FASTEST GROWING
FREE MARKET DEMOCRACY

FOREIGN DIRECT INVESTMENT

A report by Ernst & Young for IBEF

India Opportunities: Infrastructure

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INDIA OPPORTUNITIES: INFRASTRUCTURE

In India, construction is the second largest economic activity after agriculture. The investment in this segment over the financial year 2005 to 2010 is estimated at USD 124.65 billion

Market Overview

Infrastructure sector pegged to grow at 15 per cent p.a.

Infrastructure development in India has set off in a major way in the last two years and is witnessing impressive growth across various segments. A recent study indicates that India would be merely scratching the surface of the potential infrastructure opportunity with USD 191.51 billion of investments committed over the next five years. The sector is estimated to grow at a CAGR of 15 per cent over the next few years.

Construction sector to be the biggest beneficiary of the infrastructure boom

In India, construction is the second largest economic activity after agriculture. The investment in construction accounts for nearly 11 per cent of India's Gross Domestic Product (GDP) and nearly 50 per cent of its Gross Fixed Capital Formation (GFCF). It accounts for nearly 65 per centi of the total investment in infrastructure and is expected to be the biggest beneficiary of the surge in infrastructure investment over the next five years. The investment in this segment over the financial year 2005 to 2010 is estimated at USD 124.65 billion.

Key drivers underlying the growth

The growth in the infrastructure sector is being driven by a host of factors , which include:

Political will: The Government of India (GOI) has initiated an ambitious reform programme, involving a shift from a controlled to an open market economy. Building further on the initiatives taken by the previous Government, the incumbent Government is undertaking several measures to enhance the quantum of investments in the infrastructure segment.

Funding from multi-lateral agencies: Multilateral agencies such as the World Bank and the Asian Development Bank (ADB) are funding various infrastructure projects on a large scale in India. Other agencies include the Japan International Bank for Cooperation (JIBC) that funded the Delhi Metro (Underground Railway) Project. Various State Governments are mobilising funds from these agencies to support rural roads and sanitation projects.

Increased private participation: To encourage private sector participation in the sector, the Government has announced several tax breaks for investments. It is also devising return schemes that are attractive for the private participants, such as annuity payments and capital grants for road

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The Government is making innovative moves to garner funds for infrastructure development. One of these is the cess on petrol and diesel, which is being used to fund road projects such as the Golden Quadrilateral and the North-South East-West corridor

projects. Laws are being enacted to improve the finances of utilities and make their management more transparent, so as to improve returns on these facilities.

Innovative modes of funding:

The Government is tapping alternative sources of funds for infrastructure development. One of these is the cess on petrol and diesel, which is being used to fund road projects such as the Golden Quadrilateral and the North-South East-West corridor. It is also contemplating levying a tonnage tax on ships (to fund development of ports), and special taxes on air travel (for airports).

Airports, Power, Roads, and Realty- Investments surging

In terms of investments, roads, power and airports are expected to see rapid growth in the near future as the initial foundations for private investments have already been laid in these sectors. Further, the increased demand in housing and commercial space as a result of improved standards of living and economic growth, is expected to result in rampant growth in the realty sector.

Key Opportunities

Roads- "Motoring Away"

Roads occupy an eminent position in India's transportation as they carry nearly 70 per cent of freight and 85 per cent of passenger traffic in the country. Presently, India's road network spans a distance of around 3.3 million km.

India's Road Infrastructure as on May, 2005.

Types of Road	Length (km)	Percentage of Total
National Highways	65,569	2.0
State Highways	131,899	4.0
Major District Roads	467,763	14.1
Village and Other Roads	2,650,000	79.9
Total	3,315,231	100

(Source: National Highway Development Authority)

Government investments provide the impetus for growth

The focus of successive Governments on improving road connectivity across the country, has brought about significant investments in road development.

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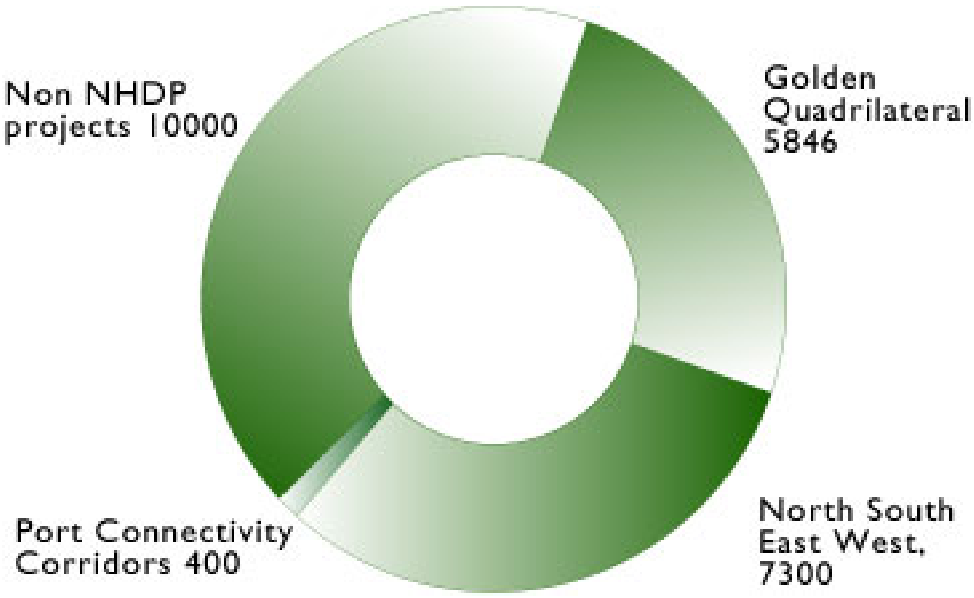
Addressing the need for an efficient road network, the Government of India plans to build a total of 23,546 kms of roads in the next two years as a part of the Tenth National Plan (2002-2007)

