



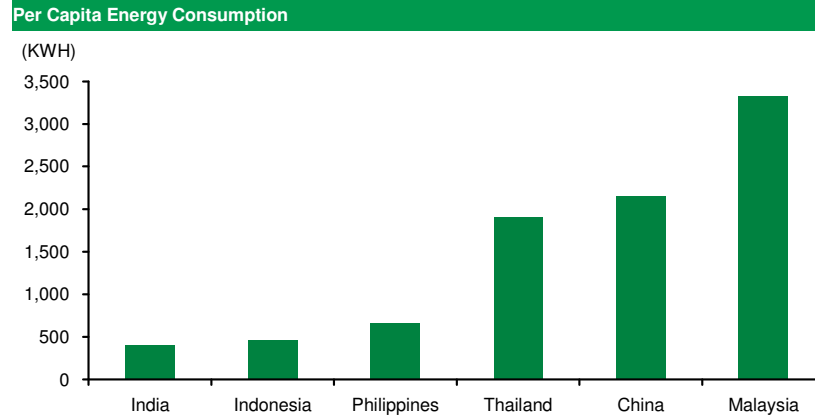
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Indian Infrastructure: A trillion dollar opportunity

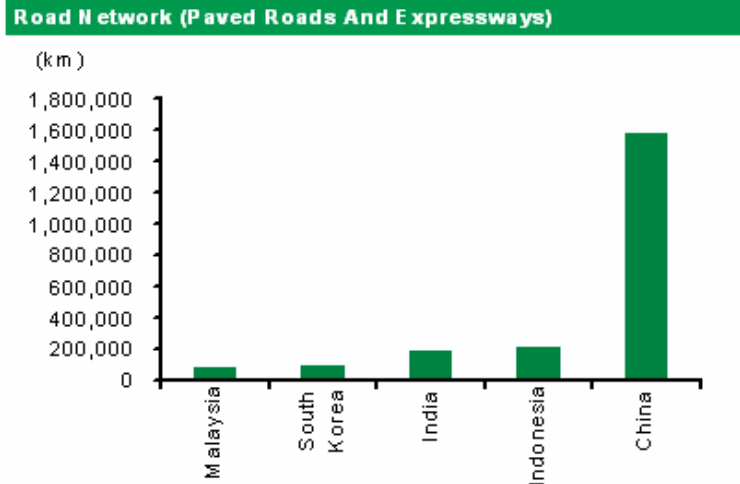
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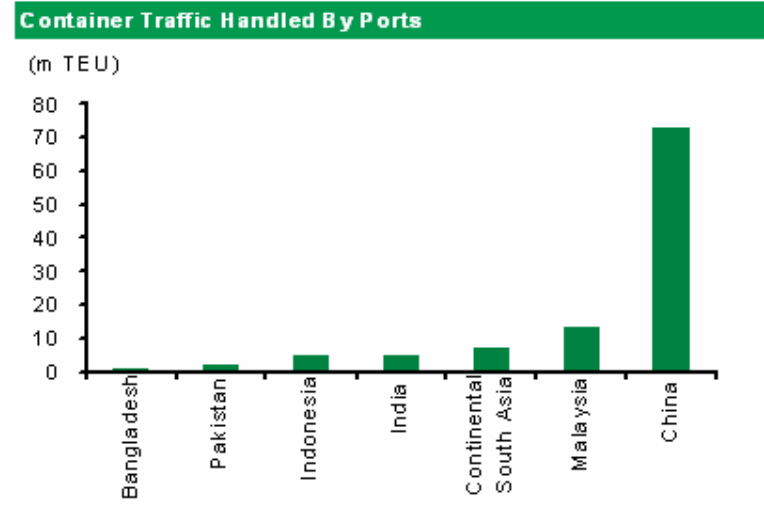
India Infrastructure: Current Status



Sources: CIA Factbook; BNP Paribas



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...but several policy reforms initiated

■ Power

- Ultra Mega Power Projects – 4000 MW capacity power plans awarded to private developers through competitive bidding (4 of 9 awarded)
- Ultra Mega Transmission Projects – connecting areas that generate power to areas that consume it
- Open Access of transmission and distribution network to facilitate a level playing field merchant power plants

