

Telecommunications

NOVEMBER
2011



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- ❖ Advantage India
- ❖ Market overview and trends
- ❖ Growth drivers
- ❖ Success stories: Airtel, Vodafone
- ❖ Opportunities
- ❖ Useful information

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Advantage India

Strong demand

- Telecom's revenues rose at a CAGR of 18.1 per cent during 2006–10
- India is the second-largest telecom market in the world with 752 million subscribers as of December 2010

Attractive opportunities

- By 2012, the total telecom outreach in the nation's rural markets is expected to be close to 40 per cent
- India is expected to feature among the top 10 broadband markets by 2013

2014E

Number of subscribers:
1 billion

Advantage India

Better telecom ratings

- The country has strong telecom infrastructure
- Compared to peers in western and Asian countries, India has a comparative advantage in telecom ratings

Policy support

- The Government of India aims to develop the nation as a global telecommunication hub and provides regulatory support to the industry to achieve the goal
- Government has released Draft National Telecom Policy – 2011; proposes 'infrastructure' status to telecom

2005

Number of subscribers:
189.9 million

Source: BMI (Business Monitor international) Report, Aranca Research

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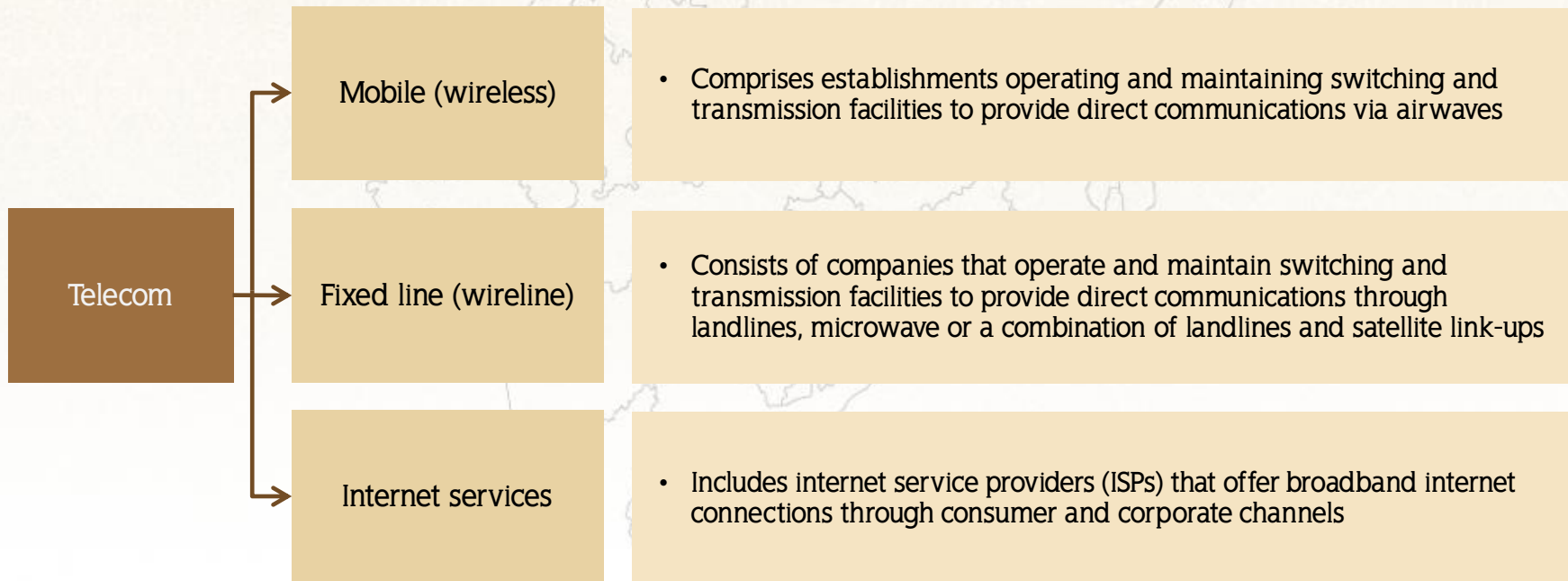
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The telecom market is split into three segments



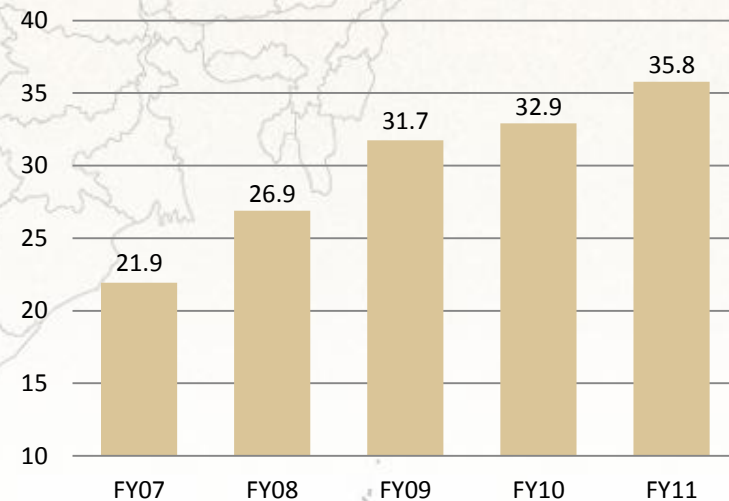
Source: Aranca Research

Rising telecom revenues ... (1/2)

- India emerged as the second largest telecommunication network in the world in 2010
- Wireless & wireline revenues rose at a CAGR of 13 per cent during FY07-11

Notes: CAGR – Compound annual growth rate

Wireless & wireline revenues in USD billion

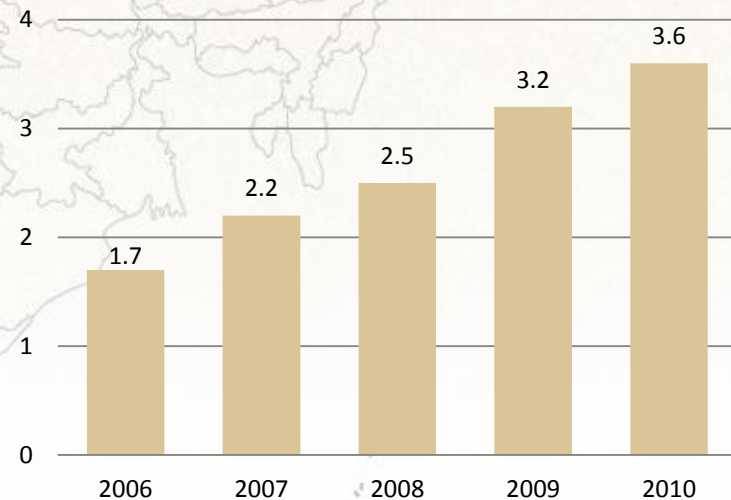


Source: Telecom Regulatory Authority of India, Aranca Research

Rising telecom revenues ... (2/2)