Government expenditure on roads in India is significant - 12 per cent of capital and 3 per cent of total expenditure; however, road maintenance is grossly under-funded with only one third of needs being met.

Recognising the present deficiencies in the road network, the Government of India has sought to address these through the Tenth National Plan (2002-2007), which has assigned a high priority to the National Highway Development Programme (NHDP).

As per the National Highways Authority of India (NHAI), a total of 23,546 kms of roads would be constructed in the next two years.

Road Projects Under Execution (in kms)



Source: NHDA

One of the most important programmes under NHAI is the National Highway Development Programme (NHDP). The NHDP has the following components:

a) **Golden Quadrilateral**: This project involves the four-laning of almost 6,000 km of national highways that link the four major cities in India (New Delhi, Kolkata, Chennai and Mumbai).

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b) **North-South and East-West (NSEW) Corridor**: This project involves upgrading the existing 2-lane highways and four-laning of almost 7,300 km of national highways, connecting Srinagar to Kanyakumari (North-South) and Silchar to Porbandar (East-West). This project is likely to be completed by December 2009.

c) **Port connectivity and other projects**: The 10 major ports (Haldia, Paradeep, Vishakapatnam, Chennai & Ennore, Tuticorin, Cochin, New Mangalore, Marmugoa, Jawaharlal Nehru Port Trust and Kandla) would be connected to the Golden Quadrilateral by widening around 400 km of road network. Other road projects include widening and strengthening of about 780 km of roads. These projects are likely to be completed by December 2008.

The Government recognises the importance of private participation in development of roads in the country. It has taken the requisite policy measures to encourage private investments in the sector

Non-NHDP projects

The two key projects are detailed below:

Pradhan Mantri Bharat Jodo Pariyojana (PMBJP)

The PMBJP programme encompasses 48 new projects for upgrading and four-laning 10,000 km of roads outside the ambit of NHDP. Road stretches are being identified on the basis of three factors: traffic density, whether these roads connect State capitals with the NHDP network, and whether these roads are linked to important centers of tourist or economic activity.

Pradhan Mantri Grameen Sadak Yojana (PMGSY)

PMGSY, launched in December 2000, is a project aimed at improving rural roads and connectivity of villages. The project will provide road connectivity to 160,000 unconnected rural habitations with populations of 500 persons or more by the end of the Tenth Plan period (2007), at an estimated cost of USD13.33 billion. The programme aims at upgrading 500,000 km of rural roads and is being executed as a centrally sponsored scheme in all the States and six Union Territories.

Private sector participation (PSP) being driven by Government policy

The Government recognises the importance of private participation in development of roads in the country. It has taken the requisite policy measures to encourage private investments in the sector.

Some of the initiatives undertaken by the Government include:

1. **National Legislative Changes**: The National Highways Act, 1956 has

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been amended to permit private entrepreneurs to undertake National Highways (NH) projects on a BOT basis and recover their investments through tolls. Under this Act, a simplified procedure has been prescribed for acquisition of land for the building, maintenance, management or operation of a National Highway and separate provisions have been made for the levy and collection of fees in respect of both public and private funded projects.

2. **State legal framework for PSP**: The Indian Toll Act, 1851, makes it possible for State Governments to levy and collect tolls on any road or bridge, which has been made or repaired at the expense of the Central Government or any State Government. However, the Act needs to be amended by respective State Governments to allow the private sector to levy and collect tolls on State roads and bridges. Some State Governments have indeed amended the Act – for example Uttar Pradesh and Madhya Pradesh – or otherwise taken legal steps in order to promote private sector participation
3. **Uniform Law:** In addition to amending the Indian Toll Act, another avenue being adopted by some States (e.g. Andhra Pradesh, Gujarat etc) is to enact a uniform law for infrastructure development.

In order to promote involvement of the private sector in construction and maintenance of roads, the Government has now decided to offer projects on a Build-Operate-Transfer (BOT) basis

Build-Operate-Transfer (BOT) emerging as a significant opportunity

In order to promote involvement of the private sector in construction and maintenance of roads, the Government has now decided to offer projects on a Build-Operate-Transfer (BOT) basis.

