

Telecommunications

AUGUST
2012



Telecommunications

AUGUST
2012

Contents

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

For updated information, please visit www.ibef.org

Advantage India

Strong demand

- India is the second-largest telecommunications market in the world with 951.3 million subscribers as of March 2012
- With 70 per cent of population staying in rural areas, the rural market will be a key growth driver in coming years

Attractive opportunities

- By end-2012, 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

2016E

Number of subscribers:
1.2 billion

Advantage India

High ratings

- The country has a strong telecommunication infrastructure
- In telecommunication ratings, India ranks ahead of peers in the West and Asia

Policy support

- The government has been proactive in its efforts to transform India into a global telecommunication hub; prudent regulatory support has also helped
- National Telecom Policy 2012 proposes unified licensing, full MNP and free roaming

2012*

Number of subscribers:
951.3 million

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

Notes: * figure are till March 2012; MNP- Mobile Number Portability; E – Estimates (2016E – estimates for 2016)

Telecommunications

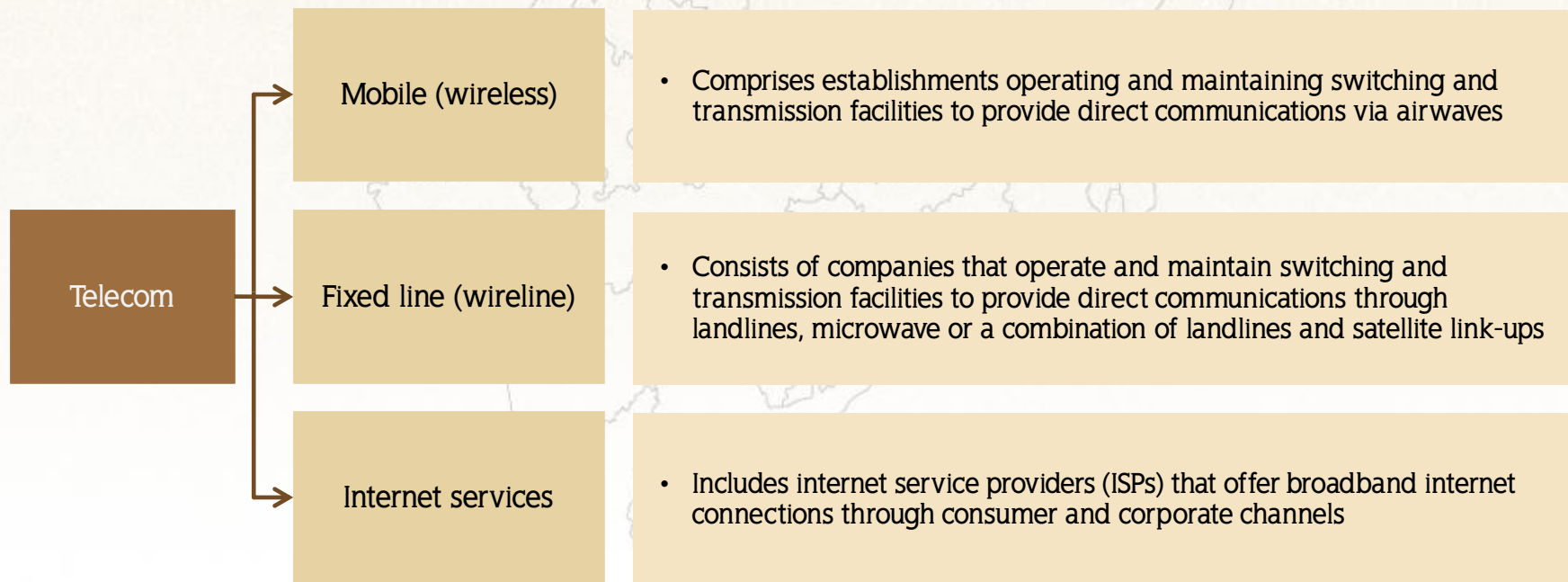
AUGUST
2012

Contents

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

For updated information, please visit www.ibef.org

The telecom market is split into three segments

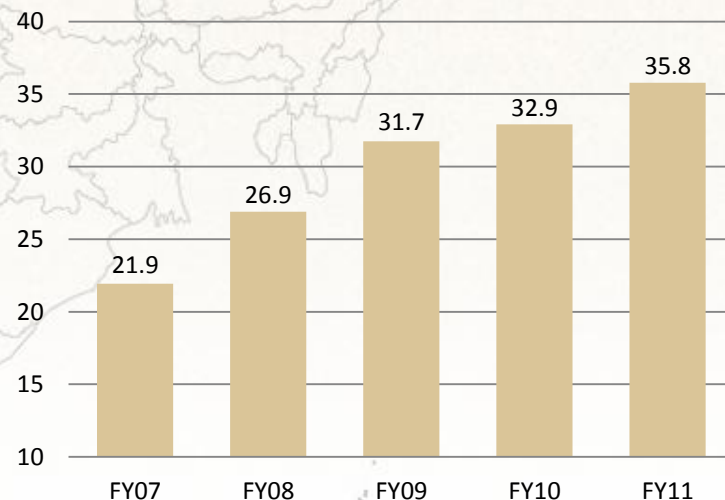


Source: Aranca Research

Telecom revenues have been surging ahead

- Indian telecom sector's revenue grew by 7 per cent to USD56.5 billion in FY11
- 'Wireless and wireline' revenue amounted to USD35.8 billion with a CAGR of 13.1 per cent over FY07-11; revenues from the telecom equipment segment stood at USD23.4 billion in FY11
- During 2012, India emerged as the world's second largest telecommunication market and has the third highest number of internet users in the world