- The internet access revenues have increased to USD3.6 billion in 2010 from USD1.7 billion in 2006 at an impressive CAGR of 20.6 per cent during 2006-10
- Revenues are forecasted to increase to USD5.9 billion by 2015

Internet access revenues in USD billion



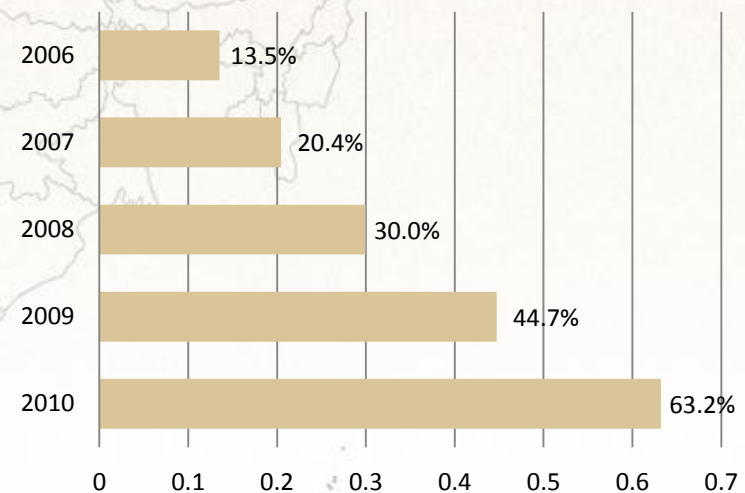
Source: Datamonitor, Aranca Research

Mobile teledensity is growing at the expense of fixed line ... (1/2)

→ The mobile segment's teledensity surged 4.7x from 13.5 per cent in 2006 to 63.2 per cent in 2010

Notes: Teledensity – The number of telephone lines for every 100 people in a country

Mobile (wireless) segment's teledensity

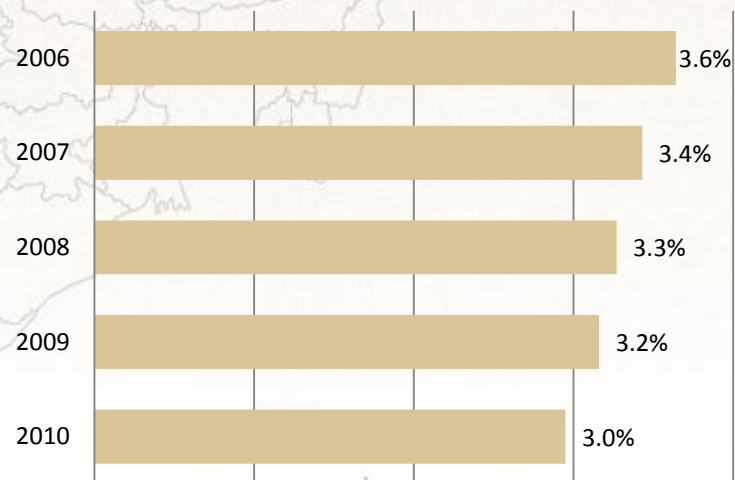


Source: Telecom Regulatory Authority of India, Aranca Research

Mobile teledensity is growing at the expense of fixed line ... (2/2)

→ Fixed line's teledensity declined from 3.6 per cent in 2006 to 3.0 per cent in 2010. However, revenues increased in the period

Fixed line segment's teledensity



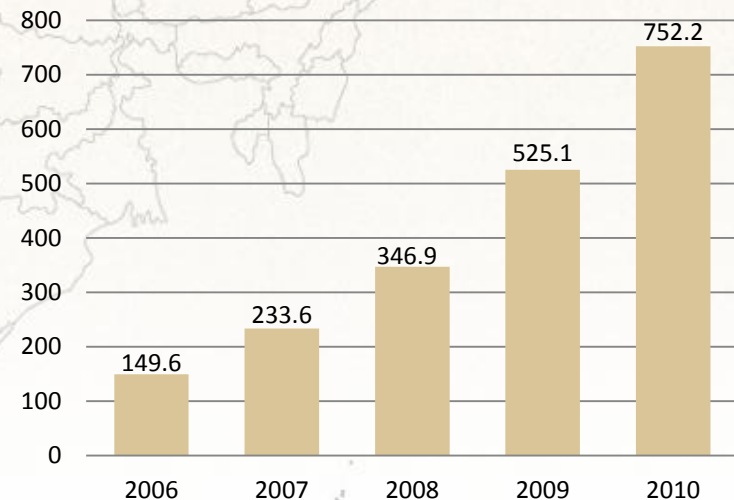
Source: Telecom Regulatory Authority of India, Aranca Research

Strong growth in mobile and internet subscriptions ... (1/2)

- Mobile subscriptions went up at an impressive CAGR of 49.7 per cent during 2006–10
- Mobile penetration rates reached 140.5 per cent in urban areas and 30.1 per cent in rural areas as of December 2010

Notes: CAGR – Compound annual growth rate

Mobile (wireless services) subscriptions (in million)