There is a significant opportunity for BOT in the national highways segment as they carry more than 40 per cent of the traffic even though they constitute just about 2 per cent of the total road network in the country. The key Government programmes that present a significant opportunity for BOT include:

- Pradhan Mantri Bharat Jodo Pariyojana (PMBJP)
- North-South and East-West (NSEW) Corridor
- Golden Quadrilateral (GQ) project

For NHDP in particular, the private sector has responded enthusiastically. Under this programme, projects valued at over USD 1.33 billion are being implemented. The NHDP has been extended to cover a 50,000 km road network, and these future works will be undertaken on a BOT basis (through toll or annuity).

Recent projects awarded under BOT:

- Under Phase I of the NHDP, USD 888.89 million worth of investment has already come into some 11 BOT-tolled projects.

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- L&T bagged an USD 146.67 million project to turn 80 km of the Baroda-Bharuch highway into a six-lane road. It has offered to pay USD 106.67 million upfront to NHAI in six months.
- By June 2005, 707 km of the NSEW corridor had been completed and NHAI had plans to award the balance length of 4,058 kmii by the end of the calendar year 2005.
- Another highlight was the financial closure of the USD 48.90 million Thiruvananthapuram City Road Development Project. This is the first urban road project being undertaken through private participation.
- Work on Karnataka's highway improvement programme is 80 per cent funded by the World Bank. The project involves upgrading and strengthening 2,269 km of roads at an estimated cost of USD 451.11 million.

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Private sector participation in road development

Some of the key players in this segment and recent projects completed by these companies are provided in the table below.

Company	Projects Completed
L&T	• Four-laning of Ahemdabad-Mehsana Road, Gujarat • Rehabilitation and upgradation of Tumkur-Sira section, Karnataka • Four-laning and strengthening of carriageway from Chennai-Tada, Andhra Pradesh • Four-laning of carriageway from Kacheepuram-Walajahpet, Tamil Nadu under Golden Quadrilateral project of NHDP
HCC	• Mumbai-Pune Expressway, Maharashtra • East-West Corridor Project, Rajasthan • Chennai by pass project, Tamil Nadu • Four-laning of Satara-Kohlapur Highway, Maharashtra
IVRCL	• Ramban - Sangaldan - Gool State Highway Road Project at Laole Railway Station. • Guna-Bypass project in the State of Madhya Pradesh on BOT Basis.
Afcons	• State Highway Project in Andhra Pradesh for a total Infrastructure length of 320 Km. • East Coast Roads in Chennai for total length of 218 Km. • National Highway-45 in Chennai for total length of 160 Km. • National Highway-1 in Punjab for total length of 288 Km.
GMR	• Tambaram-Tindivanam Expressway, Tamil Nadu • Tuni-Anakapalli projects, Andhra Pradesh • Ambala-Chandigarh

Compiled by E&Y

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Future Funding Requirements

As per a recent World Bank study, the cumulative funding shortfall over the ten year period is estimated at USD. 23.22 billion , approximating 39 per cent of the total requirement. The funding gap assumes that all the road user charges generated on the highways are returned to the highway sector.

The Government of India (GOI) is using privatisation as a tool to expand existing port infrastructure (augmenting the existing capacities as well as developing greenfield ports). With the law relating to privatisation already in place, the ports sector is emerging as one of the most attractive opportunities for private sector investments

Projected Capital Investments: Vision 2021on Expressway, National and State Highway Network

Scheme	Period 2001-2011		Period 2011-2021	
	Length	Amount (Rs. million)	Length	Amount (Rs. million)
A. Expressways	3000	300,000	7000	700,000
B. National Highways				
i) Four laning/six laning	16,000	640,000	19,000	760,000
ii) Two laning with hard shoulders	15,000	187,500	7,000	87,500
iii) Strengthening weak pavements	20,000	150,000	24,000	180,000
iv) Bypasses, bridges, over bridges, safety and drainage measures	Lumpsum	72,500	Lumpsum	92,500
v) Expansion of NH System	10,000	150,000	12,000	180,000
Total for National Highways		1,200,000		1,300,000
C. State highways				
i) Four laning/six laning	3,000	100,000	7000	250,000
ii) Two laning with hard shoulders	35,000	280,000	60,000	500,000
iii) Strengthening weak pavements	30,000	220,000	40,000	300,000
iv) Bypasses, bridges, over bridges, safety and drainage measures	Lumpsum	100,000	Lumpsum	100,000
v) Expansion of SH System	10,000	50,000	20,000	100,000
Total for State Highways		750,000		1,250,000

Source: World Bank

Ports – "Anchoring for Growth"

India occupies a strategic location on the global maritime map. Along its extensive coastline of 7,517 km, there are 12 major ports. Eleven major

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ports are Port Trusts, governed by the provisions of Major Port Trust Act, 1963 and the twelfth, Ennore Port, is the first major corporate port. In addition, there are 185 minor and intermediate ports spread across the nine coastal states. These are controlled by the respective states.

