credits gained due to the adoption of environmentally friendly technology.

Shell Company Approach: What distinguishes UMPPs from other power projects is the fact that shell companies have been set up as wholly-owned subsidiaries of Power Finance Corporation. These companies will work in conjunction with the state governments/Ministry of Power to obtain various approvals and statutory clearances including those on (1) land acquisition; (2) fuel linkages - the identification of captive coal blocks; (3) environmental clearances; (4) water linkages; and (5) off-take/sale of power. The shell companies/Special Purpose Vehicles (SPVs) will obtain the necessary clearances and then be transferred to developers through a competitive-bidding process.

Payment Security Mechanism: This would consist of (1) revolving letter of credit by distribution licensees; (2) escrow account having irrevocable claims of receivables of the distribution utility; and (3) direct supply to consumers incase of default.

Figure 29. Ultra Mega Power Projects – Key Details

Project	Units (MW)	Cost (Rs Bn)	Location	Fuel	Allocation
Coastal Maharashtra Mega Power Ltd	4000	150	Girye, Maharashtra	Imported Coal	Rajasthan, MP, Chhattisgarh, Maharashtra, Karnataka
Coastal Karnataka Power Ltd	4000	150	Tadri, Karnataka	Imported Coal	Rajasthan, TN, Kerala, Maharashtra, Karnataka
Coastal Gujarat Power Ltd	4000	150	Mundra, Gujarat	Imported Coal	UP, Punjab, Rajasthan, Haryana, Gujarat, Maharashtra
Akaltara Power Ltd	4000	150	Akaltara, Chhattisgarh	Indigenous Coal	
Sasan Power Ltd	4000	150	Sasan, MP	Indigenous Coal	UP, Delhi, Uttaranchal, Punjab, Rajasthan, Haryana, MP, Chhattisgarh
Coastal Andhra Power Ltd	4000	150	Krishnapatnam, AP	Imported Coal	Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra

* Two additional UMPPs have been proposed in Ib Valley, Orrisa and Tamil Nadu. Source: CRIS INFAC, Media Reports.

Progress so far

Several foreign and domestic players have shown an interest in the UMPPs. We believe at least 2 projects – Sasan and Mundra could fructify, as bids have been called for on November 22, 2006 with the final bid likely to be awarded by December 2006. The PFC aims to transfer the SPV to bidders by February 2007. PFC, which received 13 requests for qualification (RFQs) for Mundra and 15 for Sasan project, has already signed power purchase agreements (PPAs) with the distribution companies of the beneficiary states for these two projects on October 9.

Will the Power Sector See Turnaround Post UMPPs?

We believe these projects are a step in the right direction for the power sector and appear to be an ideal solution for cash-strapped state governments. Under the UMPP arrangement, states can enjoy the benefits of capacity addition without making any cash investment, by merely providing requisite clearances. As a result, there have been a number of states - including Tamil Nadu and Jharkhand- that have recently jumped on to the UMPP bandwagon. Benefits for private players are also evident, since major hurdles such as fuel linkages and other clearances - which are currently one of the biggest deterrents to investment - are handled by the state governments.

Issues and Concerns

Although UMPPs are a big step forward in reforming the power sector scenario, there remain several concerns:

- **Project Financing** is amongst the biggest concerns. Funding would entail long-tenors, of about 20 years, for which government intervention through the issuance of long-term infrastructure bonds would be necessary. In addition, as power has been a dominant activity in project financing, residual exposure limits may be an issue for banks in taking up large loans. Funding from Export Credit Agencies who have the ability to lend long tenors should also be considered.
- **Fuel Linkages**: A significant aspect of UMPPs is the arrangement of fuel linkages - primarily coal supply, which would hinge largely on the cooperation of state governments and their allotment of adequate coal supplies. Any delays in this regard would have a knock-on impact on the project as a whole. This issue would be more challenging for the plants based on imported coal.
- **Transmission:** Apart from the need to have transmission capabilities to evacuate and transmit power across states, it is pertinent to have PPAs in place for the entire capacity as it might be difficult to transmit huge quantities of generated units across the grid at a short notice in case of available unallocated capacities.
- **Receivable Risks:** As these are very large projects, the ability of the SEBs to continue to be strong credits would depend upon improvements in transmission and distribution and evolving of an effective payment security mechanism which can meet requirements of the existing users and the UMPPs.

