



## Expert Speak

We recently hosted a conference call with COAI and met TRAI, DoT, and wireless operators to assess the current regulatory scenario and get an update on major issues like (1) 2G spectrum pricing/allocation, (2) proposed spectrum re-farming, (3) mobile number portability (MNP) implementation, (4) M&A policy, and (5) other issues related to equipment import, radiation levels, subscriber verification, "Do Not Call" registry, etc. Divergence of views between incumbent operators and regulator/government remains substantial on key issues of 2G spectrum pricing and re-farming. We expect TRAI to issue revised recommendations on 2G spectrum within the current calendar, post which DoT is likely to take a view on these. However, wireless operators believe that the 2G spectrum pricing/allocation issue is being directly dealt by the Prime Minister's Office (PMO) and TRAI/DoT views would have a limited impact on final policy.

**2G spectrum pricing and spectrum re-farming:** TRAI continues to believe that 2G spectrum allocated beyond the contractual obligation of 6.2MHz should be priced at par with 3G spectrum. The operators believe that such pricing would be inappropriate given higher efficiency of 3G technology and relatively low quantum of 2G spectrum allocated in India. On spectrum re-farming, both TRAI and DoT are of the view that re-farming is required to keep pace with technological changes and 900MHz spectrum was allocated for 20 years, which is a long timeframe for operators to recover their investments. Operators believe that there could be significant disruption in services if 900MHz spectrum is required to be replaced by 1800MHz and there is no international precedence of such an exercise.

**Mobile number portability (MNP) implementation:** MNP testing has commenced on 25 September 2010; final implementation would yet again miss the deadline (31 October 2010) but is likely by calendar end. MNP will largely impact post-paid subscriber base (~4% of subscribers, ~15% of revenue) but operators do not expect major market disruption.

**M&A policy:** The regulator does not believe there is a need for proactive policy formulation to facilitate industry consolidation. We do not expect any major initiative from TRAI on M&A.

**Government focus on tightened implementation of regulations, as penetration and affordability are favorable:** As the sector has gone past the hyper-growth phase, the government is looking to tighten implementation of regulations so as to ensure long-term sustainability. The recent issues with tightening subscriber verification criteria, equipment imports, radiation, and tower erection, "Do Not Call" registry are all aimed at ensuring that the industry focus increases on these aspects.

**Our view:** While there is enhanced clarity on several issues, there is limited visibility on 2G spectrum pricing and re-farming. Post our interactions we would be surprised if TRAI reconsiders its opinion in the revised recommendations in a significant way. However, implementation of these recommendations would be challenging. Given that re-farming, if implemented, would only be applicable from 2014, we would not be unduly worried on this subject - there is sufficient time for legal action as well as reconciliation on this issue. We retain our positive stance on the sector as (1) revenue growth is bouncing back, (2) industry fragmentation has had limited impact on revenue market shares of incumbents, and (3) valuations remain attractive.

### Comparative Valuations (FY12)

Company	Reco	CMP (Rs)	Mcap (US\$b)	EV (US\$b)	EPS (Rs)	P/E (x)	EV/ EBITDA (x)	EV/ Sales (x)	ROE (%)	ROIC (%)
Bharti *	Buy	354	29.6	42.7	22.7	15.6	7.3	2.8	15.4	10.5
Idea	Buy	73	5.3	8.0	2.7	27.3	7.2	1.9	7.1	6.9
RCom	Buy	178	8.1	14.9	7.7	23.2	8.1	2.7	3.9	4.0

\* Proportionate EV/EBITDA and EV/sales

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2G spectrum pricing/ allocation issue being directly dealt by Prime Minister's Office (PMO); TRAI/DoT views to have a limited impact on final policy

Proposed re-farming of 900MHz could be a cumbersome exercise; there is no global precedence