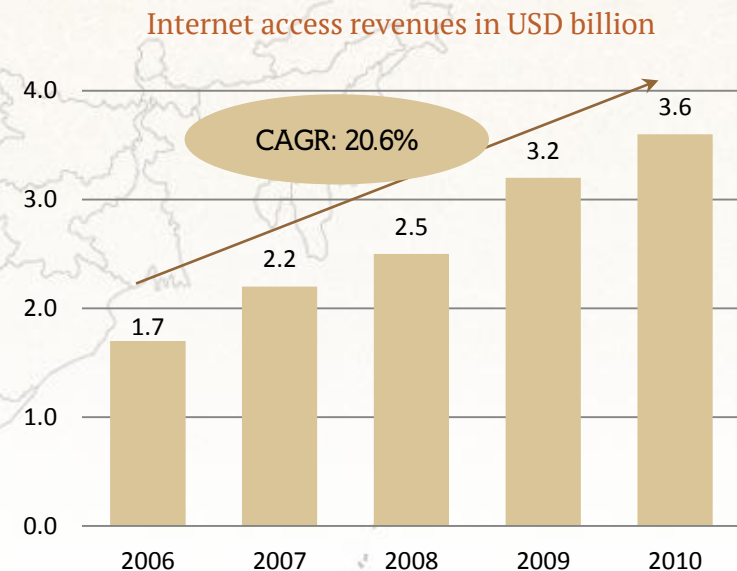
Wireless and wireline revenues in USD billion



Source: Telecom Regulatory Authority of India, Aranca Research
Notes: CAGR – Compound Annual Growth Rate

Impressive rise in internet revenues

- Internet access revenues stood at USD3.6 billion in 2010, thereby clocking an impressive CAGR of 20.6 per cent over 2006-10
- Revenues are forecasted to increase to USD5.9 billion by 2015

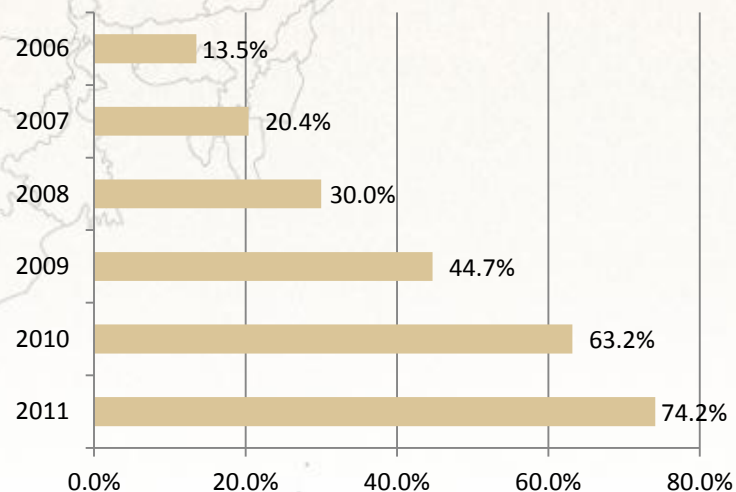


Source: Datamonitor, Aranca Research

Mobile teledensity growth continues

- The mobile segment's teledensity surged 5.5x from 13.5 per cent in 2006 to 74.2 per cent in 2011
- GSM services continue to dominate the wireless market with an 87.9 per cent share (2011); CDMA accounts for the remaining 12.1 per cent

Mobile (wireless) segment's teledensity



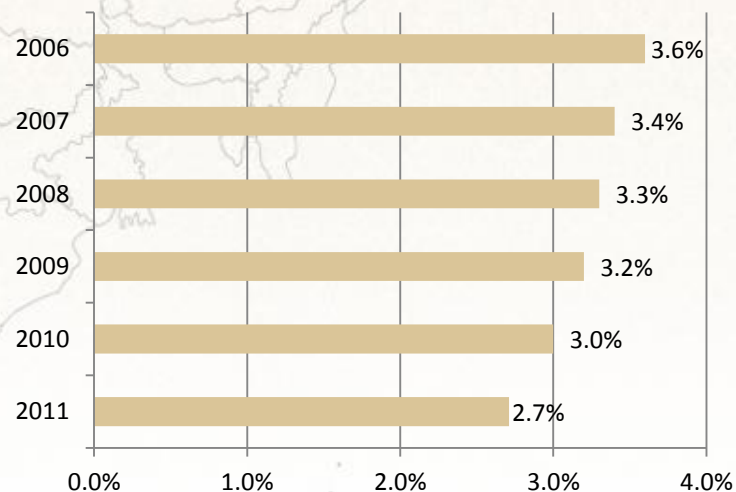
Source: Telecom Regulatory Authority of India, Aranca Research

Notes: Teledensity – The number of telephone lines for every 100 people in a country, GSM- Global System for Mobile Communications, CDMA-Code division multiple access

Fixed line market is dominated by BSNL

- During 2011, Fixed line's teledensity reached 2.7 per cent due to wide usability of wireless segment
- During FY12, BSNL continued to lead the segment with a 69.8 per cent share (in the total fixed line market)

Fixed line segment's teledensity

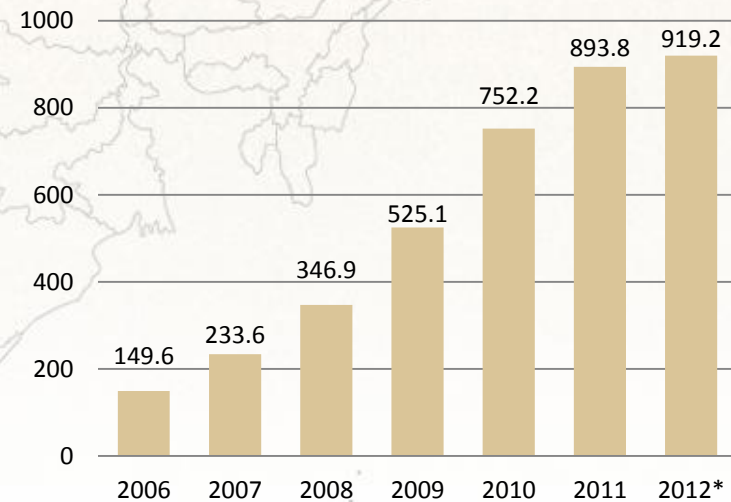


Source: Telecom Regulatory Authority of India,
Aranca Research
Notes: BSNL- Bharat Sanchar Nigam Limited

Strong growth in mobile subscriptions

- By March 2012, mobile subscriptions stood at 919.2 million; over 2006-11, subscriptions had recorded an astounding CAGR of 43.0 per cent
- The current urban wireless teledensity is 162.82 and rural teledensity is 38.33