Indian ports handle 90 per cent of India's total foreign trade in terms of volume and 70 per cent in terms of value.

Ports sector set to attract USD 5.5 billioni in the next five years

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Rampant growth in traffic – driving demand for additional capacity

The traffic handled at the ports has been growing steadily over the past decade. Following the liberalisation and opening of the Indian economy in the early 1990s, there has been a significant increase in India's maritime trade, with traffic increasing from 165 MTPA in 1991 to over 500 MTPA in 2004-05 .

The Government has fixed an ambitious target of USD 150 billion for exports by the year 2008-09 to double India's share in world exports from nearly 0.8 to 1.5 per cent. Further, the Ministry of Shipping projects the port traffic to grow to a level of 650 MTPA by 2008. As a result, the Indian ports require capacity expansion on a large scale.

As opposed to the growth of 3.5-4 per cent in global trade, India has been registering a 10.4 per cent growth in containerised cargo and a 6 per centv growth in bulk cargo. India's 3.9 millionv TEUs (Twenty-foot Equivalent Units) in 2004-2005 is expected to grow to 4.4 million TEUs in 2005-06 accounting for 5-6 per cent of cargo in Asia. In the past five years, manufacturing exports from India have increased at a compounded annual growth rate of 14 per cent. Ores and minerals exports have increased 4.5 times in last 5 years.

Multiple options exist for private sector participation in ports

Multiplicity of activities in the port sector makes its privatisation more complex than most other core sectors. This presents a range of options for private-sector involvement in ownership of port assets and

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operations. The most commonly adopted approach has been the unbundling of various assets and operations under a port, and privatising each of them separately.

Spurt in private investments follow recent reforms

Deregulation in the ports sector (100 per cent FDI is allowed) and attractive terms of BOT/BOOT/BOMT etc. are drawing a large number of domestic and foreign players to this sector.

In order to encourage private investment, the Government is planning to develop the Paradeep port under the BOT model. The project includes deepening of the channel to accommodate 1,25,000 dwt vessels for USD 34.2 million, developing deep draught iron ore berth on BOT basis at a cost of USD 72.9 million, developing a clean cargo berth at USD 30.7 million, replacement and procurement of four cranes at cost of USD 6.7 million and developing railway sidings at USD 5.6 million.

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In addition, a new port at Ennore, 25 km north of Chennai has been constructed with Asian Development Bank's assistance and has been operationalised. The port has been developed through joint venture formation between major and minor ports.

Some of the major players in the construction industry have notched a presence in the ports segment; viz. Gammon India Ltd, Larson & Toubro, Skanska Cementation India Ltd., and Simplex Concrete Piles Ltd etc.

Some of the major international players in the sector are now looking at India as a key target market. Foreign investors in Indian ports include P&O Ports (Australia), Port of Singapore and International Seaports Ltd. Recently, the Singapore-based global cargo transportation and logistics major, Neptune Orient Lines (NOL), has made major investment plans in port development in India.

Several ports privatised in recent times

- Port privatisation has picked up momentum. In the recent past. 18 private or captive projects worth USD 1.39 billion have been approved. Of these, 13 projects worth USD 577.78 million are operational. The private participants include global players such as P&O, PSA, Maersk, Gammon India, CWC and the Dubai Port Authority.
- The Gujarat Maritime Board and the Maharashtra Maritime Board have identified four out of 21 and two out of nine minor ports

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respectively for privatisation.

Some of the privatised berths and terminals in major ports are listed in the table below:

Port	Type of Port Facility	Private Developer/Operator
Kolkata	Multipurpose Berth	SAIL
Haldia Berth	Multipurpose Berth	TISCO & IQ Martrade ISPL
Paradeep	Fertiliser Berth Multipurpose Cargo Berth (MPB – I)	Paradip Phosphate Ltd. Oswal Chemicals & Fertiliser
Vizag	Container terminal, bulk cargo berths	Dubai Port Authority Gammon India Ltd.
Ennore	Coal Jetty	TNEB
Chennai	Jawahar Dock I Jawahar Dock 5	Ege Seramik (Malaysia) & T Arumaidurai & Co. ACT India Ltd
Tuticorin	Container terminals	P&O Ports, Australia and PSA SICAL Terminal Ltd
Mormugao	Coal & general cargo berth & waterfront (ship repair)	ABG Goa Port Ltd & Western India Group
Mumbai	Berth at Pir Pau	Tata Electric Company
JNPT	Berths for handling POL & container terminal	BPCL, IOCL, PSOC P&O Ports, Australia
Kandla	Virtual Jetties, Oil Jetty, Oil Jetty	Geepee Corp., Thailand IOCL, HPCL Essar Oil and IFFCO

Source: Ministry of Shipping

The National Maritime Development Programme envisages an investment of over USD 13.33 billion for augmenting the present capacity and modernisation of existing ports