Looking ahead, we believe UMPPs will play a major role in shoring up the additional capacity required to meet targets set out by the Electricity Act, if these issues are adequately addressed. Our Electric Utilities and Equipment analyst Venkatesh Balasubramaniam believes the key beneficiaries are:

- Electric Utilities: NTPC, Tata Power, Reliance Energy
- Generation Equipment Suppliers: BHEL
- Transmission Equipment Suppliers: ABB, Siemens, Crompton Greaves, Bharat Bijlee, EMCO, Torrent Cables, KEI , RPG Cables, and Universal Cables
- Transmission Structure Suppliers: KEC, Jyoti Structures, Kalpataru

Tourism in India – Unlocking Its Potential as an Engine of Growth

In the November Macroscope we got into the holiday spirit…

…and on Nov. 23, we analyzed the tourism industry in India, and found it had immense unlocked potential

WE FOUND…

- **That tourism in India has immense unlocked potential, given that India had recently been ranked among the top 5 tourist destinations but accounted for less than 0.5% of world tourist arrivals.**

…AND WHAT IS HAPPENING

- **Tourism in India is on an upswing, with growth led by both international tourist arrivals, and an expansion in the domestic market. Government initiatives have included developing niche tourist packages, for instance rural and cruise tourism.**

Indian tourism – Unlocking the potential

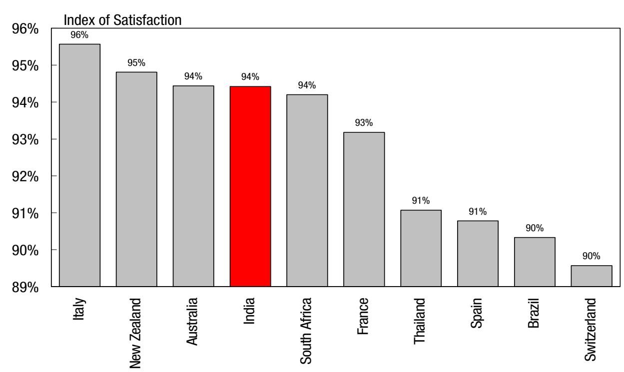
Despite being an attractive tourist destination, India drew barely 3.92m visitors in 2005 and accounted for just a 0.5% share of total international tourist arrivals. The key reasons for this have been weak infrastructure, the shortage of hotel rooms and lack of awareness. However, we believe the industry – which already accounts for 5.3% of GDP, 5.4% of total employment, and contributes substantially to forex earnings – has significant potential to be a powerful growth engine if government policies remain supportive.

Figure 30. Key Tourism Indicators: India and the World

	World Average*	India
Contribution to GDP	10.3% (US$4,963bn)	5.3% (US$41.8bn)
Number of jobs generated (% of total employment)	8.7%, 234mn jobs	5.4% , 24mn jobs
Visitor Spending (% to total exp)	11.8% (US$1,646.2bn)	4.7% (US$9.7bn)
Amount spent on T&T by residents(% of total personal cons)	9.5%(US$2,844.7bn)	3.8%(US$21.4bn)
T&T capital exp by Public+pvt sectors (% of total inv)	9.3%(US$1,010.7bn)	7.2%(US$15.6bn)
Spending by govt on T&T industry (% of total govt spend)	3.8%(US$300.2bn)	1%(US$0.9bn)

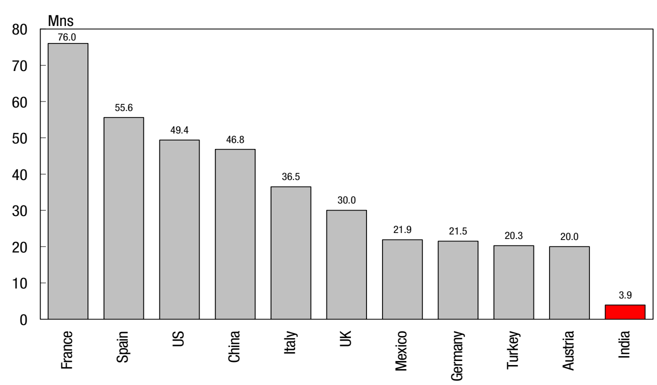
* US$ values indicate world totals. Source: WTTC

Figure 31. India Is Among The Most Sought After Holiday Destinations in the World …



Note: Values represent responses based on an index of 100. Source: Conde Nast Magazine

Figure 32. …Yet Tourist Arrivals Rank Among the Lowest



Source: World Tourism Organization, 2005

Government initiatives

The government's new tourism policy, which is targeting for 10m tourists annually by 2010 from 3.92m in FY05, aims at positioning tourism as a major engine of economic growth and to harness its direct and multiplier effects for employment and poverty eradication in an environmentally sustainable manner.