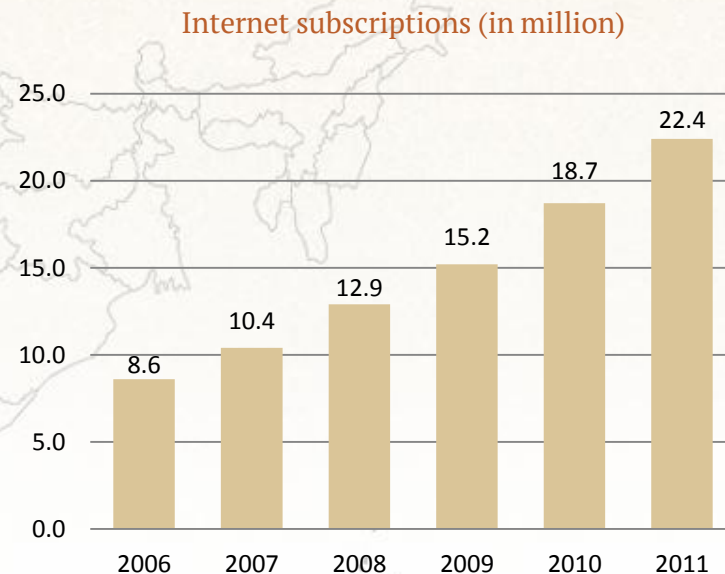
Mobile (wireless services) subscriptions (in million)



Source: Telecom Regulatory Authority of India, Aranca Research
Note: 2012* - the figure for 2012 is till March 2012

Number of internet subscribers are also going up at a fast pace

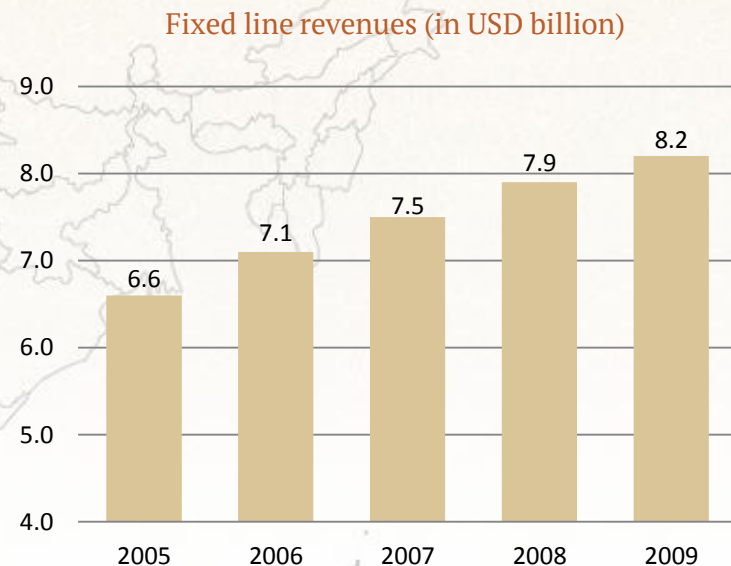
- Internet subscriber figures went up to 22.4 million in 2011 from 8.6 million in 2006, a CAGR of 21.1 per cent
- Top 10 Internet Service Providers (ISPs) together hold 95.0 per cent of total internet subscriber base; state owned BSNL is the market leader with 55.0 per cent of market share
- By 2016, internet subscriptions are expected to rise to 215.0 million, with a penetration rate of 16.2 per cent



Source: Telecom Regulatory Authority of India, Business Monitor International, Aranca Research
Notes: CAGR – Compound annual growth rate;
BSNL – Bharat Sanchar Nigam Ltd

Fixed line revenues are growing steadily

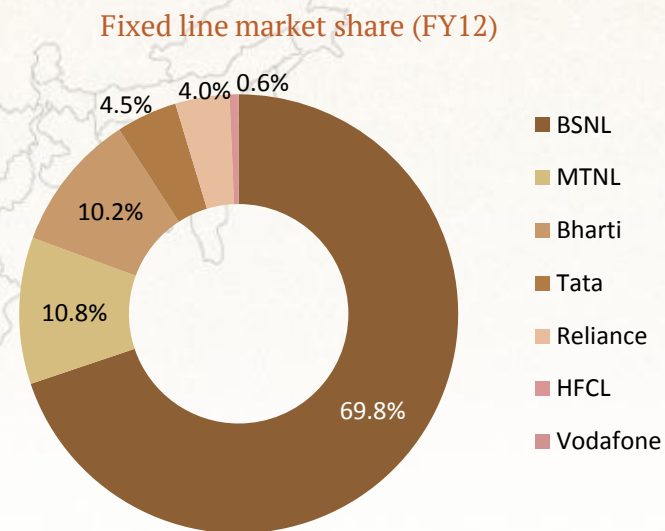
- Fixed line revenues increased at a CAGR of 5.6 per cent to USD8.2 billion over 2005-09
- The market is forecasted to accelerate at a CAGR of 7.2 per cent over 2009-14 (to USD11.6 billion by the end of 2014)



Source: Datamonitor, Aranca Research

BSNL is the market leader in the fixed line segment

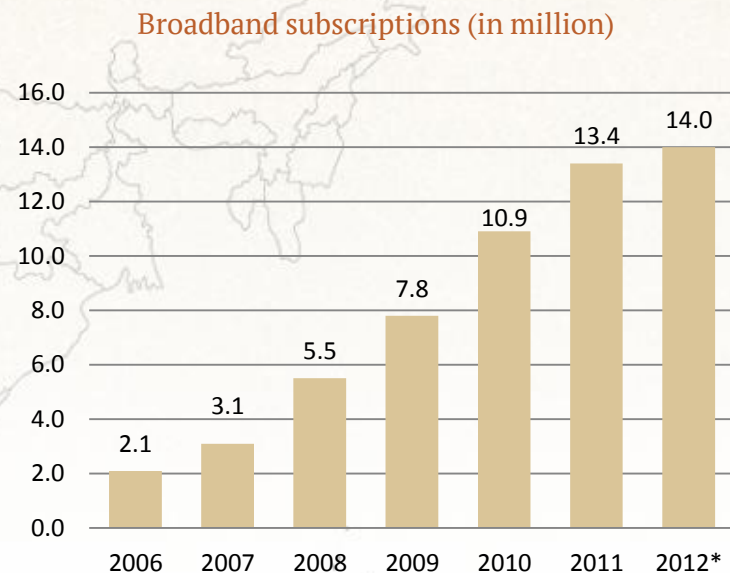
- BSNL is the market leader with a share of 69.8 per cent; MTNL comes second (10.8 per cent share)
- BSNL, MTNL and Bharti together account for over 90 per cent of the total fixed line market