Projects worth USD 13.33 billion proposed under National Maritime Development Programme (NMDP)

Under this programme, there are several projects to be completed over the next 10 years. The programme envisages an investment of over USD 13.33 billion for augmenting the present capacity and modernisation of the existing ports. The programme is proposed to be implemented through public-private partnership. The areas for which funds would be required can be categorised under the following three heads:

- Projects related to port development (construction of jetties, berths etc.)
- Procurement, replacement or up gradation of port equipment

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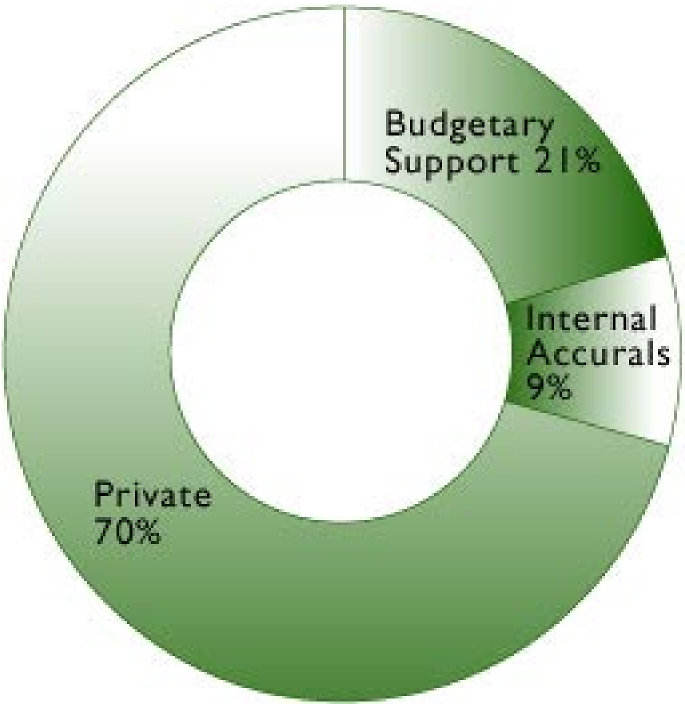
The Sagar Mala project is estimated to bring an investment of ~US $ 22 billion over a ten-year period. Under this scheme, many individual port development plans would now be strung together in a `mala'(thread) and on an ambitious scale

- Deepening of channels for improvements in drafts

The estimated investment for above projects is USD 13.41 billion, out of which USD 2.54 billion will be raised through budgetary support, and an additional USD 1.13 billion will be funded through internal resources. The rest of the investment of USD 8.72 billion will be mobilised from the private sector.

Sources of Funds for NMDP



Source: Ministry Of Shipping, Roads and Highways

Sagar Mala Project

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The Sagar Mala project includes:

√ Setting up of new ports; modernisation and expansion of existing ports

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- √ Improvement in draft, productivity and efficiency of Indian ports to benchmark against international standards;
- √ Development of inland navigation

Realty- "Scaling New Heights"

The realty sector in India has come of age and competes strongly with other investment options in the structured markets. The strong economic growth of the country has augured well for the Indian real-estate market. Continuing bullish sentiment in the economy and slow delivery of stock on the supply side has resulted in realty prices increasing significantly in many parts of the country.

Housing, IT and Retail driving growth in realty

India's property market is on a fast track, driven largely by the rapid expansion of its information technology industry, a retail boom and the simultaneous growth of its middle class population.

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Almost 80 per cent of the real estate development is in the residential space and rest comprises offices, hotels, malls etc. The number of households in India are expected to increase at a CAGR of 2.58 per cent owing to growth in urbanisation, increasing affordability, and further nuclearisation of families. Further, factors such as lower interest rates, declining EMI rates, increasing disposable incomes, and various Government incentives are also triggering the growth in the housing sector.

Most large cities, such as Mumbai, Delhi, Chennai, Bangalore, Pune and Hyderabad, are developing IT clusters, especially designed to house offices of hi-tech companies and residential townships for their employees. There is also a surge in retail development, such as shopping malls and multiplexes.

Major reforms witnessed in real estate FDI policy and venture funds

With the objective of mobilising the requisite capital for augmenting the real estate sector, the Government of India has introduced reforms and liberalised investment policies for this sector. This is the first step towards radically changing and reorganising the real estate sector in the country.

Two major reforms introduced in the real estate sector are:

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- Changes in the Foreign Direct Investment (FDI) policy
- Introduction of real estate venture capital funds

FDI allowed under the automatic route

Post March 2005, the Government of India has decided to allow FDI under the automatic route in the construction - development sector. Though FDI was already permitted in this sector, it had to be routed, until now, through the Foreign Investment Promotion Board (FIPB).

Real estate venture capital funds

The Securities Exchange Board of India (SEBI) has been firm in its stand on restricting retail investors from investing in real estate as this sector is deemed to be a speculative asset class. However, in a major policy change in April 2004, it permitted high-risk capital, Venture Capital Funds to invest in real estate.