TRAI re-affirms the justification for linking 2G spectrum pricing to 3G auction

### Key takeaways from conference call with COAI

- 2G spectrum pricing/allocation issue being directly dealt by Prime Minister's Office (PMO); TRAI/DoT views to have a limited impact on final policy
- Mobile number portability (MNP) testing commenced on 25 September 2010; final implementation to miss deadline of 31 October 2010, but likely by calendar-end
- Interim provision with respect to equipment import already in place, resulting in almost normalized situation in capex deployment; COAI expects all issues to be resolved by the end of November 2010
- Many state governments have tightened their implementation of subscriber verification norms, resulting in some churn-out of customers, especially in sensitive areas such as J&K and the North East; while this might affect subscriber net additions on a monthly basis, overall impact on industry revenue is likely to be minimal
- Consultation process by TRAI currently underway to address the issue of unsolicited calls/SMS; Regulator is also considering changing the mechanism from 'Do Not Call' registry to 'Do Call' registry, which could significantly impact telemarketing
- DOT as well as local government authorities more vigilant on radiation levels and alleged violation by wireless operators; the authorities have already instructed self-certification by operators regarding safety levels of radiation from cell phone towers
- COAI believes that proposed re-farming of 900MHz could be a cumbersome exercise, given technological issues regarding network topology and coverage; there is no global precedence of such a comprehensive spectrum swapping
- Revenue growth potential from 3G services is contingent on pricing discipline in data offerings; if there is significant price war in data similar to voice, and then data opportunity would become much smaller than current potential

### Key takeaways from meeting with TRAI

- Focus on increasing broadband penetration, which remains less than 1% v/s wireless penetration of ~55%
- While the regulator has no view on the best technology suitable for increasing broadband penetration, TRAI may look at providing incentives for broadband connectivity in rural areas
- TRAI re-affirms the justification for linking 2G spectrum pricing to 3G auction, citing similar propagation characteristics of 1800MHz and 2100MHz frequency bands, while 900MHz spectrum is proposed to be priced at a premium; final recommendations on 2G spectrum pricing are still awaited and likely to be issued within this calendar
- Dramatic change in M&A rules unlikely, as regulator does not want to directly interfere with the natural consolidation process; however, some incentives for M&A could still be considered

The government believes that key targets with respect to overall wireless penetration and affordability have been largely met; policy focus shifting towards rural wireless, broadband penetration and better regulation

### **Key takeaways from meeting with Telecom Commission, DoT**

- DoT is awaiting the revised TRAI recommendations on spectrum management and licensing framework before taking a view on the contentious issue of 2G spectrum pricing.
- The government believes that key targets with respect to overall wireless penetration and affordability have been largely met. Hence, the policy focus is shifting towards rural wireless and broadband penetration.
- The government is looking to tighten regulations related to subscriber verification, radiation norms, tower erection, spectrum pricing, etc so as to ensure sustainable long-term growth.
- Final policy decision on 2G pricing and licensing framework could get delayed further given the significant policy implications. However, the decision would be made keeping in mind medium-term sustainability, as the government does not want to be viewed as changing its policy stance within short intervals.

## Appendix I

## Overview of TRAI Recommendations on Spectrum Management and Licensing Framework

Recommendations	Likely Impact
One-time payout for spectrum allocation beyond 6.2MHz for GSM operators	One-time liability of ~Rs45b for Bharti and ~Rs14b for Idea
Hike in annual spectrum charges (linked to revenues)	EBITDA margin impact of 100-200bp for Bharti/Idea and less than 50bp for RCom
Significant payouts for spectrum (linked to 3G auction winning price) and return of spectrum allocated in 800MHz (CDMA) and 900MHz (GSM) on license renewal	Payout of ~Rs151b for Bharti and ~Rs121b for Idea on license renewal for a period of ten years
Phased decline in license fee from 6-10% currently (circle-wise) to a uniform 6% by FY14 (charged as a percentage of AGR)	Margin accretion of 100-200bp for Bharti/Idea/RCom by FY14
Tightening of rollout obligations	Increase in capex outlay of new entrants
Linking of spectrum allocation beyond start-up spectrum to rollout obligations (v/s subscriber base currently)	More investment in rural coverage required to get incremental spectrum allocation
De-linking of future licenses with spectrum	Further interest by in new pan-India licence unlikely