Source: Telecom Regulatory Authority of India, Aranca Research
Note: MTNL-Mahanagar Telephone Nigam Limited, BSNL-Bharat Sanchar Nigam Limited'

Strong growth in broadband drives internet access revenues

- Broadband subscription increased at an impressive CAGR of 46.1 per cent during 2006–11
- Growth is set to pick up pace even further; the market is set to post a CAGR of 72.1 per cent during 2011–15, with subscriptions increasing to 117.6 million by end-2015

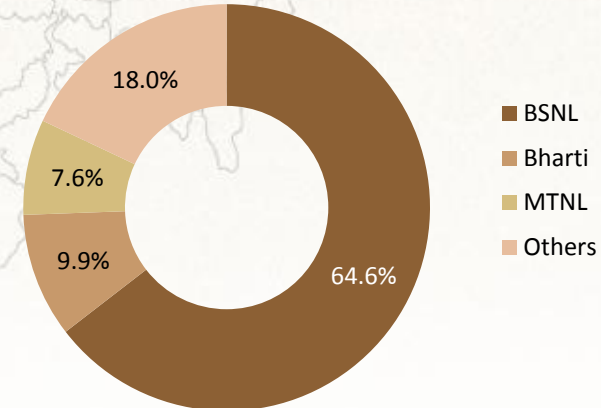


Source: Telecom Regulatory Authority of India, Aranca Research
Note: 2012* - the figures for 2012 are as of March 2012

BSNL has the major share in broadband subscriptions, followed by Bharti Airtel






- Of the total broadband subscriptions in the country:
- BSNL topped with 64.6 per cent of total broadband market share
- Bharti Airtel followed at the second place with 9.9 per cent of total broadband market share

Market break-up by broadband subscriptions (FY12)



Source: Telecom Regulatory Authority of India, Aranca Research
Notes: BSNL – Bharat Sanchar Nigam Ltd;
MTNL – Mahanagar Telephone Nigam Ltd

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 (approximately 67.9 per cent)	Mobile (CDMA) and Broadband
	Bharti Airtel	Bharti Group(45.7), Pastel Ltd (15.57 per cent), LIC India (4.3 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

- There are over 62,443 uncovered villages in India; these would be provided with village telephone facility with subsidy support from the government's Universal Service Obligation Fund (thereby increasing rural teledensity)
- By 2012, the rural subscriber base accounted for 39.2 per cent of 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 in 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