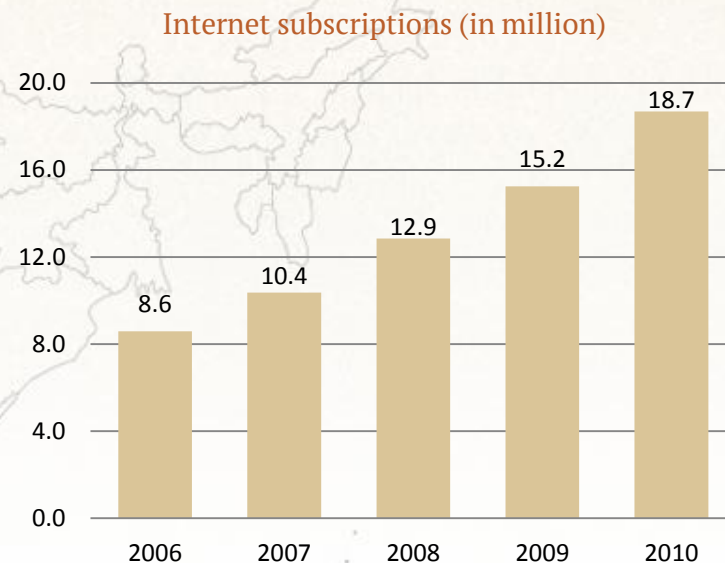


Source: Telecom Regulatory Authority of India, Aranca Research

Strong growth in mobile and internet subscriptions ... (2/2)

- Internet subscriber figures went up to 18.7 million in 2010 from 8.6 million subscribers in 2006, at a CAGR of 21.4 per cent
- Top 10 Internet Service Providers (ISPs) together hold 95 per cent of total internet subscriber base, while state owned BSNL is the market leader with 57 per cent of market share

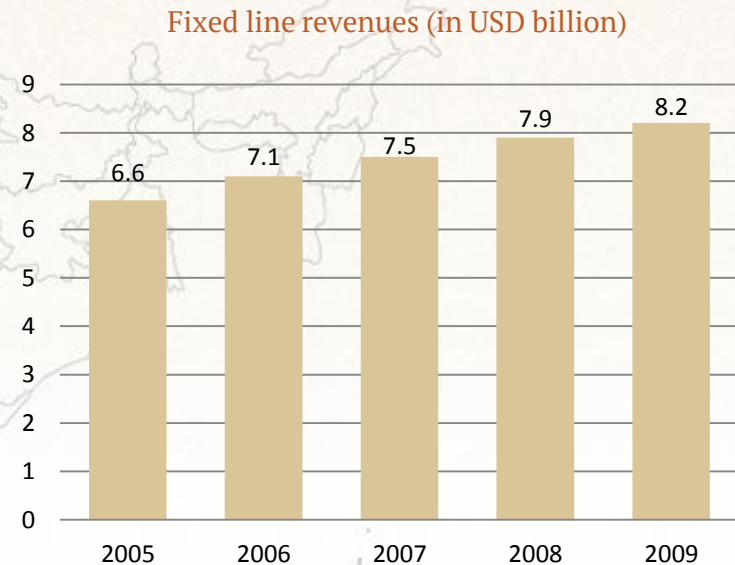
Notes: CAGR – Compound annual growth rate;
BSNL – Bharat Sanchar Nigam Ltd



Source: Telecom Regulatory Authority of India, Aranca Research

Fixed line revenues growing; BSNL is the market leader ... (1/2)

- Fixed line's revenues increased at a CAGR of 5.6 per cent from USD6.6 billion in 2005 to USD8.2 billion in 2009
- The market is forecasted to accelerate at a CAGR of 7.2 per cent during 2009–14, to reach USD11.6 billion by the end of 2014

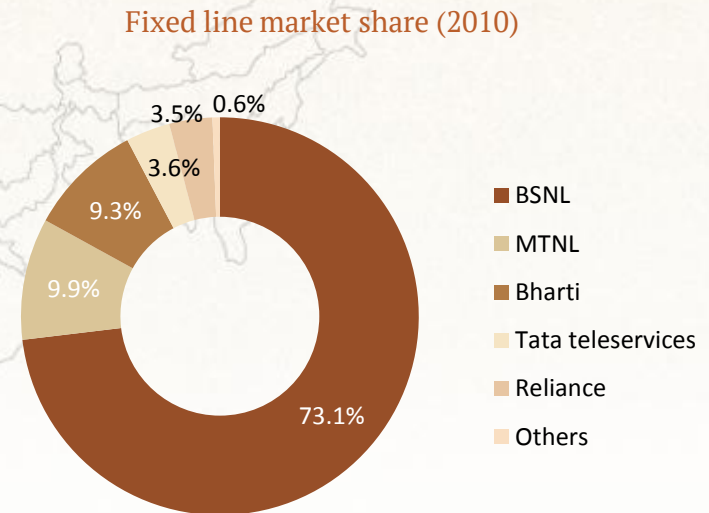


Source: Datamonitor, Aranca Research

Fixed line revenues growing; BSNL is the market leader ... (2/2)

- BSNL is the market leader with a market share of 73.1 per cent, MTNL is second with 9.9 per cent
- Private players like Bharti, Tata and Reliance are growing y-o-y, commanding an increasingly significant share

Notes: y-o-y is year-on-year

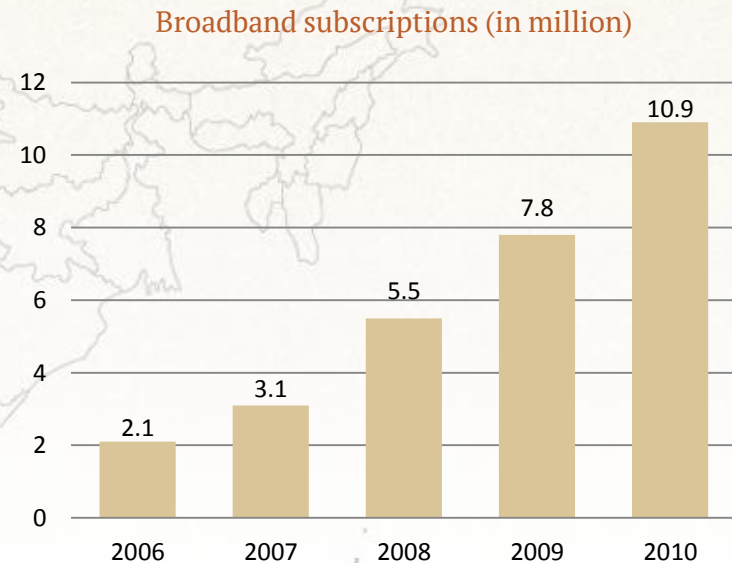


Source: BMI, Aranca Research

Strong growth in broadband drives internet access revenues ... (1/2)