India – only BRIC country to have Power trading exchanges

Key Ongoing Initiatives

- Generation Capacity augmentation: 120,000 MW expected to be added in 12th plan (vs c70,000 MW in 11th plan)
- Rural Electrification – funded through 90% central government grant
- Selective privatization of power distribution after long delay

Airports

- Mumbai and Delhi airports ‘privatized’
- Policy for green-field airports liberalized
- Private greenfield airports operational in Bangalore and Hyderabad
- AAI to work with private developers to modernize airports in Tier II cities



Roads

- Roads
 - Financing of new road construction
 - INR2/l cess levied by the government on petrol and diesel
 - Sovereign guarantees to enable NHAI to borrow additional funds from the domestic market and multilateral agencies
 - PPP - model concession agreement has been put in place that allows private investors to levy user charges
 - 2873 kms of BOT projects awarded in FY 11 YTD (vs 3361 km in FY 10 and 644 km in FY 09)
 - Indexed user charges to recover building/maintenance costs of roads.
 - 20 km/day 'target' for road construction set by the new minister

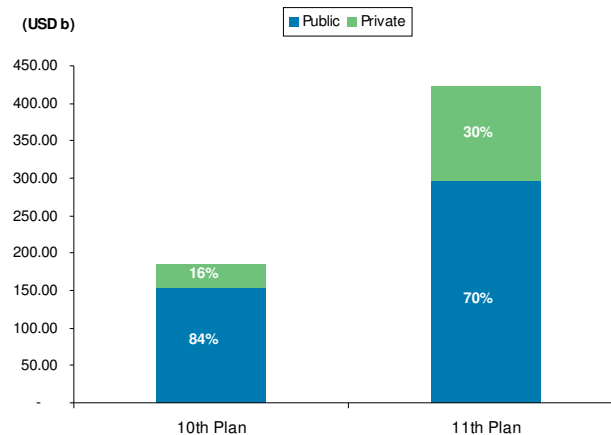
- Key Ongoing Initiatives
 - Policy on land acquisition finalized to expedite rehabilitation
 - Arbitrator for Rehabilitation and Resettlement



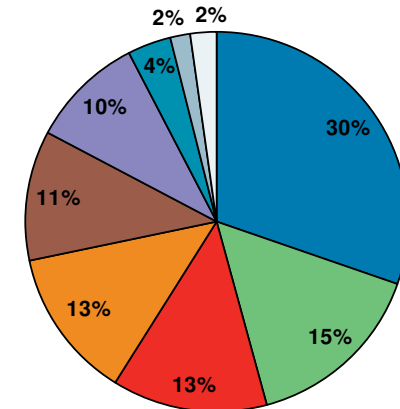
...And that's the opportunity, particularly for private sector!

- To sustain a GDP growth of 9%, investments in infrastructure should be 10 - 11% of GDP, according to the planning commission
- 11th Plan formulated with an investment target of INR20t or USD420b (+130% vs 10th Plan)
- Significant emphasis on private participation through PPP to gain efficiencies and help funding - India is the world's largest PPP playground
- Private sector contribution to increase from 16% in 10th Plan to 30% in 11th Plan

11th Plan vs 10th Plan



Sector allocations



- Power
- Highways
- Telecommunications
- Railways
- Irrigation
- Water supply and Sanitation
- Ports
- Airports
- Others

		Proportion	USD bn
Public	State	30%	126
	Center	40%	168
Private		30%	126

Source: Planning Commission



Where will opportunities in infrastructure come from?