Telecommunications

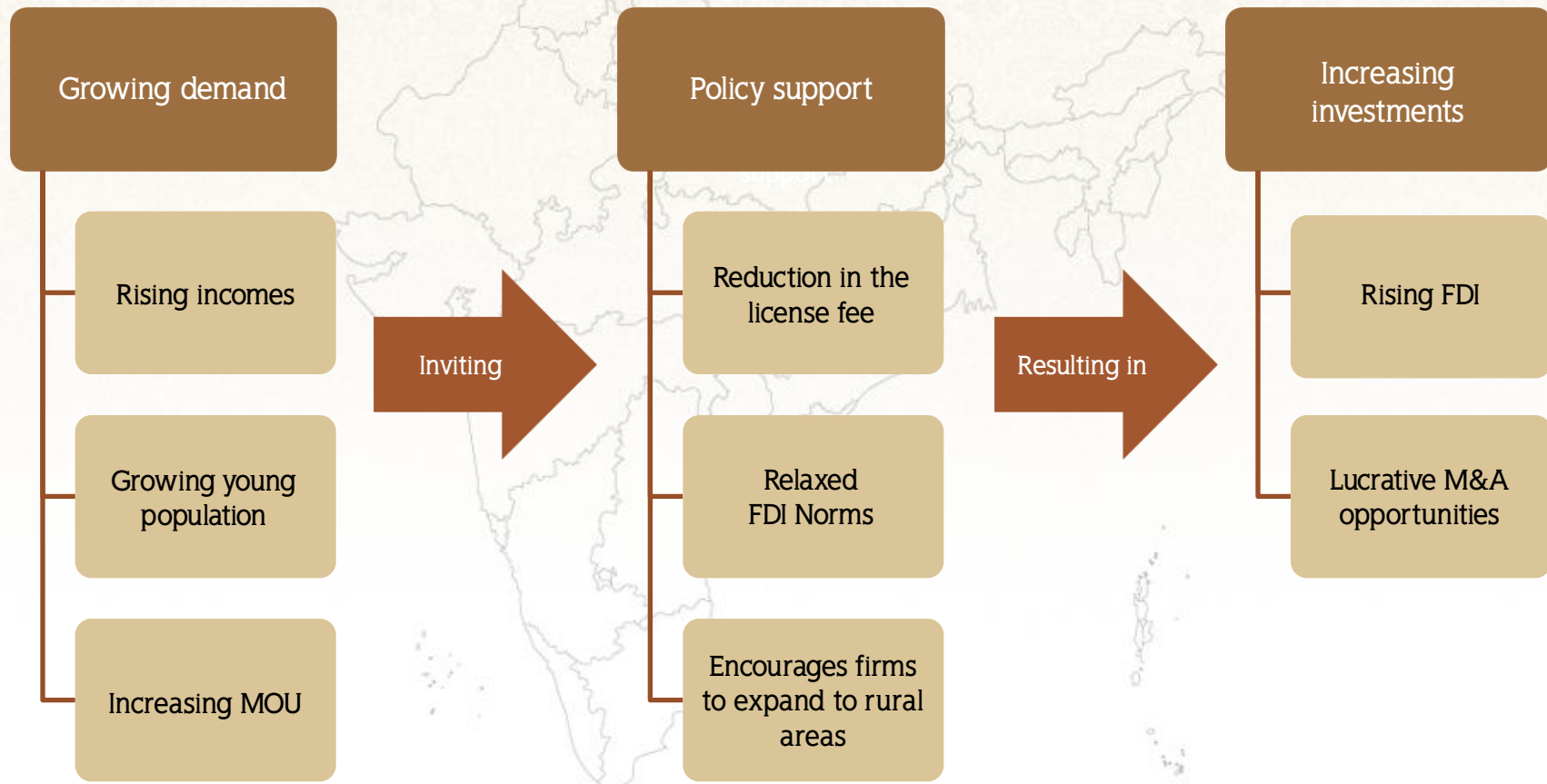
AUGUST
2012

Contents

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

For updated information, please visit www.ibef.org

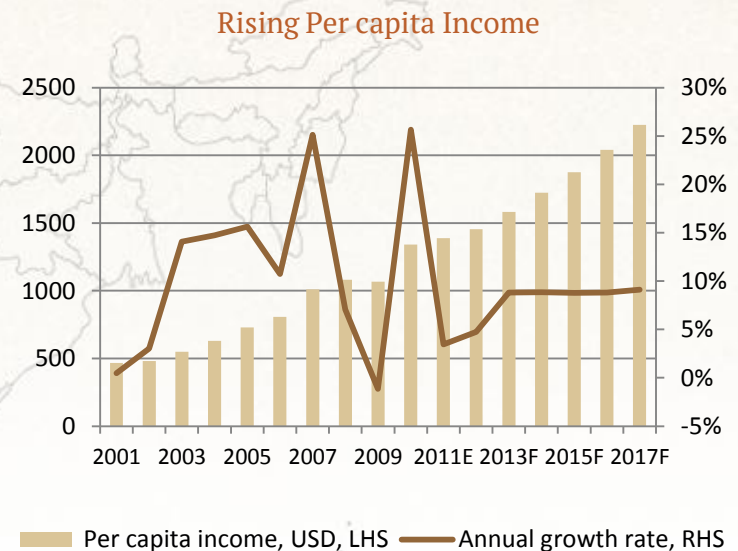
Sector benefits from rising incomes, growing young population



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

- Rising incomes has been a key determinant of demand growth in the telecommunication sector in India
- Per-capita income in the country rose at a CAGR of 11.5 per cent over 2001-11 (to USD1388.8)
- Strong income growth is set to continue in future as well; IMF forecasts point to a CAGR of 8.2 per cent over 2011-17 (to USD2225.9)

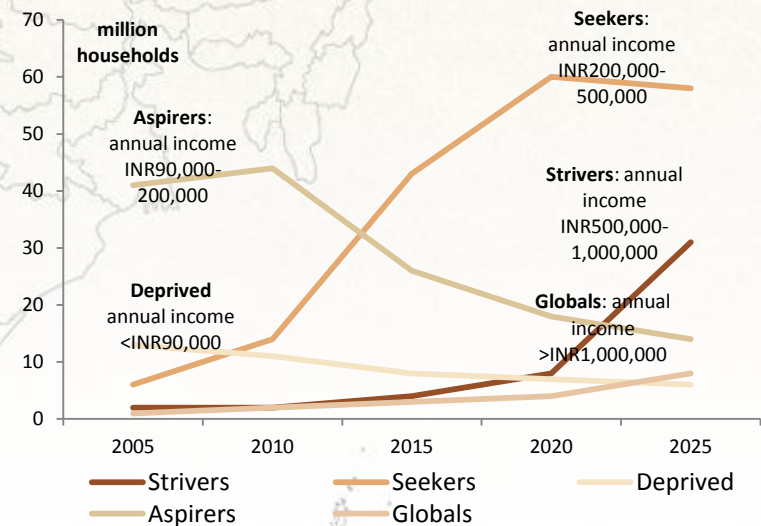


Source: IMF, Aranca Research

Rising incomes and growing rural market fuel form the key demand drivers

- The emergence of an affluent middle class is triggering demand for the mobile and internet segments
- A young and growing population is aiding this trend (especially demand for smart phones)

Indian residents shifting from low to high income groups

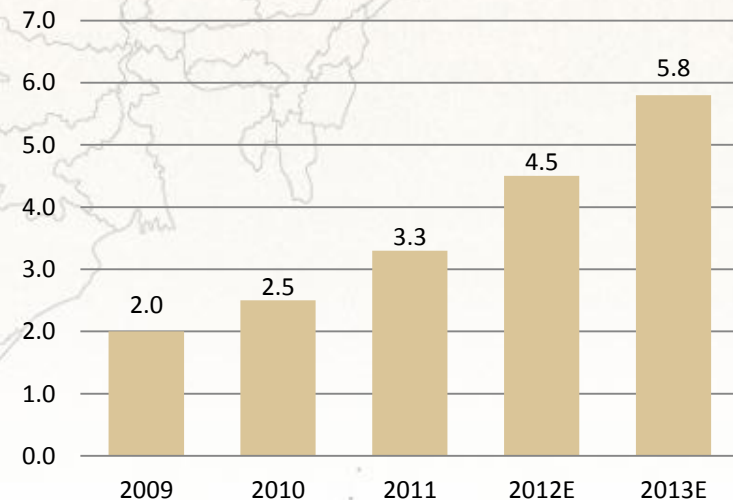


Source: McKinsey Quarterly, Aranca Research

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

- The MVAS industry is expected to reach USD5.8 billion by 2013 from USD3.3 billion in 2011
- The share of non-voice revenues, which currently stand at around 10 per cent of telecom operators' revenues, is estimated to rise to over 30 per cent in the next five to seven years