- **Tourism infrastructure**: Weak infrastructure is among the biggest hurdles to building India's tourism potential. As seen in Figure 3, government spending on infrastructure has been barely 1% of total expenditure as compared with the global average of 3.8%. Key initiatives aimed at supporting the objective to position tourism as an engine of growth include liberalization in the aviation sector, rationalization in tax rates in the hospitality sector, a tourist friendly visa regime and immigration services[43], procedural changes in making available land for construction of hotels and allowing the setting up of guest houses.
- **Media positioning:** A key strategy adopted by the Ministry of Tourism has been to promote tourism by popularizing the cultural sites of major regions through its *Incredible India* marketing campaign that focuses on yoga, Ayurveda and other spirituality-related concepts[44]. Since then, new themes have targeted niche areas and included *rural tourism; adventure and wildlife and MICE (meetings, incentives, conferences, and exhibition) tourism. Medical tourism* - a subject that we explored last year, has also attracted many to the country's low-priced, high-quality medical care.

Impact on the economy

Tourism in India contributes 5.3% to GDP, lower than the world average (10.3%) as well as that of the the South East Asian economies of Malaysia and Thailand (15%). We believe supportive government policies coupled with expansion in hotel capacity will have a knock-on impact on employment, the balance of payments, and sectors such as manufacturing, construction, and service industries.

- **Employment generation**: As the travel and tourism industry is relatively labor intensive, employment generation (both direct and indirect) would be one of the biggest benefits. Currently, the industry accounts for 5.4% of total employment in India. The World Travel and Tourism Council (WTTC) expects tourism to register 8% real growth annually till 2016. We believe this will help create more jobs and bodes well for India's demographic dilemma (to create 10m jobs annually to support the rapidly expanding work force).
- **Foreign exchange:** Tourism is a major source of foreign exchange and is a top top export category for many countries including India Domestically, it is turning into a volume game where a large number of participants (hotels, tour operators, airlines, shipping) are contributing to revenue of the industry**.** For instance, tourism earnings in India have risen from US$3.5bn in 2003 to

[43] Initiatives to bridge the current shortage in hotel rooms have also been positive, with the government recently launching a '**bed and breakfast'** scheme whereby homeowners can offer up to 5 rooms as tourist accommodation. In addition, a 'visa-on-arrival' scheme and the issuance of multiple-entry visas is also under consideration in order to boost tourist arrivals

[44] The impact of attractively-packaged campaigns is most apparent in Kerala, where health and wellness tourism has helped attract attention to Kerala as the home of Ayurvedic medicine and a centre for holisitic healing. Other destinations that have been packaged attractively to garner high-value tourism include Rajasthan, UP, MP, and Goa.

US$5.7bn in 2005 and has already crossed US$5bn for Jan-Oct06. Interestingly, *per capita tourist earnings* in India is US$1,462, much higher than the world average of US$844. Studies by the Ministry of Tourism indicate that this is due to: (1) a greater number of days spent by tourists in India; and (2) visits by higher-spending tourists.

- **Invisibles and the BoP**: A pick-up in tourism receipts would boost invisible flows and in turn have a favorable impact on the current account. Because many Indians travel overseas (7.2m in 2005) compared with the number of visitors coming in, net tourism receipts are US$1.4bn, or 3% of total invisibles. This suggests to us that there is catch-up potential for growth.
- **Manufacturing and construction:** Higher tourist activity would bode well for the Indian handicraft industry including gems and jewelry. Another knock-on impact of tourism would be a uptick in investment, largely infrastructure and construction.

What needs to be done to put India on the tourist map?