Roads (USD 20b in each of next 2 yrs)

- Total opportunity of USD 42.2 bn over next 2 yrs.
- Expressways additional opportunity of USD 11 bn.
- Regulatory changes to the awarding process, concession agreement sweetened the deal for private developers – BK Chaturvedi Committee recommendations

Phases of NHDP	NHAI	Pvt	Total
	Investment	Investment	
	USD b	USD b	USD b
Phase-I & II (Bal. work)	9.6	5.3	14.9
Phase-III	9.1	15.7	24.8
Phase-IV	2.6	6.0	8.5
Phase-V	1.5	9.7	11.2
Phase-VI	2.0	3.0	5.0
Phase-VII	1.4	2.3	3.6
SARDP-NE	0.9	1.0	1.9
ICTT Cochin	0.2		0.2
Others	1.9		1.9
TOTAL	29.2	42.8	72.1

Source: NHAI

Power (USD 200 bn in next 4 yrs)

- 12th Plan capacity addition of 100GW (vs. 78GW)
- Private energy developers dominant share (64%)
- Investment of USD102b investment in power plants and an additional USD102b in T&D
 - Huge market for equipment, BoP and EPC
- 70-80% of capex is funded by debt; lending institutions like IDFC, PFC and REC beneficiaries.



Source: BNP Estimates



Railways: On the right track (USD59b pipeline)

Opening up to private sector

- Emphasis on private participation (e.g. award of Dedicated Freight Corridor packages, rolling stock factory EPC contract to L&T)
- Increased emphasis on PPPs; approximately 17% of funds to be sourced from PPPs

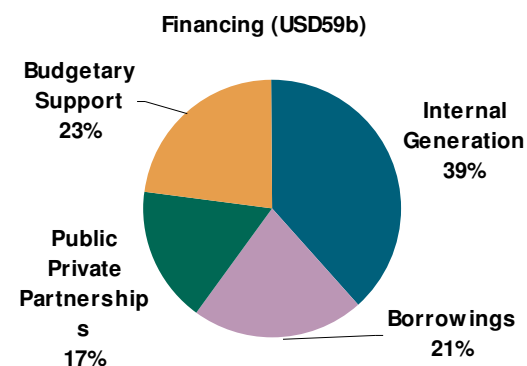
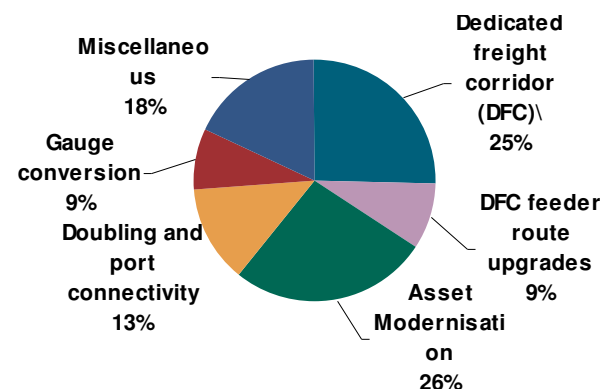
Estimate INR800-900b spending over the next 1-2 yrs

- Dedicated freight corridor (USD15b) and associated feeder route upgrades (USD5b) comprise 30% of total spending
- Approximately 26% (USD15.6b) allocated for asset modernization

Challenges

- Land acquisition: 12,500 hectares required for DFC alone

Where is the opportunity?



Source: BNP Estimates



Ports & Airports – Ready to take off (USD27b opportunity)

Ports – Investment opportunity of USD18b (INR870b)

- Approximately USD1.1b (INR59b) port projects in progress at Mumbai, Tuticorin, Kandla and Chennai ports
- Eight large projects worth USD1.8b (INR86.0b) to be tendered
- Private players: 26% of total investment
- Clearances are the biggest roadblock

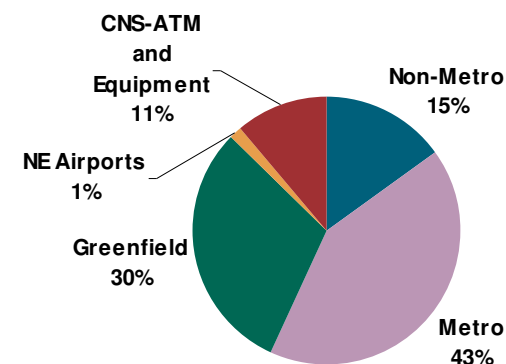
Airports – Opportunity of USD8.6b (INR409b)

- Brownfield metro airport expansion comprise 48% of total spending (Delhi complete)
- Bangalore, Hyderabad greenfield airports operational, USD2.6b (INR124b)
- Opportunities: modernization and redevelopment of 35 non-metro airports at an estimated cost of USD1.3b (INR6b)