MVAS revenues in USD billion

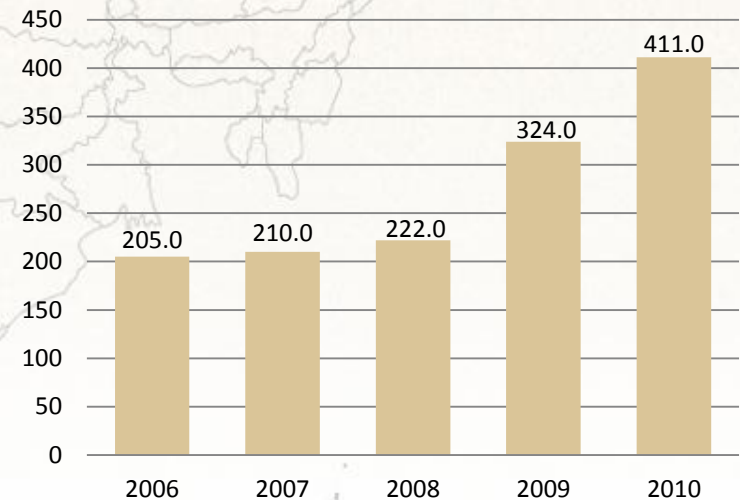


Source: Deloitte, Aranca Research
Notes: CAGR – Compound annual growth rate;
MVAS – Mobile Value-added services

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

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

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



Source: Telecom Regulatory Authority of India, Aranca Research
Notes: MOU – Minutes of use

India has a distinct competitive advantage over peers

- In terms of telecom ratings, India competes primarily with China, Indonesia and Philippines
- In terms of country risk, India has an edge over Indonesia, Philippines, Pakistan, Bangladesh, Laos, Cambodia, Thailand, Vietnam and Sri Lanka

	Telecom Industry Rewards	Country rewards	Telecom industry risks	Country risk	Telecom Rating
India	65.0	32.1	60	58.1	55.1
China	63.3	35.0	70	67.9	58
Indonesia	62.5	45.0	60	57.7	57.1
Philippines	52.5	46.7	60	51	52
Pakistan	57.5	42	60	38.4	51.2
Bangladesh	50	36.7	60	46.8	47.8
Laos	36	39	50	33.5	43.2
Cambodia	46.8	38.3	50	33.5	43.2
Thailand	50	32.7	60	57.7	48.4
Vietnam	42.5	33.3	60	46.9	43.5
Sri Lanka	36	30	50	49.7	38.7

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

Abolishment of roaming charges

- During May 2012, the Union Cabinet declared to abolish roaming charges and allow mobile number portability even outside designated circles (without having to pay extra charges)

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

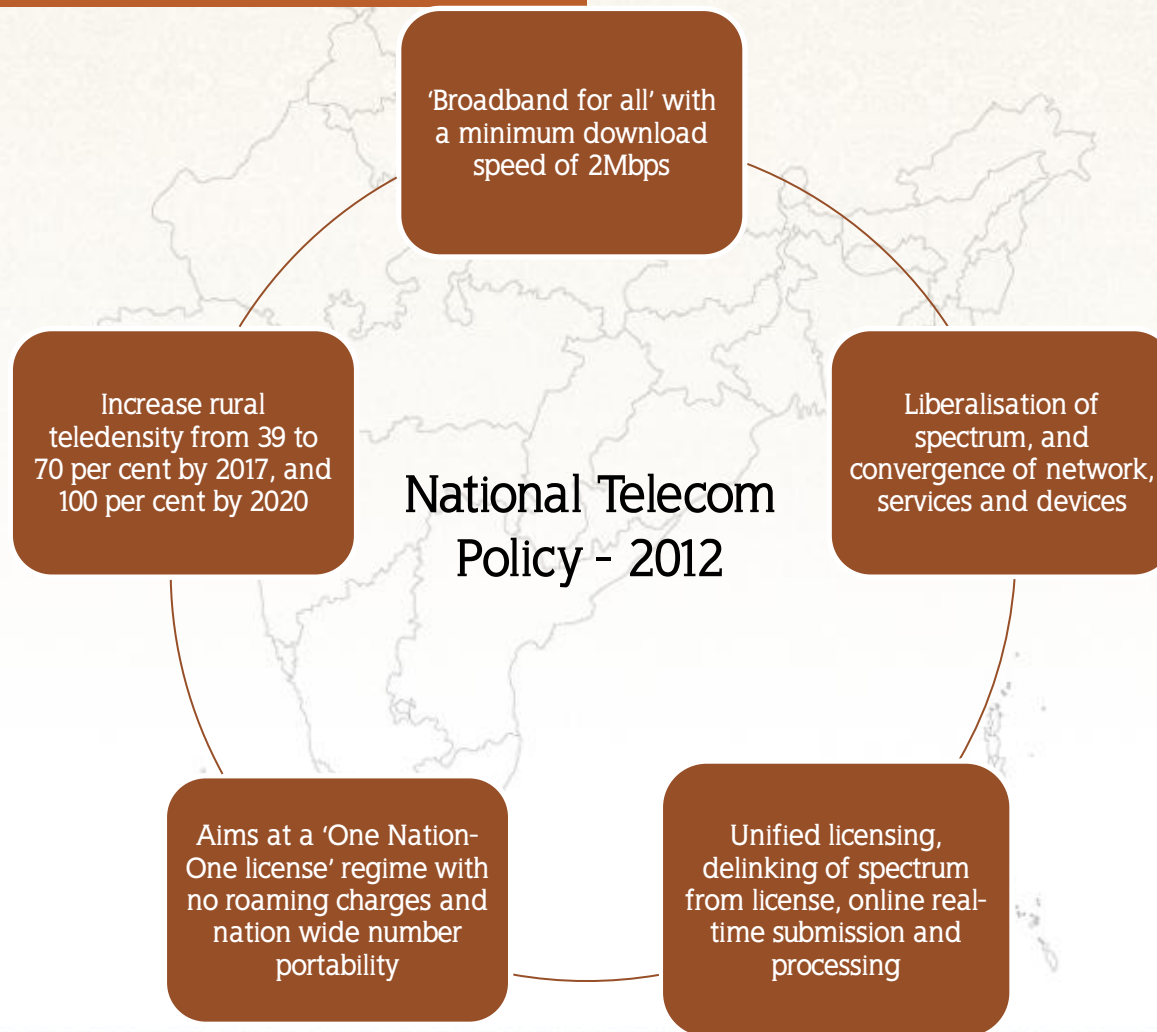
- The USOF is expected to extend financial support to operators providing service in rural areas and encourage active infrastructure sharing among the operators