- Broadband subscription increased at an impressive CAGR of 51.9 per cent during 2006–10
- The market is forecast to accelerate at a CAGR of 61.1 per cent during 2010–15, to reach 117.6 million by the end of 2015

Notes: CAGR – Compound annual growth rate



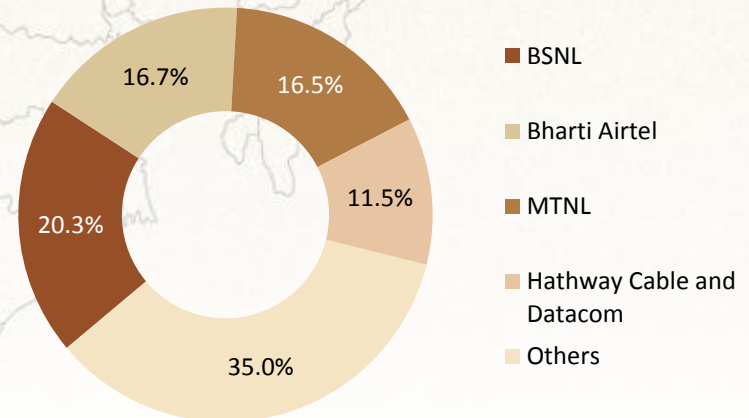
Source: Telecom Regulatory Authority of India, Aranca Research

Strong growth in broadband drives internet access revenues ... (2/2)

- Of the total broadband subscriptions in the country:
- BSNL topped with 6.3 million subscriptions
- Bharti Airtel followed at the second place with 1.3 million subscribers






Notes: BSNL – Bharat Sanchar Nigam Ltd;
MTNL – Mahanagar Telephone Nigam Ltd

Market break-up by broadband subscriptions (2010)



Source: BMI Report, Aranca Research

Key companies in the market

Company		Ownership	Presence
	Mahanagar Telephone Nigam Ltd (MTNL)	Government (56.3 per cent)	Fixed line and mobile telephony (in Delhi and Mumbai), data and internet
	Bharat Sanchar Nigam Ltd (BSNL)	Government (100 per cent)	Fixed line and mobile telephony (GSM – outside Delhi and Mumbai), data and internet in 22 circles
	Reliance communications	ADAG Group (Approx 64 per cent)	Mobile (CDMA) and Broadband
	Bharti Airtel	Bharti Group(45.50), SingTel (15.57 per cent), LIC India (5.0 per cent)	Broadband and mobile (GSM) in 22 circles
	Vodafone Essar	Vodafone (74 per cent), Telecom Investment India (19.5 per cent)	Broadband and mobile (GSM) in 22 circles

Source: Companies' websites, Aranca Research

Notable trends in the Indian telecom sector

Green telecom

- The green telecom concept aims at reducing the carbon footprint of the telecom industry through reduced energy consumption
- TRAI initiated a consultation process in May 2010, requesting inputs from firms across the telecom value chain to provide recommendations on green telecom's framework and implementation

Expansion to rural markets

- Rural markets are expected to be the next key growth drivers for the Indian telecom sector, given the country's growing rural population and disposable income
- By 2012, the rural subscriber base is anticipated to account for nearly half the total subscriber base, thereby fuelling the sector's growth

Emergence of BWA technologies

- BWA technologies such as WiMAX have been among the most significant recent developments in wireless communication
- WiMAX is likely to attract around 8 to 10 million subscribers and account for around USD1–1.5 billion by 2012

Outsourcing non-core activities

- As part of the recent outsourcing trend, operators have outsourced functions like network maintenance, IT operations and customer service

Source: Aranca Research

Note: BWA – Broadband Wireless Access, TRAI – Telecom Regulatory Authority of India