Ports

Projects	Investment (INR bn)
Standalone container handling facility, JNPT	6
Second Container Terminal, Tuticorin Port	2
Four Multipurpose Berth Projects, Kandla Port	7
Iron Ore Terminals, Murmagao Ports	7
Mega Container Terminal, Chennai	37
TOTAL	59

Airports



Source: Ministry of Shipping, BNP Estimates



It's a more than \$ 1 tn opportunity

	FY 13	FY 14	12th Plan FY 15	FY 16	FY 17
Nominal GDP (INR bn)	93,126	105,698	119,967	136,162	154,544
GDP growth rate (%)	13.5%	13.5%	13.5%	13.5%	
Infrastructure GCF as a % of GDP	8.7	8.8	9.0	9.2	9.3
Infrastructure GCF (INR bn)	8,102	9,301	10,797	12,527	14,373
TOTAL (INR bn)	55,100				
TOTAL (USD bn)	1,377				

Source: BNP Estimates

- Major assumptions
 - Real GDP will continue to grow at 8.5%
 - Infrastructure investment to rise to 10% of GDP
 - We estimate that India will invest USD 1 tn in next few years



How to profit from it?

Many currently listed stocks participate / benefit directly from the infrastructure build-out

	Sector	Market Cap (USD bn)	Volume (USD mn)	Valuations - FY 11E	
				P/E	P/B
L&T	E&C	24.2	50.8	29.7	5.3
IVRCL	E&C	0.9	8.4	15.9	1.6
Nagarjuna Const	E&C	0.9	3.7	16.8	1.8
HCC	E&C	0.8	6.3	26.3	2.8
Punj Lloyd	E&C	0.8	12.1	15.3	1.2
BHEL	Capital Good - Power Generation	25.7	28.6	21.7	7.5
Crompton Greaves	Capital Good - T&D	4.2	8.6	28.7	7.7
ABB	Capital Good - T&D	3.6	6.5	43.6	6.8
Cummins	Capital Good - Generation	3.2	3.2	25.0	9.8
Thermax	Capital Good - Generation	2.0	1.2	26.2	8.4
Mundra Port and SEZ	Transportation	6.8	10.9	35.0	9.1
GMR	Asset Owner	4.9	6.4	57.3	3.2
IRB	E&C	2.1	8.4	16.6	4.7
GVK	Asset Owner	1.6	6.1	33.9	2.4
Kalpataru Power	Capital Good - Transmission Tower	0.7	0.5	14.1	2.6
Gammon India	E&C	0.4	0.6	60.4	2.8
KEC International	Capital Good - Transmission Tower	0.5	0.4	11.4	2.9
Simplex Infrastructure	E&C	0.5	0.2	15.3	2.5
Ahluwalia Contracts	E&C	0.3	0.9	12.1	7.5
Jyoti Structures	Capital Good - Transmission Tower	0.2	1.1	10.3	2.3
Siemens India	Capital Good - T&D	5.1	6.6	30.3	8.5
Reliance Infra	Conglomerate	5.4	40.4	19.3	1.4
Jaiprakash Associates	Conglomerate	5.2	30.6	19.6	2.8
Lanco	Conglomerate	3.6	8.6	13.9	5.0
ITNL	E&C	1.4		15.6	3.8

Source: Bloomberg, BNP Paribas



Debt financing

(INR bn)	FY 12	FY 13	FY 14	12th Plan		
				FY 15	FY 16	FY 17
GDP	63,017	68,373	74,185	80,491	87,332	94,756
Savings Rate	35%	35.50%	36%	36.50%	37%	37.50%
Total Savings	22,056	24,272	26,707	29,379	32,313	35,533
Savings into financial assets	11,028	12,379	13,887	15,571	17,449	19,543
Savings consumed by the govt (i.e. fiscal deficit)	1,891	1,709	1,484	1,449	1,310	1,232
Savings available for other sectors	9,137	10,670	12,404	14,122	16,139	18,312
Financing available for infra	15%	15.50%	16%	16.50%	17%	17.50%
Domestic savings for Infrastructure financing	1,371	1,654	1,985	2,330	2,744	3,205
Total (INR bn)	13,287					
Total - banking system (USD bn)	316					
Total - Insurance (USD bn)	100					
Total - Others (USD bn)	50					
Total from Domestic Sources (USD bn)	466					