Source: TRAI/MOSL

## Spectrum Allocation for Operators (MHz)

Circle	GSM												CDMA					
	Bharti	Idea	Spice	Vodafone	RCom	TataTele	Aircel	Loop	Uninor	Videocon	Etisalat	SMTNL/Tel BSNL	RCom	TataTele	Sis tema	MTNL/BSNL		
Delhi	10	8	-	10	4.4	-	4.4	-	-	-	4.4	-	12.4	5	5	2.5	2.5	
Mumbai	9.2	4.4	-	10	4.4	4.4	4.4	10	4.4	4.4	4.4	-	12.4	5	5	2.5	2.5	
Kolkata	8	4.4	-	9.8	6.2	4.4	4.4	4.4	4.4	4.4	-	-	10	5	3.75	2.5	2.5	
Maharashtra	8.2	9.8*	4.4	6.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	-	10	5	5	2.5	2.5	
Gujarat	6.2	6.2	-	9.8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	-	7.4	3.75	3.75	2.5	2.5	
A.P.	10	8*	4.4	6.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	-	10	5	3.75	2.5	2.5	
Karnataka	10	4.4	6.2*	8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	-	10	5	3.75	2.5	2.5	
T.N. (incl. Chennai)	9.2	4.4	-	8	4.4	4.4	9.8	4.4	4.4	4.4	4.4	-	10	5	2.5	2.5	2.5	
Kerala	6.2	8	-	6.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	-	10	5	3.75	2.5	3.75	
Punjab	7.8	4.4	7.8*	6.2	4.4	4.4	4.4	4.4	4.4	4.4	-	4.4	-	6.2	3.75	3.75	2.5	2.5
Haryana	6.2	6.2*	4.4	6.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	-	10	3.75	3.75	2.5	2.5	
U.P.(W)	6.2	8	-	6.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	-	10	5	3.75	2.5	2.5	
U.P.(E)	7.2	6.2	-	8.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	-	10	5	3.75	2.5	2.5	
Rajasthan	8.2	6.2	-	6.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	-	8	3.75	3.75	5	2.5	
M.P.	8	8	-	4.4	6.2	4.4	4.4	4.4	4.4	4.4	4.4	-	10	5	2.5	2.5	2.5	
W.B. & A&N	6.2	4.4	-	6.2	6.2	4.4	4.4	4.4	4.4	4.4	-	-	8	3.75	2.5	2.5	2.5	
H.P.	6.2	4.4	-	4.4	6.2	4.4	4.4	4.4	4.4	4.4	-	4.4	10	2.5	2.5	2.5	2.5	
Bihar	9.2	4.4	-	4.4	8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	10	5	3.75	2.5	2.5	
Orissa	8	4.4	-	4.4	6.2	4.4	4.4	4.4	4.4	4.4	-	4.4	10	3.75	2.5	2.5	2.5	
Assam	6.2	4.4	-	4.4	6.2	-	6.2	4.4	4.4	4.4	-	4.4	10	2.5	2.5	2.5	2.5	
N.E.	6.2	4.4	-	4.4	6.2	-	4.4	4.4	4.4	4.4	-	4.4	10	2.5	2.5	2.5	2.5	
Jammu & Kashmir	6.2	4.4	-	4.4	4.4	-	4.4	4.4	4.4	4.4	-	4.4	8	2.5	2.5	2.5	2.5	

\* Operational spectrum for Idea Cellular post consolidation with Spice

Source: TRAI/MOSL

## Operator-wise Sepectrum Allocation in 900MHz Frequency Band (MHz)

Circle	Bharti	Idea/ Spice	Voda fone	RCom	Aircel	Loop	MTNL/ BSNL
Delhi	8.0		8.0				6.2
Mumbai			8.0			8.0	6.2
Kolkata	6.2		7.8				6.2
Maharashtra		7.8	6.2				6.2
Gujarat		6.2	7.8				6.2
A.P.	7.8	6.2					6.2
Karnataka	7.8	6.2					6.2
T.N. (incl. Chennai)	6.2		7.2		7.8		6.2
Kerala		6.2	6.2				6.2
Punjab	7.8	7.8					6.2
Haryana		6.2	6.2				6.2
U.P.(W)	6.2	6.2					6.2
U.P.(E)	6.2		6.2				6.2
Rajasthan	6.2	6.2					6.2
M.P.		6.2		6.2			6.2
W.B. & A&N	4.4		4.4	4.4			6.2
H.P.	6.2			6.2			6.2
Bihar	6.2			6.2			6.2
Orissa	6.2			6.2			6.2
Assam	4.4			6.2	4.4		6.2
N.E.	4.4			4.4	4.4		6.2
Jammu & Kashmir	6.2				4.4		8.0
<b>Aggregate</b>	<b>100.4</b>	<b>65.2</b>	<b>68.0</b>	<b>39.8</b>	<b>21.0</b>	<b>8.0</b>	<b>138.2</b>

Source: TRAI/MOSL

Four major operators- BSNL/MTNL, Bharti, Vodafone, Idea-account for 84% of the spectrum allocated in the 900MHz band

## Current Spectrum Charges

GSM		CDMA	
Amount of Spectrum (MHz)	Charge as % of AGR	Amount of Spectrum (MHz)	Charge as % of AGR
4.4	2	2.5	2
6.2	3	3.75	3
8	4	5	3
10	4	6.25	-
12.5	5	8.75	-
15	6	10	-

Regulatory uncertainty on spectrum charges remains; wireless operators and the government currently locked in a legal battle