Encouraged by this policy move, several large financial firms and private equity funds have launched exclusive funds targeted at the real estate sector. This has paved the way for organised debt and equity instruments in the real estate market and the establishment of Real Estate Funds (REFs).

One of the funds that has got the approval of SEBI and is operational is HDFC India Real Estate Fund. Apart from this, there are close to 15 funds which are either being planned or have been proposed. It is estimated that these funds would invest about USD 1.2 billion into real estate stock over the next one year.

Real estate mutual funds

One of the most awaited developments for the Indian real estate sector is the entry of Real Estate Mutual Funds (REMFs) or the Real Estate Investment Trusts (REITs). REMFs in India are proposed to be structured on the lines of REITs in the US and though it has been on the agenda of SEBI for some time now, a decision regarding it is still pending.

REMF is an investment vehicle that buys, develops, manages and sells real estate assets. It provides an opportunity to retail and institutional investors to include professionally managed real estate in their investment portfolio and share the gains of escalation in property prices without making large amounts of investments.

As the real estate markets in India expand and more foreign players make

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Commercial real estate continues to be a desirable investment option in India. On an average, the returns from rental income on an investment in commercial property in metros is around 10.5 per cent, which is the highest in the world

their entry, the need for transparency and disclosure requirements has become more pronounced. REMFs will mandatorily bring about these much desired changes.

High investment yields and capital appreciation in Indian realty

Commercial real estate continues to be a desirable investment option in India. On an average, the returns from rental income on an investment in commercial property in metros is around 10.5 per cent, which is the highest in the world. In case of other investment opportunities such as bank deposits and bonds, the returns are in the range of 5.5-6.5 per cent.

Increasing demand from the IT / ITES and BPO sector has led to approximately 20-40 per cent increase in capital values for office space in the last 12-15 months across major metros in India. Grade-A office property net yields have come down from 12-14 per cent in 2003 and currently average around 10.5-11 per cent p.a. The fall in yields has resulted from decreasing interest rates and increasing appetite from investors. This has in turn resulted from abundant liquidity options available coupled with the acceptability of real estate as a conventional class of asset.

The net yields (after accounting for all outgoings) on residential property are currently at 4-6 per cent p.a. However, these investments have benefited from the improving residential capital values. As such, investors can count on potential capital gains to improve their overall returns. Capital values in the residential sector have risen by about 25-40 per cent p.a in the last 15-18 months.

The retail market in India has been growing due to higher disposable incomes and dearth of quality space as on date. Though the net yields on retail property have registered a fall from 10-12 per cent p.a. reported earlier to 9-10.5 per cent p.a. currently, the capital appreciation in this sector is close to 20-35 per cent p.a. Changing consumer psychographics combined with increasing disposable incomes will ensure further growth of the retail sector in India.

Positive outlook on the sector to continue

As we look ahead, the expanding Indian economy, improving property fundamentals in major markets across the Indian cities and the shortage of other yield-producing assets do suggest increasing investment and

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capital inflow in this sector in the short to medium term.

In order to inject some dynamism in the real estate market, the Government has put in place several incentives, including tax benefits. Relaxation of the external commercial borrowing norms for the real estate sector is a welcome move.

Airports- "Ready To Take Off"

India has 450 airports managed by Government agencies such as defence services, State Governments and the Airports Authority of India (AAI). The AAI manages a total of 120 Airports in the country, which include 11 International Airports, 81 domestic airports and 28 civil enclaves. Top 5 airports in the country handle 70 per cent of the passenger traffic out of which Delhi and Mumbai together account for 50 per cent traffic.

The opportunities in the airport sector are huge. With air travel becoming more affordable the air traffic in India is witnessing rapid growth. Passenger and cargo traffic has grown at an average of about 9 per cent over the last 10 years. The domestic passenger segment is likely to grow at 12 per cent per annum over the next few years

Upsurge in air traffic creating under-capacity

With air travel becoming more affordable the air traffic in India is witnessing rapid growth. Though the entry of low-cost air carriers is a key factor, industry analysts attribute the boom in air travel to India's economic upswing, increased FDI in various key industrial sectors, a flood of outsourcing firms, the growing popularity of India as a tourist destination and the consequent surge in the numbers of foreign travelers arriving in the country.

Passenger and cargo traffic has grown at an average of about 9 per cent over the last 10 years. The domestic passenger segment is likely to grow at 12 per cent per annum over the next few years. The estimated growth for the international passenger segment is 7 per cent while the growth for international cargo is likely to be at a healthy rate of 12 per cent.

With the number of passengers in the country expected to grow from 19 million annually now to 50 million by 2010, a number of new air carriers have entered the space while several other groups are planning their foray. Airlines in India are expected to buy at least 280 new planes by 2010, worth an estimated US$ 15 billion, and another US$ 15 billion below worth in the following decade. Market estimates of international aircraft manufacturer Airbus Industries, indicate that demand for planes from India could grow to about 800-1,000 in the next two decades.