Source: BNP Paribas Estimates

- A trillion \$ investment would need almost USD 750 bn of debt financing (3:1 - debt:equity)
- We estimate that at best 60 - 65% (USD 450 – USD 500 bn) of that can come from domestic savings
- USD 300 bn must come from foreign savings
- The opportunities are many:
 - ECBs by REC and PFC (power financing institutions)
 - Borrowings by IIFCL
 - Private companies (particularly large utilities like Reliance Power, Tata Power could choose to tap foreign bond markets)



How to benefit from the trillion dollar opportunity

- ECBs, corporate debt may not be available to non-institutional investors in the US
 - Distribution in the United States limited only to “major institutional investors” (defined in Rule 15a-6 under the Securities Exchange Act)
 - These instruments cannot be marketed to persons who are not “major institutional investors”
- RBI does not allow foreign retail investors (even NRI, PIOs) to directly invest in Indian stocks
- So India ETFs are a good proxy
 - Almost 45% of MSCI India (Financials, Capital goods, E&C, Cement, Metals) will benefit from India’s infrastructure build-out
 - It will increase as government lists large commodity companies (eg. Coal India, Hindustan Copper) and private infrastructure companies raise equity, thereby increasing free float



But there are risks

High likelihood of projects being delayed due to the following:

1. What stage is developer's project in?
 - **Govt Approvals – 18-24mths from concept to start of construction**
 - **Environmental Clearances – scrutiny more stringent; projects can be rejected!**
2. **Land acquisition challenging – onus on govt in certain sectors (highways)**
3. **Shortage of skilled labor/logistics infrastructure/sub-contractors**
4. **Has 100% funding (debt & equity) been arranged?**
 - **Global Credit crunch making foreign borrowing difficult**
 - **Domestic funding constraints - RBI sectoral caps, absence of corporate debt market, no pension/insurance money for infrastructure**



...particularly the Naxal menace

- Naxalite violent incident and fatalities has increased sharply in 2009 and the first few months of 2010 .
- Much of the proposed investment, especially in resource intensive industries (e.g. steel), is in Naxalite affected states
- Naxal violence coupled with local opposition has probably hampered projects execution on schedule and cost. Cancellations of some large projects (POSCO, ArcelorMittal) could derail the capex cycle.
- The spurt in violence could also hinder infrastructure build-out. We estimate that that 25% and 50% of NHA1 proposed road projects (in Work plans 1 and 2 respectively) Naxal areas.

Exhibit 1: Naxalite-related Fatalities

	Fatalities
2005	717
2006	742
2007	650
2008	638
2009	998
2010 YTD	310

Source : SATP

Exhibit 4: Proposed Steel Plants

	No of MoUs signed	Capacity (mt)
Orissa	49	76
Jharkhand	65	104
Chattisgarh	74	57
West Bengal	12	21
Total (India)	222	276
% in affected states (%)	90	93

Source : Ministry of Steel

Exhibit 5: Road Projects In Naxal Affected Areas

	(kms)	% of all India (%)	Cost (INR b)	% of all India (%)
Workplan 1	2,561	21	274.78	23
Workplan 2	5,971	50	597.1	50

Source : BNP Paribas



Some useful links...

National Highways Authority of India: <http://www.nhai.org>

Airports Authority of India: <http://www.aai.aero/AAI/main.jsp>

Central Electricity Authority: <http://www.cea.nic.in/>

Database of Public Private Partnerships: <http://www.pppindiadatabase.com/>



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*In most cases, the target price will equal the analyst's assessment of the current fair value of the stock. However, if the analyst doesn't think the market will reassess the stock over the specified time horizon due to a lack of events or catalysts, then the target price may differ from fair value. In most cases, therefore, our recommendation is an assessment of the mismatch between current market price and our assessment of current fair value.

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