- **Weak infrastructure** has currently been the biggest impediment to enhancing tourist arrivals with India's infrastructure facilities paling in comparison with other tourist destinations. In addition, costs are high as tourism is a state subject. Each state separately spends on tourism-related activities; if these funds were spent by a nodal agency, we think the results would be better. Improving access to destinations via inter-state highways and roads, better facilities at airports and railway stations would be a first step towards strengthening infrastructure.
- **Shortage of hotel rooms:** India currently has 100,000 hotel rooms across all categories. The rise in tourism traffic (2.6mn in 2000 to 3.92mn in 2005, a 50% rise) has resulted in hoteliers substantially increasing room tariffs and making India a high-cost destination. We believe 8-10% growth in tourist arrivals would warrant an additional 30,000 rooms in all categories. With the Commonwealth Games approaching, we think the high rates and shortage of accommodation pose major deterrents for the industry.

How to play this theme

- **Hotels:** Over the past two years, demand for rooms has outpaced supply. Our hotels industry analyst, Ashish Jagnani, expects trends to continue in the premium segment till 2008. Post-2008, supply of rooms will likely exceed demand, which would slow ARR growth. He believes that Indian Hotels, India's largest hotel chain, owner of the *Taj* luxury brand with pan-India presence, is best positioned. Other key hoteliers include EIH and Hotel Leela Ventures.
- **Airlines:** In the long term, our airlines analyst Jamshed Dadabhoy believes that the domestic airline industry will also benefit from rising tourist flows, both inbound and outbound. Besides the state-owned carriers, Jet and Kingfisher should also benefit from growth in traffic (the latter once it receives permission to fly on international routes). However, in the immediate near term, burgeoning seat capacity will likely drive down yields and profitability for the sector. Air caterers such as Taj SATS Air Catering would be likely beneficiaries.
- **Other travel plays:** Thomas Cook, Cox & Kings.

Prospects for 2007

Come December, we ended the year with a contented sigh…

... But there remained one unfinished task – predicting prospects for 2007. And we concluded that the good times would continue!

WE EXPECT GOOD TIMES TO CONTINUE…

- **In our final publication in 2006, we argued that India will likely sustain its 8% GDP growth over the next two years, with wholesale inflation hovering around 4.5%.**
- **The Reserve Bank of India's rate tightening should soon come to an end, possibly with one further hike by 25 basis points at round the turn of the year.**
- **Current account deficits are likely to continue, but their shares of GDP should decline over time, as exports likely outpace imports.**
- **With unusual levels of investor confidence, strong capital inflows are likely to continue in the near term. These should underpin an upward trend for the Indian rupee.**
- **But key risks that we believe could impact growth are a widening talent shortage, politics, and the infrastructure deficit.**

Good Times to Continue

India is likely to sustain its 8% GDP growth over the next two years, with wholesale inflation hovering around 4.5%. The Reserve Bank of India's rate tightening should soon come to an end, possibly with one further hike by 25 basis points at round the turn of the year. Current account deficits are likely to continue, but their shares of GDP should decline over time, as exports likely outpace imports. With unusual levels of investor confidence, strong capital inflows are likely to continue in the near term. These should underpin an upward trend for the Indian rupee.

Real GDP growth rose to around 9% levels during the first two quarters of 2006, on more balanced and stronger momentum in the industrial and service sectors. While such a pace might be extraordinary, India's level of trend growth will likely sustain at around 8%, thanks to improved macroeconomic stability, liberalizations in a number of key areas and gradual improvement in infrastructure. 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 to remain as one of the fastest-growing economies in the region.

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. 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. The recently announced Ultra Mega Power Projects (UMPP) with the target of providing "Power for All" by 2012 offers a good example.

The on-going urbanization process should also be a sustainable driver of investment growth, given that two-thirds of the population still live in the countryside. In the near term, buoyant investor confidence, relatively loose monetary conditions, healthy corporate balance sheets and rich cash flows of most companies are also positive for the investment outlook. We expect India's investment share of GDP to rise from 28.4% during the current fiscal year to 30.3% during FY08, which would be the second highest after China.

Consumption has been growing at rates slightly below GDP growth. But steady growth of both income and jobs should underpin consumer spending going forward. India's rising proportion of young workers in the labor force, alongside the growing middle class, is a favorable backdrop for the consumption story. Growth of motor vehicle sales, for example, picked up from 13.4% in 2005 to 16.7% yoy during the first 10 months of 2006. Urbanization and consumer credit could also be long-term drivers of consumer spending. India's retail lending has been growing at close to 40% annually for the past three years, but it is still under 10% of GDP, way below levels of many other Asian economies including China.