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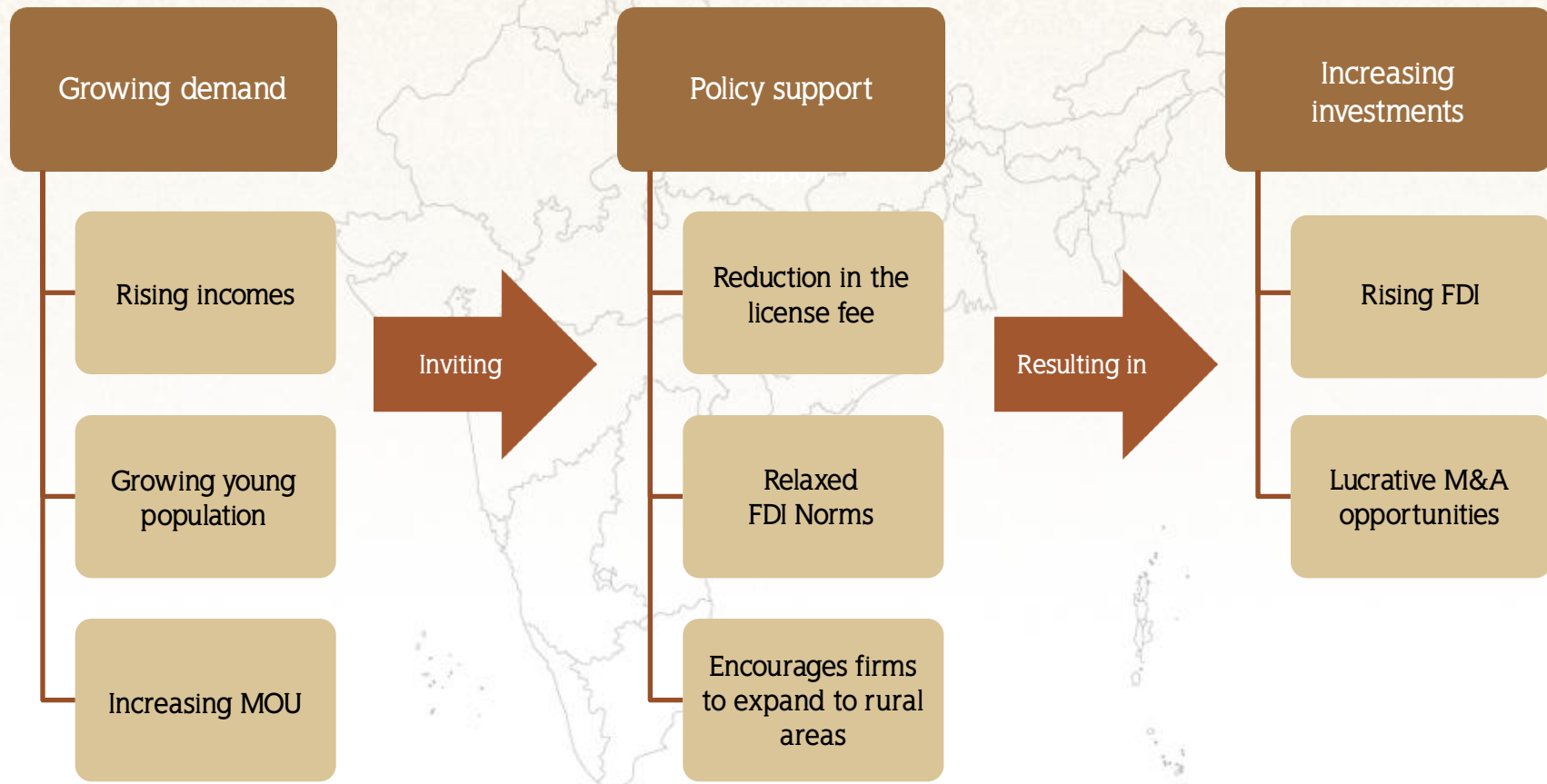
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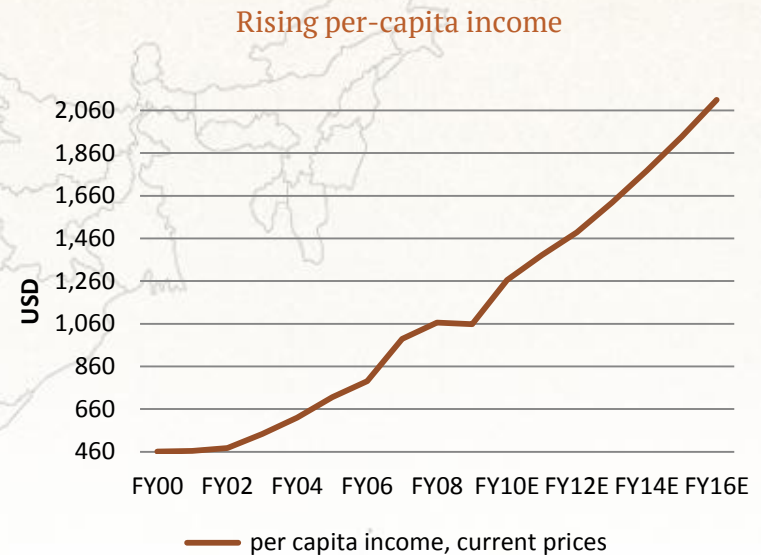
Sector benefits from rising incomes,
growing young population



Notes: FDI – Foreign direct investment; MOU – Minutes of use per month and per subscriber; M&A – Mergers and acquisitions

Rising incomes fuel demand for telecom services ... (1/2)

- The increasing per-capita income is set to touch INR65,000 by 2016
- It is projected to rise at a CAGR of 7 per cent during 2009–16
- The growth in the per-capita income drives demand for telecom services

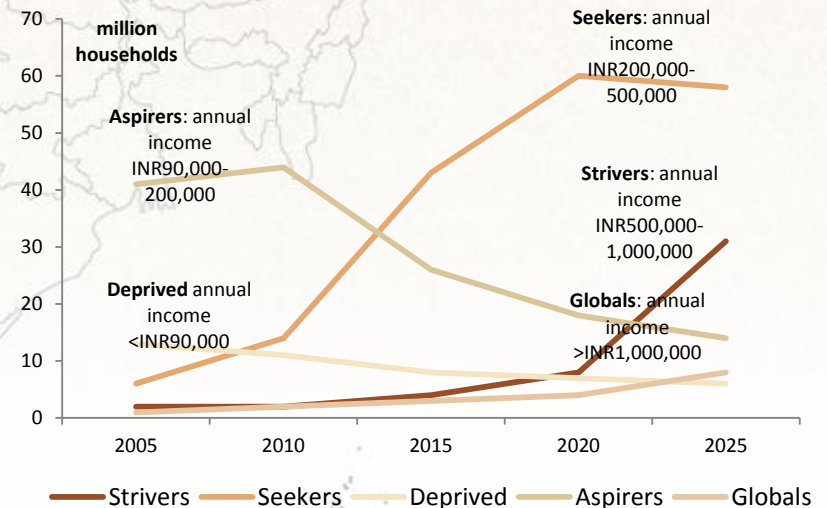


Source: IMF, Aranca Research

Rising incomes fuel demand for telecom services ... (2/2)

- The emergence of an affluent middle class is triggering demand for the mobile and internet segments
- A rising young population is increasingly purchasing mobile phones and mobile internet services
- Thus, the increase in this population segment implies more demand for telecommunications

Indian residents shifting from low to high income groups

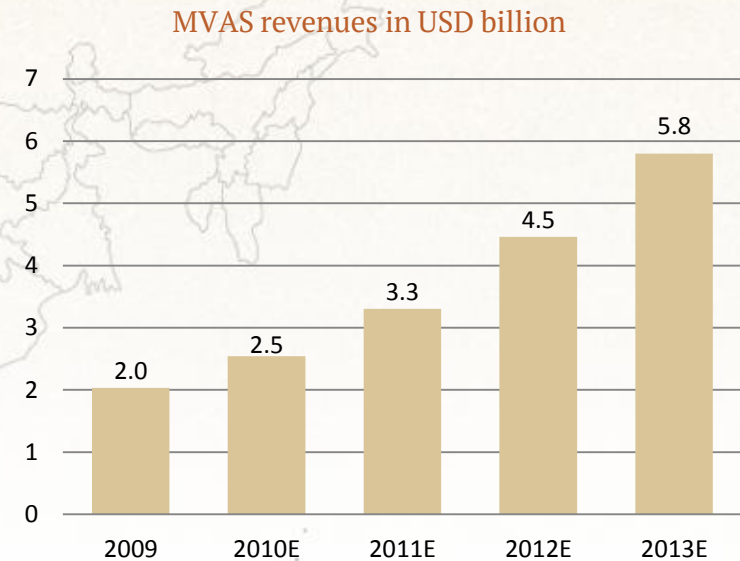


Source: McKinsey Quarterly, Aranca Research

Increasing internet revenues and subscriptions ... (1/2)