Enhanced spectrum limit

- An increase in the prescribed limit on spectrum from 6.2MHz to 2x8 MHz (paired spectrum) for GSM technology in all areas other than Delhi and Mumbai where it will be 2x10MHz (paired spectrum)
- Telecom players can however obtain additional frequency; there will be an auction of spectrum subject to the limits prescribed for merger of licenses

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

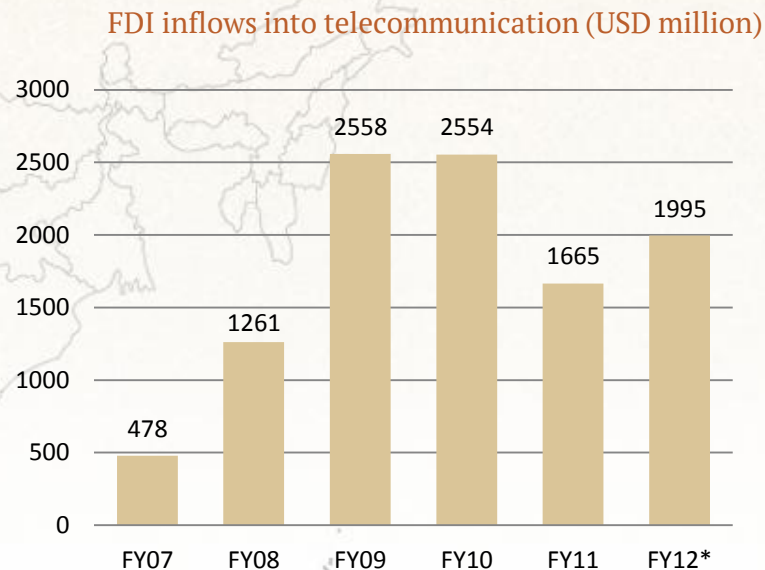
National Telecom Policy - 2012



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

- Cumulative FDI inflows into the telecom sector over April 2000 – Feb 2012 amounted to USD12.6 billion
- During this period, FDI into the sector accounted for an 8 per cent share of total FDI inflows into the country

Notes: FDI – Foreign direct investment



Source: Department of Industrial Policy & Promotion,
Aranca Research

Note: FY12* - Figures are from April 2011 to February 2012

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)

Merger and Acquisition deals (2010 to 2012)

Target	Acquirer	Acquisition price (USD million)	Division acquired
Qualcomm India Pvt Ltd	Bharti Airtel Ltd (2012)	165	Broadband wireless access
Zain's African operations	Bharti Airtel Ltd (2010)	11	Entire business
Radiacion	Kavveri Telecom Products Ltd (2011)	27.5	Telecom unit
Kavveri Telecom Products Ltd	Investor Group (2010)	9.9	-
Tata AutoComp Mobility	Trimble Navigation Ltd (2010)	5.1	-
Eduexel Infotainment Ltd	Discovery Infoways Ltd (2010)	0.9	-

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

Telecommunications

AUGUST
2012

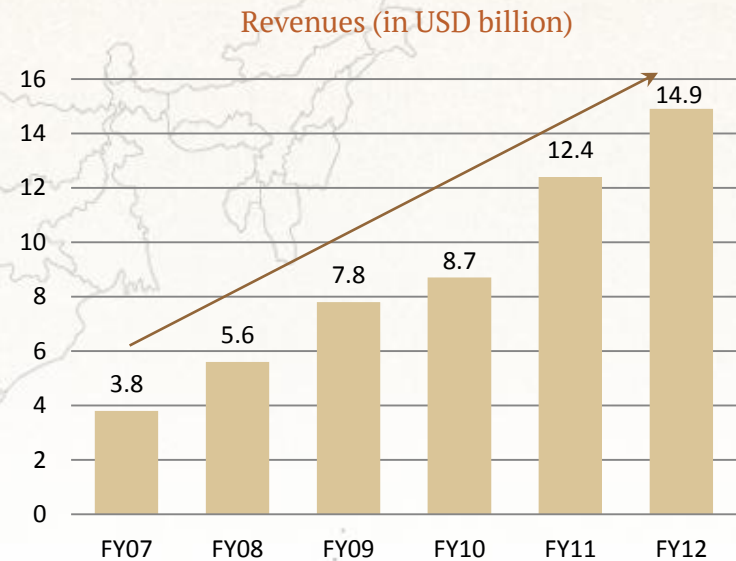
Contents

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

For updated information, please visit www.ibef.org

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
- Bharti's revenues increased from USD3.8 billion in FY07 to USD14.9 billion in FY12, a CAGR of 31.4 per cent

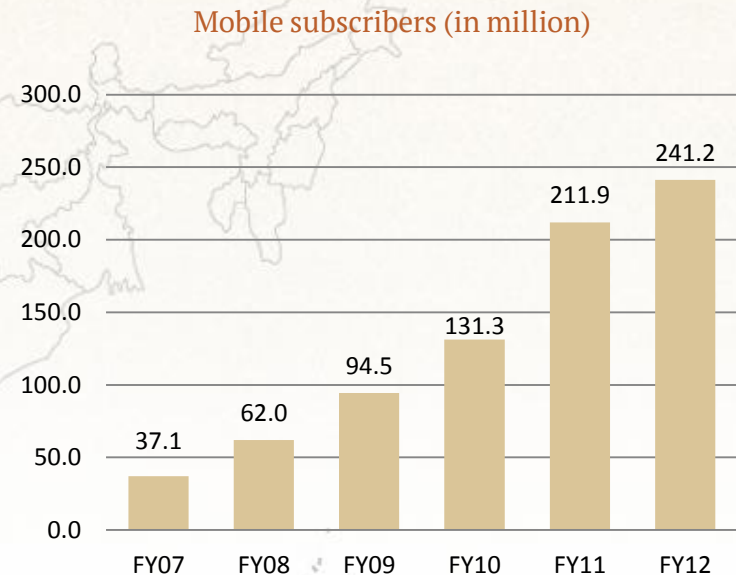


Source: Company Annual report, Aranca Research

- 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 a customer base of more than 0.3 billion (as of March 2012)