India's famous outsourcing story is likely to continue to shine. Building on established positions in software and IT-related areas, the businesses are also moving rapidly into other service sectors, including finance and clinic trials. Manufactured exports also improved significantly, especially in textiles, engineering products, autos and auto parts.

Recently, the Indian economy hit bottlenecks in a number of areas, most notably in infrastructure, the energy sector and the market for skilled workers. While we don't think they are significant enough to drag down economic growth below 8%, we need to monitor closely to see if they pose important risks to inflation, profits and India's international competitiveness. Bottlenecks in areas such as transportation and energy are probably easy to resolve. Strong economic momentum and investor confidence could bring new investment in these sectors and gradually ease constraints on economic activities. But further reforms look necessary in order to attract more private-sector investors.

The "talent shortage" in parts of the economy probably reflected a fundamental conflict of the Indian economy. Despite its relatively developed high education system, India is still a low-income country, with two-thirds of the population residing in the countryside, 35% being illiterate and 25% living under the poverty line. Meanwhile, outsourcing services and relatively advanced manufacturing lead India's current economic growth. A shortage of skilled workers occurred in the engineering, textile, aviation, telecom and retail sectors. Reports indicate wage cost inflation has kicked in, with salary increases at 22% during the first half of FY07.

In the near term, this is unlikely to cause major macroeconomic consequences, as both the government and corporations are already taking proactive steps to curb the problem, including recruiting overseas and directly extending training to schools. Over time, however, either the education system will need to respond decisively or industries will need to move down the technological ladder in order to employ more less-skilled workers.

The fiscal situation should continue to improve gradually, but aggregate deficits should remain large. Strong economic growth and better-than-expected tax collection imply that the fiscal balance may turn out to be better than the budget. But with fiscal deficits at more than 6% of GDP, the government will need to make further efforts, especially on the revenue side, to reduce them to more sustainable levels. They also imply that the potential for additional public spending on infrastructure is very limited.

Over the next couple of months, we expect the Reserve Bank of India to hike its reverse repo rate once more to 6.25%, on the possibility of inflation edging up and above-target growth of money and credit. The 10-year bond yield may also increase to 8% from 7.6% currently, but upside risk appears very limited. We expect the current account deficit to narrow to -1.5% of GDP in FY08 and -0.8% in FY09 from –1.8% during the current fiscal year. The rupee is likely to strengthen against the dollar to 43 within the next 12 months, on the back of improving external balances, strong economic growth and appreciating Asian currencies. Over time, however, continued currency strength will depend on India’s ability to contain the current account deficit and avoid a sudden stop of capital inflows.

Statistical Snapshot

Figure 33. India – Macroeconomic Summary, FY97- FY08E (Percent unless otherwise indicated)