- The MVAS industry is expected to reach USD5.8 billion by 2013 from USD2.0 billion in 2009, representing a CAGR of 30.5 per cent
- TRAI estimates the share of non-voice revenues of telecom operators to rise from 10 per cent in 2010 to over 30 per cent over the next 5-7 years

Notes: CAGR – Compound annual growth rate;
VAS – Value-added services



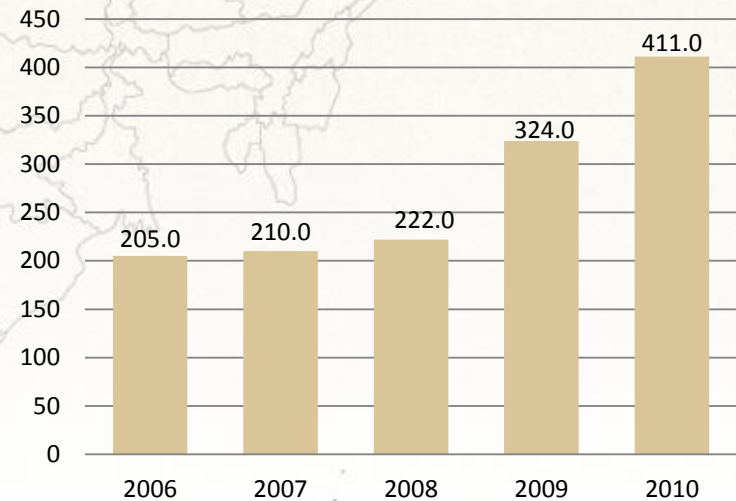
Source: Deloitte, Aranca Research

Increasing internet revenues and subscriptions ... (2/2)

- Minutes of usage of dial-up internet access has increased to 411 in 2010 from 205 in 2006 at a CAGR of 19 per cent

Notes: CAGR – Compound annual growth rate;
MOU – Minutes of use

Internet - dial up access MOU (per month per subscriber)



Source: Telecom Regulatory Authority of India, Aranca Research

India has a distinct competitive advantage over peers

- In terms of the telecom market environment , India competes with Japan, Singapore, Australia, South Korea, Hong Kong, Malaysia and Taiwan
- The country has an edge over China, Indonesia, Philippines, Pakistan, Bangladesh, Laos, Cambodia, Thailand, Vietnam and Sri Lanka

	Telecom Industry Rewards	Country rewards	Telecom industry risks	Country risk	Telecom Rating
India	63.3	35	70	70.6	58.4
China	52.5	42.7	60	51.1	51
Indonesia	47.5	46.7	70	53.1	50
Philippines	50	45.3	70	28.1	48.6
Pakistan	52.5	36	60	44.5	48.4
Bangladesh	40.5	60	50	49.9	48.1
Laos	46.8	54	50	36.4	47.5
Cambodia	40	32.7	60	62.2	44.5
Thailand	37.5	36.7	60	47.8	42.2
Vietnam	33.8	30	50	59.9	39.2
Sri Lanka	63.3	35	70	70.6	58.4

Source: BMI, Aranca Research, Note: explanation of the indicators given under appendix

Strong policy support is crucial to the sector's development ... (1/2)

Reduction in license fees

- The Government of India plans to cut license fees up to 33 per cent for operators that cover services for over 95 per cent of the residential areas in a calling circle
- The issuance of several international and national long-distance licenses has created opportunities and attracted new companies into the market

Removal of restrictions

- In 2008, TRAI removed restrictions that governed the provision of national long-distance VoIP services

Relaxed FDI norms

- FDI of up to 74 per cent is allowed in basic and cellular, unified access, national/international long distance, and V-Sat services as well as public mobile radio trucked services
- FDI of up to 100 per cent is permitted for infrastructure providers offering dark fibre, electronic mail and voice mail

Allowed the use of WiMAX

- In August 2008, the DoT allowed operators to use WiMAX networks as an alternative to cable and DSL to offer voice services
- This would enable faster delivery of wireless broadband services

Notes: FDI – Foreign direct investment; TRAI – Telecom Regulatory Authority of India; DoT – Department of Telecommunication; WiMAX – Worldwide interoperability for microwave access telecommunications. VoIP- Voice over Internet Protocol.

Strong policy support is crucial to the sector's development ... (2/2)

Set up internet connections

- The Department of Information Technology intends to set up over 1 million internet-enabled common service centres across India as per the National e-Governance Plan

Expansion to rural areas

- The USOF identified 5,000 villages, and is in the process of developing a scheme to connect through wireless broadband
- It also intends to provide 888,832 broadband connections in rural areas by 2014
- The USOF also has plans to strengthen the OFC network in rural and remote areas

Financial support

- The USOF is expected to extend financial support to operators providing service in rural areas and encourage active infrastructure sharing among the operators

Notes: USOF – Universal Service Obligation Fund; OFC – Optical fibre cable

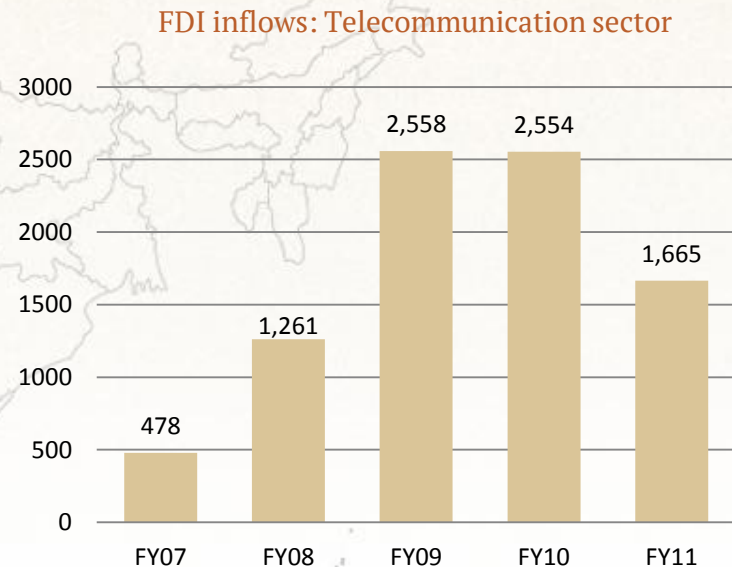
Draft National Telecom Policy - 2011



Foreign investments flowing in ... (1/2)