## Proposed Spectrum Charges

GSM		CDMA	
Amount of Spectrum (MHz)	Charge as % of AGR	Amount of Spectrum (MHz)	Charge as % of AGR
4.4	2.2	2.5	1.25
6.2	3.1	3.75	1.9
8	4.9	5	2.5
10	6.9	6.25	3.75
12.4	9.3	8.75	6.25
14.4	10	10	7

Source: TRAI/MOSL

## Revised Spectrum Charges Post 3G Spectrum Allotment w.e.f 1 September 2010

GSM		CDMA	
Amount of Spectrum (MHz)	Charge as % of AGR	Amount of Spectrum (MHz)	Charge as % of AGR
Upto 4.4	3	Upto 5	3
Upto 6.2	4	Upto 6.25	4
Upto 8.2	5	Upto 7.5	5
Upto 10.2	6	Upto 10	6
Upto 12.2	7	Upto 12.5	7
Upto 15.2	8	Upto 15	8

Source: DOT/MOSL

Spectrum fees payable will increase for the 3G circles

## Current License Fees (% of AGR)

Metro	10
A circle	10
B circle	8
C circle	6

Source: TRAI/MOSL

## Proposed Licence Fees (% of AGR)

	FY11	FY12	FY13	FY14
UASL/CMTS in Metro	10	9	8	6
UASL/CMTS in category A	9	8	7	6
UASL/CMTS in category B	7	6	6	6
UASL/CMTS in category C	6	6	6	6
ISP	4	5	6	6
IP-I	4	5	6	6

Source: TRAI/MOSL

Proposed lower licence fees the only relief for operators in the May 2010 TRAI recommendations

## Current Rollout Obligations

Time	% of District Headquarters
1 year	10
3 years	50

Source: TRAI/MOSL

## Proposed Rollout Obligations

Time	Habitation		
	> 10,000	5,000 - 10,000	2,000 - 5,000
2 years	100%	50%	-
3 years	100%	100%	50%
4 years	100%	100%	100%

Source: TRAI/MOSL

## Spectrum Allocation Criteria Based on Rollout Obligations

	GSM/CDMA spectrum allocation criteria (MHz)			
	4.4/2.5	6.2/3.75	8.0/5.0	10.0/6.25
Delhi and Mumbai	Start-up	90% street coverage	5% market share	10% market share
Other Circles	Start-up	50% of district headquarters	100% coverage of habitation > 10,000; 50% for habitation 5,000-10,000	NA

Source: TRAI/MOSL

## Appendix-II

### About COAI

- The Cellular Operators Association of India (COAI) is a registered, non-profit, non-government society set up in 1995 to represent the Indian GSM industry.
- GSM operators constitute 'core' members whereas 'associate' members include companies like Ericsson Communications Ltd, GTL Infrastructure Ltd, Indus Tower Ltd, Nokia Siemens Networks, Quippo Telecom Infrastructure Ltd, etc.
- Its role includes addressing problems of cellular operators relating to operational, regulatory, financial, or licensing through interactions with the Ministry of Communications & IT, Ministry of Finance, Ministry of Commerce, Department of Telecommunications, Telecom Regulatory Authority of India, Financial Institutions, etc.
- Other functions include assisting relevant authorities by providing them information about the industry to help them formulate suitable policies for the industry's growth.
- COAI collaborates with other industry associations such as CII, FICCI, AUSPI, etc and various international organizations such as ITU, GSMA, UMTS, etc.

### About TRAI

- TRAI (Telecom Regulatory Authority of India) was reconstituted through the Telecom Regulatory Authority of India (Amendment) Act, 2000.
- One of the main objectives of TRAI is to provide a fair and transparent policy environment, which promotes a level playing field and facilitates fair competition.
- TRAI has issued from time to time a large number of regulations, orders and directives to deal with issues coming before it and provided the required direction to the evolution of Indian telecom market from a government-owned monopoly to a multi-operator multi-service open competitive market.

### About Telecom Commission

- The Telecom Commission was set up with administrative and financial powers to deal with various aspects of telecommunications by the Government of India.
- However, with the corporatization of two service providing departments under Telecom Commission viz. Department of Telecom Services (DTS) and Department of Telecom Operations (DTO) into a public sector company "Bharat Sanchar Nigam Limited" (BSNL) w.e.f. 01.10.2000, the role of Telecom Commission has changed.
- The Telecom Commission is currently responsible for policy formulation, licensing, wireless spectrum management, administrative monitoring of PSUs, research and development, and standardization/validation of equipment, etc.
- The Commission consists of a Chairman and four members (Finance, Production, Services and Technology).



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