Presently, Indian airports face several constraints. Due to liberalisation in the sector and a spurt in new airlines launching their services, the airport

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infrastructure is under increased pressure. The limited parking and terminal capacity, delay in passenger clearances, and bunching up of flights have led to congestion at airports. Moreover, most Indian airports lack modern ground-handling facilities, night-landing systems, and cargo-handling facilities.

Investments taking off through Public-Private participation

In its effort to develop airports of world class standards, the Government is inviting private sector participation for developing the existing airports such as Mumbai, Delhi, etc as well as greenfield airports such as Hyderabad and Bangalore. The total investments envisaged in Indian airports over the next five years are USD 5.07 billion.

Upgradation of metro city airports

The cost of upgrading Delhi, Kolkata, Chennai and Mumbai airports is estimated at USD 2.22 billion. The Government is keen to hand over Mumbai and Delhi airports to private parties for operations and modernisation. The modernisation of the two airports is estimated to cost USD 666.67 million. Private parties will recover their investment through levying special surcharge for airport facilities. The government has appointed a consultant for the privatisation process of these two airports. Similar initiatives are expected in this sector over the next 2-3 years.

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Hyderabad Airport

The first phase of this project to build an international airport at Shamshabad in Hyderabad, is expected to cost USD 257.78 million. The Malaysian MAHB consortium will develop this project along with the Government of Andhra Pradesh (GoAP) and the AAI. The Malaysian consortium will have a 74 per cent equity stake in the project and the rest will be shared equally between AAI and GoAP. The advance development fee of USD 23.78 million, paid by GoAP, will be recouped by levying an additional tax on the existing airport at Hyderabad.

The GoAP recently cleared USD 70 million of interest-free loans and granted USD 23.78 million as advance development fees for this project. The state support and shareholders' agreements are expected to be signed soon. This would be followed by a concession agreement between the developer and the Indian government.

INDIA OPPORTUNITIES: INFRASTRUCTURE

There is a wider real estate angle to the development of airports today. An estimated USD 1,650-1950 million is being planned for investment in over one thousand acres of land comprising golf courses, hotels, convention centres, malls, office space and entertainment centres at the Kolkata, Hyderabad and Bangalore airports

Bangalore Airport

The project cost is estimated at USD 288.89 million, with a debt-equity ratio of 2:1. About 74 per cent of equity will be held by its developers, Siemens Consortium. The Karnataka Government will invest 13 per cent through Karnataka State Industrial Investment & Development Corporation, and AAI will hold the rest. The project has achieved financial closure, and construction has begun.

More than just airports

There is a wider real estate angle to the development of airports today. An estimated USD 1,650-1950 million is being planned for investment in over one thousand acres of land comprising golf courses, hotels, convention centres, malls, office space and entertainment centres at the Kolkata, Hyderabad and Bangalore airports.

The new business model

Airport	Area for Commercial Development (Acres)	Real Estate Plans	% of Revenue Expected	Expected Investment (USD Million)
Bangalore	300	Hotels, Office Space, malls .	N.A	400-500
Hyderabad	600-800	NA	N.A.	500-600
Kolkata	300	Golf Course, 4 hotels, convention centre	70-80	750-850

Source: Cushman & Wakefield

Other projects

The Central government intends to modernise airports at Madurai, Trichy and Coimbatore. Modernisation of the Coimbatore airport is expected to cost USD 9.3 million.

Legislative reforms for airport investments in place

The Airport Authority of India (Amendment) Bill, 2003 has been passed by Parliament. The Bill provides a legal framework for operational and managerial independence to private operators. It also seeks to ensure a

INDIA OPPORTUNITIES: INFRASTRUCTURE

level playing field to private sector greenfield airports by lifting control of AAI except in certain respects.

Special Economic Zones - "Mushrooming Across India"

The growth in industrial parks in India is being primarily driven by Government reforms through Special Economic Zones (SEZs). Presently, there are 11 operational SEZs and approvals have been granted for setting up of another 42 SEZs in the private/joint sectors or by the State Governments and its agencies on the basis of the proposals received from them.

Benefits of SEZ

The Special Economic Zones Act 2005, which is expected to infuse further growth in the sector, offers incentives such as exemption from duty on import or procurement of capital goods, raw materials, consumables and spares. It also offers a 100 per cent concession on income tax upto 10-15 years

The Passing of The Special Economic Zones Act 2005, is expected to infuse further growth in the sector. Some of the key benefits offered by Indian SEZs include:

- Exemption from customs duty on import of capital goods, raw materials, consumables, spares etc.
- Exemption from Central Excise duty on procurement of capital goods, raw materials, consumable spares etc. from the domestic market.
- 100 per cent Income-tax concessions upto 10/15 years.
- No license required for import.
- Facility to retain 100 per cent foreign exchange receipts in EEFC Account.
- Facility to realise and repatriate export proceeds within 12 months.
- Commodity hedging by SEZ units permitted
- Profits allowed to be repatriated freely without any dividend balancing requirement.
- Full freedom for subcontracting including subcontracting abroad.
- In house Customs Clearance.
- Concession on dividend distribution Tax and Minimum Alternate Tax.
- No restriction on domestic sales.