- FDI inflows into the telecom industry from April 2000 to April 2011 amounted to USD10.6 billion
- The industry accounted for 8 per cent of the total cumulative FDI between April 2000 and April 2011

Notes: FDI – Foreign direct investment



Source: Department of Industrial Policy & Promotion, Aranca Research

Foreign investments flowing in ... (2/2)

- In 2010, the telecom sector's M&A deal value stood at USD14.6 billion (29.4 per cent of the total M&A deal value)

Source: Thomson Banker, Deal Tracker, Aranca Research
Notes: M&A – Merger and acquisition

Merger and Acquisition deals (2010 and 2011)

Target	Acquirer	Acquisition price (USD million)
Viom Networks Ltd	Macquarie SBI Infrastructure	306.1
Qualcomm India Pvt Ltd	Investor Group	57.7
MVL Telecom Ltd	MVL Ltd	52.6
Micromax Informatics Ltd	Investor Group	43.8
Kaveri Telecom Products Ltd	Investor Group	9.9
Tata AutoComp Mobility	Trimble Navigation Ltd	5.1
Eduexel Infotainment Ltd	Discovery Infoways Ltd	0.9

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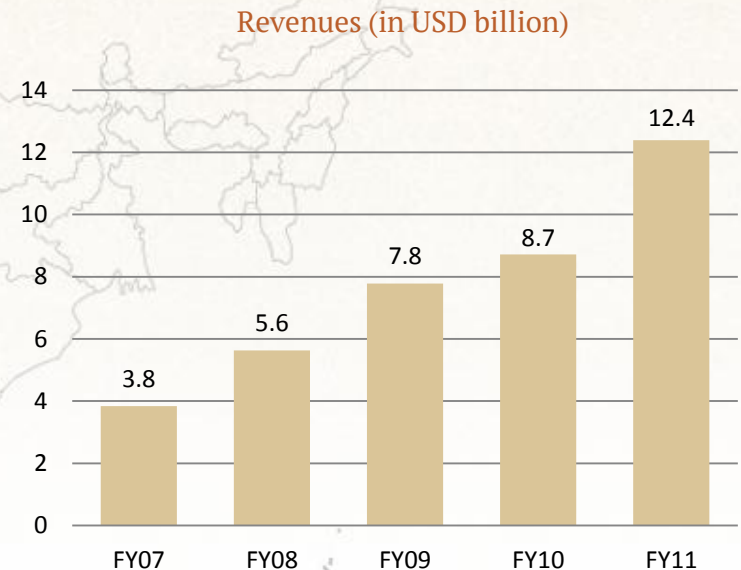
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Bharti Airtel: An inspiring success story ... (1/2)

- In 2010, Bharti established a major outsourcing relationship with IBM, which gave IBM full control and ownership of Bharti's IT infrastructure and associated processes
- In September 2010, Bharti launched the Global Data portfolio in Thailand and Malaysia as part of its global expansion strategy



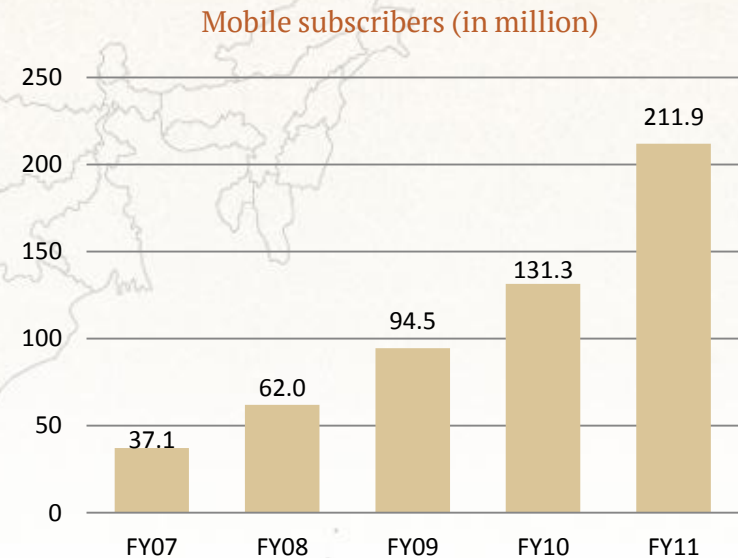
Source: Company Annual report, Aranca Research

- Set up in 1995, Bharti Airtel is India's largest mobile operator with presence in all of India's 22 circles
- It is the country's leading mobile operator with more than 211 million mobile subscribers as of March 2011

Bharti Airtel: An inspiring success story ... (2/2)

- In November 2010, Bharti Airtel rebranded operations in 19 countries
- In January 2009, Bharti Airtel launched an IPTV service, Airtel Digital TV Interactive using MPEG-4 technology
- In 2009, the company launched global wholesale services to provide operators access to its fibre network

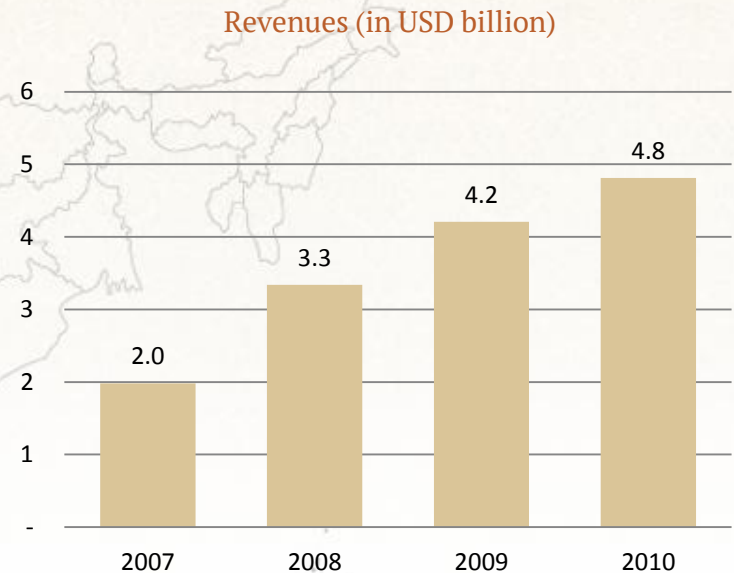
Notes: MPEG – Moving picture experts group ;
IPTV : Internet Protocol Television