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

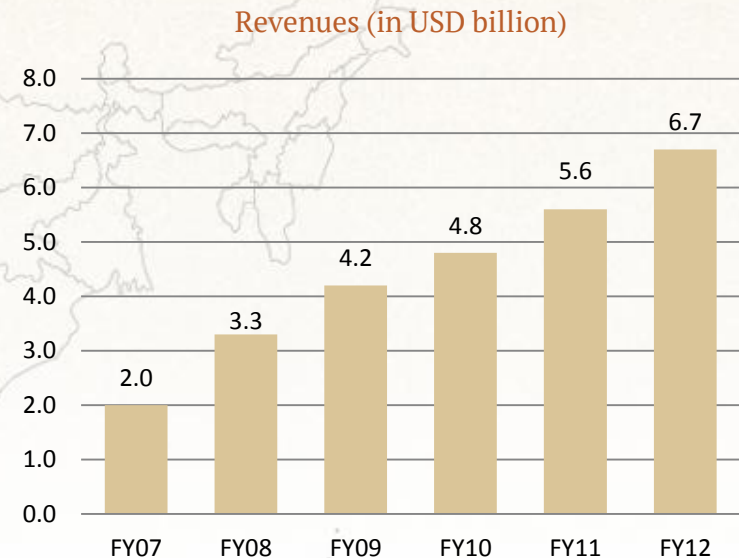
- Bharti has over 251.6 million subscribers, out of which mobile service subscription accounts for 95.8 per cent (FY12)
- The total subscriber base has grown at a CAGR of 45.2 per cent to 251.6 million from 37.1 million over FY07-12



Source: Company Annual Report 2012, Aranca Research

Vodafone :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
- Vodafone's revenues from India grew at a CAGR of 27.4 per cent over FY07-12; revenues stood at USD6.7 billion in FY12

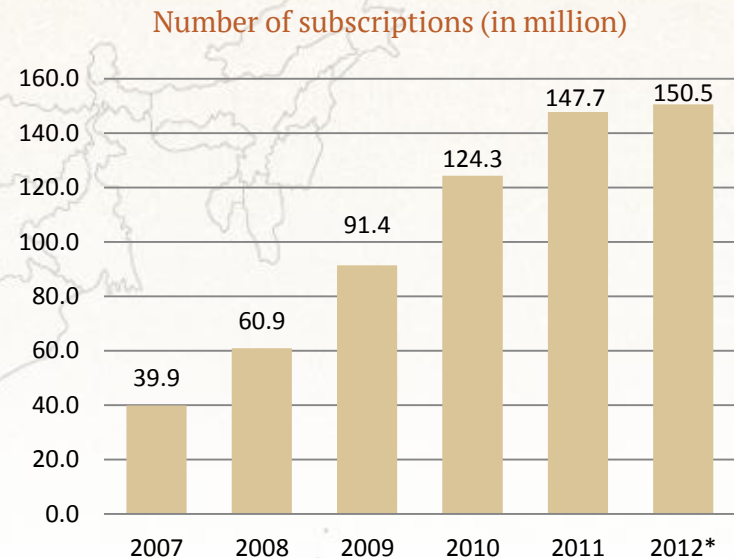


Source: Media news ,Aranca Research

- Set up in 1994, it is India's leading mobile operator with more than 150.5 million customers as of March 2012

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

- Vodafone's customer subscription grew at a CAGR of 38.7 per cent over 2007-11 (to 150.5 million)
- Vodafone Group plans to invest heavily in the establishment of a fibre-optic network in India
- Vodafone plans to invest USD400-500 million by 2015 to purchase 3G equipment



Source: BMI Report, Aranca Research
Note: 2012*- figures are as of February 2012

Telecommunications

AUGUST
2012

Contents

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

For updated information, please visit www.ibef.org

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)

Untapped rural markets

- The rural teledensity is expected to reach 70 percent by 2017 from the current 39.2 per cent
- Rural telecom users are set to account for over 60 per cent of the handsets market (by volume) by 2012

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

Source: Press information bureau, Government of India ,Aranca Research

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 and Cloud computing

- The Indian Mobile Value-Added Services (MVAS) industry is expected to reach USD5.8 billion by 2013, from USD2.0 billion in 2009
- The Indian cloud computing market is expected to grow at a CAGR of 76 per cent over the period till 2012 (to USD15-18 billion)

Telecom equipment market

- The production of electronic and related equipment touched USD19.8 billion in FY12
- It is anticipated to reach USD52.0 billion by 2020
- NTP 2012 is likely to fuel further growth with its 'Broad for all' schemes and policies to increase rural penetration

Source: Press information bureau ,Government of India ,Aranca Research
Notes: VAS: Value-added services, NTP- National Telecom Policy

Telecommunications

AUGUST
2012

Contents

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

For updated information, please visit www.ibef.org

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

Disclaimer

India Brand Equity Foundation (IBEF) engaged Aranca to prepare this presentation and the same has been prepared by Aranca in consultation with IBEF.

All rights reserved. All copyright in this presentation and related works is solely and exclusively owned by IBEF. The same may not be reproduced, wholly or in part in any material form (including photocopying or storing it in any medium by electronic means and whether or not transiently or incidentally to some other use of this presentation), modified or in any manner communicated to any third party except with the written approval of IBEF.

This presentation is for information purposes only. While due care has been taken during the compilation of this

presentation to ensure that the information is accurate to the best of Aranca and IBEF's knowledge and belief, the content is not to be construed in any manner whatsoever as a substitute for professional advice.

Aranca and IBEF neither recommend nor endorse any specific products or services that may have been mentioned in this presentation and nor do they assume any liability or responsibility for the outcome of decisions taken as a result of any reliance placed on this presentation.

Neither Aranca nor IBEF shall be liable for any direct or indirect damages that may arise due to any act or omission on the part of the user due to any reliance placed or guidance taken from any portion of this presentation.