INDIA OPPORTUNITIES: INFRASTRUCTURE

The passing of the SEZ Act 2005 has prompted 45 new projects worth over USD 33.33 billion in investment

Impressive export performance of SEZs

Exports from the SEZs during 2003-04 were of the order of USD 3,079 million as compared to the export of USD 2,235 million during 2002-03, representing a growth of 38 per cent over the previous year.

Exports from SEZ

Zone (in USD Million)	2003-04	2004-05
Kandla SEZ	226	236
SEEPZ SEZ	1,741	1,844
Noida SEZ	341	948
Chennai SEZ	231	306
Cochin SEZ	66	103
Falta SEZ	183	126
Vishakhapatnam SEZ	97	129
Surat SEZ	193	342
Manikanchan SEZ	-	21
Jaipur SEZ	-	1
Indore SEZ	-	12
Total	3,079	4,069

Source: Ministry of Commerce and Industry

As on March 31, 2005, there are 811 units in operation in the 8 functional SEZs. Investment by the units in these Zones is of the order of USD 405 million. The SEZ units collectively provide employment to about 1,00,650 persons

Passing of SEZ Act opens floodgates to investments

The passing of the SEZ Act 2005 (however, the Draft SEZ Rules would come into force only on receiving the assent of the Central Government and thereby being notified in the Official Gazette of India) has prompted 45 new projects worth over USD 33.33 billion in investment. Some of the recent investments include:

INDIA OPPORTUNITIES: INFRASTRUCTURE

State	Proposed Investments
Tamil Nadu	• The TVS group is actively considering setting up a facility • The Mahindra World City occupants include Infosys, and BMW which has secured land inside the township but not in the auto SEZ.
Gujarat	• Reliance Industries Ltd has already got an in-principle approval for USD 6.7 million petrochemical SEZ in Jamnagar - the largest in the country. • ONGC investment of USD 1.33 billion in Dahej
Karnataka	• ONGC investment of USD 5.55 billion in Mangalore

Indian and foreign companies are rushing to set up special economic zones or to convert existing projects into SEZs as a strong economy, rising investment by foreign companies and tax sops make the setting up and management of SEZs a profitable proposition

Private sector investing in SEZs on a large scale

Indian and foreign companies are rushing to set up special economic zones or to convert existing projects into SEZs as a strong economy, rising investment by foreign companies and tax sops make the setting up and management of SEZs a profitable proposition. Reliance Industries Ltd. (RIL), the Anil Dhirubhai Ambani Enterprises(ADAE), Finnish giant Nokia, auto major Mahindra & Mahindra and ONGC, among others, are pouring investments and resources into building vast enclaves for industrial and commercial use which they hope will compete with China's Shenzhen Special Economic Zone, and trigger even faster economic growth.

Reliance Industries, the country's largest private sector company, has already announced plans for a 15,000-acre SEZ in Haryana at a cost of USD 3.33-4.89 billion. In Jamnagar, where the company already has a large refining and petrochemical complex, RIL plans to build another SEZ to house a second 30 million-tonne refinery and another petrochemical complex. The company is also close to picking up significant stakes in the Mumbai Integrated SEZ outside the city.

ADAE's Reliance Energy has acquired about 1,000 hectares in Ghaziabad for a multi-product SEZ. ONGC is planning an export-oriented oil refinery near Mangalore and an SEZ.

The steel baron, LN Mittal's upcoming 12 million-tonne steel project in Jharkhand and Posco's similar project in Orissa, both estimated to cost

INDIA OPPORTUNITIES: INFRASTRUCTURE

over USD 8.90 billion, are likely to be declared SEZs.

The rush for SEZs is chiefly because of the various tax sops announced by the government and an attempt to cash in on the growing demand for land in the country caused by higher and higher levels of investment.

Other companies setting up SEZs include Mahindra & Mahindra, which is planning to set up two projects in Chennai and Jaipur. The area covered by the Jaipur Project is expected to be over 3,000 acres and is likely to cost over USD 244.44 million.

Flextronics, the USD 16 billion electronics manufacturing services provider, is believed to be building a large facility near Chennai, is intended to be upgraded as an SEZ.

Other companies planning to set-up SEZs include Ranbaxy, Wipro, Zydus Cadila, Biocon, Orient Textiles, the Maharashtra Airport Development company and the Tamil Nadu Industrial Development Corp.

SEZs attracting FDI too

Houston-based Hines, one of the largest privately held real estate development, investment, and management companies in the world, and SembCorp Engineers and Constructors P. Ltd., Singapore are two companies, among several others, that have shown interest in developing SEZs in India.

The India Brand Equity Foundation is a public - private partnership between the Ministry of Commerce, Government of India and the Confederation of Indian Industry. The Foundation's primary objective is to build positive economic perceptions of India globally.

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