Source: BMI Report, Aranca Research

Vodafone Essar: India's third-largest mobile operator ... (1/2)

- In February 2007, Vodafone unveiled a high-growth five-year strategy for India to offer low-cost handsets and wireless connectivity to the country's rural areas
- In August 2008, Vodafone introduced Apple's iPhone to the Indian market

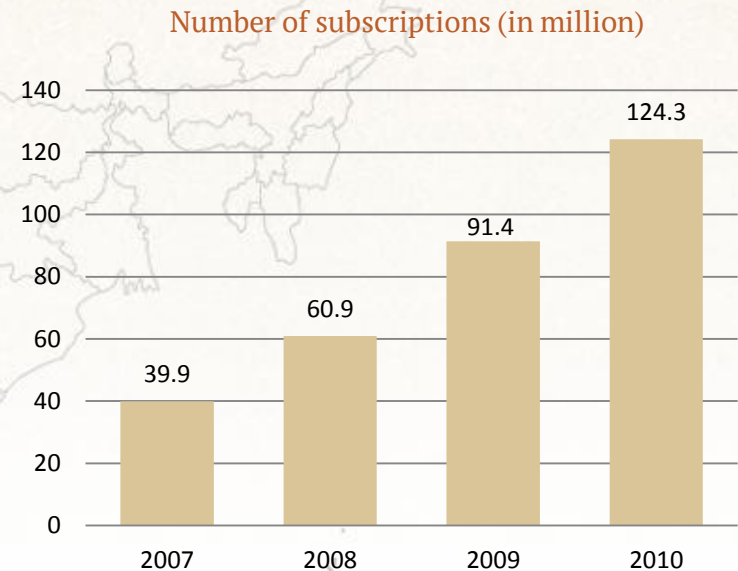


Source: BMI Report, Aranca Research

- Set up in 1994, it is India's third-largest mobile operator with more than 124 million customers as of December 2010

Vodafone Essar: India's third-largest mobile operator ... (2/2)

- Vodafone aims to build more than 5,000 base stations by Q411
- Vodafone Group plans to invest heavily in the establishment of a fibre-optic network in India
- Vodafone plans to invest USD400–500 million to purchase 3G equipment by 2015



Source: BMI Report, Aranca Research

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Opportunities ... (1/2)

Increasing mobile subscribers

- The number of wireless subscribers is expected to reach approximately 1 billion by 2014
- Of the total subscribers, around 572 million are likely to be from urban areas and the rest would be rural subscribers (468 million)
- Indian mobile operators added about 8–10 million subscribers every month throughout 2010

Untapped rural markets

- The rural market's teledensity was around 31.2 per cent in December 2010
- By 2012, the total telecom outreach in the largely untapped rural markets of India is expected to reach close to 40 per cent

Rising internet penetration

- The Internet penetration is expected to grow steadily and is expected to be bolstered by government policy
- The current broadband penetration rate is 1.5 per cent and is likely to be 9.4 per cent by 2015
- The country is expected to feature among the top 10 broadband markets by 2013

Opportunities ... (2/2)

Development of telecom infrastructure

- Telecom infrastructure is expected to increase at a CAGR of 20 per cent during 2008–15 to reach 571,000 towers in 2015
- TRAI has made several recommendations for the development of telecom infrastructure including tax benefits and recognising telecom infrastructure as essential infrastructure

Growth in MVAS

- The Indian Mobile Value-Added Services (MVAS) industry is expected to reach USD5.8 billion by 2013, from USD2.0 billion in 2009
- Currently, VAS contributes 10–12 per cent of the total telecom revenues
- Introduction of 3G services will help in the faster growth of VAS Industry

Telecom equipment market

- The telecom equipment market's production of electronics and equipment went up 11.7 per cent to reach USD10.5 billion in 2008–09
- It is anticipated to reach USD29.5 billion by 2013–14

Notes: VAS: Value-added services

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Industry Associations

Association Of Unified Telecom Service Providers Of India (AUSPI)

B-601, Gauri Sadan 5, Hailey Road, New Delhi – 110 001, India

Tel: 91 11 23358585

Fax: 91 11 23327397

Website: <http://www.auspi.in/>

Association Of Competitive Telecom Operators (ACTO)

601, Nirmal Tower, 26, Barakhamba Road, Connaught Place, New Delhi – 110 001, India

Tel.: 91 11 43565353 / 43575353

Fax: 91 11 43515353

E-mail: info@acto.in

Website: www.acto.in

Internet & Mobile Association Of India (IAMAI)

F-36, Basement, East of Kailash, New Delhi – 110 065, India

Tel: 91 11 46570328

E-mail: kalyan@iamai.in

Website: www.iwww.iamai.in

Appendix

BMI telecoms business environment ratings

- Industry rewards: it considers Average revenue per users, number of subscribers, subscriber growth, and number of operators
- Country rewards: it considers urban/rural split, age range, GDP per capita, USD
- Industry risks: it considers regulatory independence
- Country risk: it rates the country on short-term external risk, policy continuity, legal framework corruption
- Telecom ratings: overall rating of the above indicators

Glossary ... (1/2)

- **BWA:** Broadband wireless access
- **CAGR :** Compound annual growth rate
- **DoT:** Department of Telecommunication
- **FDI:** Foreign direct investment
- **FTTH:** Fibre to the home
- **FY:** Indian financial year (April to March)
- **IMF:** International Monetary Fund
- **INR:** Indian Rupee
- **IPTV** Internet protocol television
- **M&A:** Mergers and acquisitions
- **MoU:** Minutes of use per month and per subscriber
- **MPEG:** Moving Picture Experts Group

Glossary ... (2/2)

- **OFC:** Optical fibre cable
- **TRAI:** Telecom Regulatory Authority of India
- **USOF:** Universal Service Obligation Fund
- **USD:** US Dollar
 - Conversion rate used: USD1 = INR48, HKD1 = USD0.128, GBP1 = USD1.854
- **VAS:** Value-added services
- **WiMAX:** Worldwide Interoperability for microwave access telecommunications
- Wherever applicable, numbers have been rounded off to the nearest whole number

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