Year -end 31 March	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07E	FY08E
National income indicators												
Nominal GDP (Rs bn)	13,682	15,224	17,409	19,588	21,077	22,813	24,497	27,602	31,214	35,315	40,082	45,293
Nominal GDP (US$ bn)	385	409	413	451	461	475	507	601	694	797	885	1048
Per Capita GDP (US$)	403	422	418	453	458	467	494	583	672	761	832	972
Real GDP growth (%)	7.8	4.8	6.5	6.0	4.4	5.8	3.8	8.5	7.5	8.4	8.3	8.0
Agriculture growth (%)	9.6	-1.9	7.1	0.5	0.0	6.2	-6.9	10.0	0.7	3.9	3.0	3.0
Industry growth (%)	6.0	5.8	3.4	56.3	6.3	2.7	7.0	7.6	8.6	8.7	9.2	9.2
Services growth (%)	7.2	9.0	8.1	75.4	5.6	7.1	7.3	8.2	9.9	10.0	9.8	9.2
Real indicators (% Y/Y)												
Cement despatches	8.3	10.6	6.4	14.1	0.1	8.6	11.1	6.5	9.3	10.3	10.0	10.0
Commercial vehicle sales	9.4	-33.2	-11.2	22.0	-11.9	-4.5	27.9	38.1	24.0	13.0	24.0	9.0
Car sales	14.9	1.1	-0.9	54.9	-6.9	4.5	7.6	32.8	18.7	7.0	15.0	12.0
Two-wheelers	11.5	-3.7	5.0	-5.4	-28.1	-3.1	-13.1	10.6	16.8	15.0	14.0	13.0
Diesel consumption	8.4	3.5	3.7	5.5	2.0	-3.5	3.0	4.5	5.5	3.0	5.0	5.0
Tele-density	1.5	1.9	2.2	2.8	3.5	4.3	5.2	7.4	9.4	12.7	16.2	17.2
Monetary indicators												
Money supply	16.2	18.0	19.4	15.0	16.4	14.1	14.7	16.7	12.3	21.2	18.0	18.0
Int rate PLR - year end	14.5	13.0	12.0	11.3	11.5	11.3	10.8	10.3	10.0	10.3	10.5	10.0
Inflation - WPI	4.6	4.4	5.9	3.3	7.2	3.5	3.4	5.4	6.5	4.5	5.3	4.5
CPI	9.4	6.8	13.1	3.4	3.8	4.3	4.0	4.0	4.5	4.0	6.0	5.0
Bank credit growth	9.6	16.4	13.8	18.2	17.3	15.3	23.7	15.3	30.9	30.0	23.0	20.0
Deposit growth	16.6	18.4	19.3	13.9	18.4	14.6	16.1	17.5	13.0	17.0	15.0	15.0
Fiscal Indicators (% GDP)												
Centre's fiscal deficit	4.2	4.9	5.1	5.3	5.6	6.2	5.9	4.5	4.0	4.1	3.8	3.5
State fiscal deficit	2.7	2.9	4.3	4.7	4.2	4.2	4.2	4.5	3.5	3.2	2.6	2.5
Combined def(Centre+State)	6.3	7.2	8.9	9.4	9.5	9.9	9.6	8.5	7.5	7.5	6.4	7.0
Combined dom liabilities	59.8	62.0	63.0	66.4	70.8	76.4	81.0	81.6	82.5	79.5	77.5	75.7
Combined o/s gurarantees	9.7	9.7	9.9	11.0	12.1	11.5	11.2	11.0	9.9			
External Sector												
Exports (US$bn)	34.1	35.7	34.3	37.5	45.5	44.7	53.8	66.3	85.2	104.8	125.7	148.4
Exports	5.6	4.5	-3.9	9.5	21.1	-1.6	20.3	23.3	28.5	23.0	20.0	18.0
Imports (US$bn)	48.9	51.2	47.5	55.4	57.9	56.3	64.5	80.0	118.9	156.3	187.6	213.9
%YoY	12.1	4.6	-7.1	16.5	4.6	-2.8	14.5	24.1	48.6	31.5	20.0	14.0
Trade deficit (US$bn)	-14.8	-15.5	-13.2	-17.8	-12.5	-11.6	-10.7	-13.7	-33.7	-51.6	-61.9	-65.5
Invisibles (US$bn)	10.2	10.0	9.2	13.7	9.8	15.0	17.0	27.8	31.2	40.9	45.3	49.3
Current A/c Deficit (US$bn)	-4.6	-5.5	-4.0	-4.1	-2.7	3.4	6.3	14.1	-2.5	-10.6	-16.6	-16.2
% to GDP	-1.2	-1.3	-1.0	-0.9	-0.6	0.7	1.3	2.3	-0.4	-1.3	-1.9	-1.5
Forex res (excl gold) (US$bn)	22.4	26.0	29.5	35.1	39.6	51.0	71.9	106.1	135.1	145.1	155.1	162.5
Months of imports	5.5	6.1	7.5	7.6	8.2	10.9	13.4	15.9	13.6	11.1	9.9	9.1
Exchange rate												
Rs/US$ - annual avg	35.5	37.2	42.2	43.4	45.7	48.0	48.3	45.9	45.0	44.3	45.3	43.2
% depreciation	6.3	4.8	13.4	2.8	5.3	5.0	0.6	-5.0	-2.0	-1.6	2.3	-4.6
Rs/US$ - year end	35.8	39.52	42.4	43.6	46.5	48.9	47.5	43.6	43.8	44.6	44.5	43.2
% depreciation	4.7	10.4	7.3	2.8	6.7	5.2	-2.9	-8.2	0.3	2.0	-0.3	-2.9

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

Notes

Disclosure Appendix

ANALYST CERTIFICATION

We, Rohini Malkani, economist and author of the report, and Anushka Shah, research associate, hereby certify that all of the views expressed in this research report accurately reflect our personal views about any and all of the subject issuer(s) or securities. We also certify that no part of our compensation was, is, or will be directly or indirectly related to the specific recommendation(s) or view(s) in this report.

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