

# GROUND ZERO

A PhillipCapital India Publication

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pg 37. Indian Economy - Trend indicators

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A little too early  
A little too late



VOLUME1. APRIL 1<sup>ST</sup>-15<sup>TH</sup> 2014

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Vineet Bhatnagar- Managing Director and CEO

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# LETTER FROM THE MANAGING DIRECTOR

Research and information flow in the financial services industry have changed enormously in the last 15 years and some of the changes have been led by technological advancements such as internet search engines, advent of databases, financial software, and now, even social media is having its fair share of impact. Changes in regulations and the evolution of institutional investors have forged other changes.

However, in this age of superfluous information exchange, reliability of information often takes a back seat as basics are overlooked. Nowadays, a lot of investors' time is consumed in filtering information — and this may lead to de-coupling from ground realities. To this end, I am extremely pleased to introduce our latest publication "Ground Zero" a new and refreshing bi-monthly magazine with the sole focus of providing first-person-view of the happenings on-the-ground backed by in-depth research on subjects outside the realm of routine databases, excel models, and internet search engines.

Our cover story on the soon-to-be-launched services of Reliance Jio, penned by telecom analysts Naveen Kulkarni and Vivekanand Subbaraman, delves into the company's on-the ground deployments, salient features of its network, and the psyche of Reliance Group. The Indian telecom sector has created immense wealth for investors but it is now reeling under pressure because of hyper-competitive activity and prohibitive spectrum pricing. Reliance Jio's launch will have an incisive influence on the quality of services, competitive landscape, and in turn on the profitability of this sector. Reliance Jio could actually be a blessing in disguise, as it could consolidate the market to achieve profitability. Until then, the Indian telecom subscribers could look forward to another party in the offing.

We sincerely hope that the readers will find Ground Zero relevant and of continued value.

Best wishes,

Vineet Bhatnagar

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An evening with Jio: Picture of a live Ground Based Mast at Kankaria lake, Ahmedabad'

# Reliance Jio, a little too **early** a little too **late**

“Once the network is ready, the market will witness nothing short of a data revolution,” says a site engineer (not wishing to be named) working with Reliance Jio Infocomm (Jio). The plans are grand and the spending seems to be even grander. With an upfront investment of US\$ 8bn, Jio will take on the established Indian telecom veterans — Bharti Airtel, Idea Cellular, and Vodafone.

**BY NAVEEN KULKARNI & VIVEKANAND SUBBARAMAN**

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# Deployment on fast track now, but still some way to go..... Some surprises in store!

Jio recently soft-launched its WiFi network in eight Ahmedabad areas. The quality of the network was not inspiring, probably because it is still in trial — download and upload speeds matched currently offered 3G speeds. While Jio has launched its WiFi service, its primary focus is its LTE network (Long Term Evolution or 4G) on its 2,300-MHz band. Average data speed of the LTE network tested in the small town of Jamnagar is ~45Mbps which is far superior compared to the 3G network of Vodafone that ranges from 8-10Mbps.

## India: Clear need for speed

In India, where the market is intensively competitive (mainly 2G and 3G), 4G will represent a significant leap for users in terms of data speeds and quality of service. Various sources point at an increase in hunger for faster data speeds among India's 3G subscriber base — Nokia says 3G data usage in India rose to 21 petabytes at the end of December 2013 from 8 petabytes at the end of December 2012; it basically doubled in 2013 and has beat the world growth average. Nokia's

study showed that customers in India consumed an average of 532MB of 3G data every month, up 23% from 434MB in 2012. There is a clear and present need for faster data connectivity among India's mobile users.

## Quality seems to be the key focus; city roll-outs could be faster than metros

Jio's network coverage in phase-1 will focus on providing high-quality data services to major towns. According to some internal targets, its Mumbai and Delhi launches are likely by September 2014 and many tier-1 cities like Ahmedabad, Bangalore, Pune should be online on Dhirubhai Ambani's birthday on 28th December 2014. Quality seems to be a clear focus. "Delays are fine, but there should be no compromise on the quality of deployments. No cutting corners. This is a strong diktat from Mukesh Ambani himself," says a site engineer working with Jio. It is quite possible that Jio's launches in tier-1, tier-2 cities could be faster than its metro launches as it has been able to lay optic fiber cables much faster in these cities than in metros



Source: PhillipCapital India Research

Jio's speed in Jamnagar compares well with 4G data speeds in developed markets like the US or the UK – speeds of providers such as AT&T in the US and EE in the UK are also in a similar range of 35-50Mbps.

***“For the whole of Gujarat, Jio plans to rollout ~3,600 eNodeBs in phase-1, of which it has already setup ~1,200”***

### **Jio’s eNodeB rollout in Gujarat looks impressive**

Jio has already rolled out ~350 eNodeB in Ahmedabad (4G base-transceiver station (BTS) is also called Evolved Node B — basically, it is the hardware, which when connected to the mobile phone network, communicates directly with mobile handsets like a base-transceiver station in the GSM networks) and its phase-1 coverage plans entail a roll out of 600-700 4G eNodeBs there. For the whole of Gujarat, it plans to rollout ~3,600 eNodeBs in phase-1, of which it has already set up ~1,200. Compared with Vodafone’s 10,000 BTS on its 900-MHz band, this may sound paltry, but considering the data-handling capacity of eNodeBs and this being only phase-1, Jio’s roll out plan is quite comprehensive.

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## **A Mega data factory in the making**

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Up until now, Jio has rolled out its network on the 2,300-MHz; it is now firming up plans of a rollout on its recently won 1,800-MHz spectrum. Its network is very different from its GSM competitors, but similar to RCOM’s CDMA network from an architectural standpoint.

### **The three most striking features of Jio’s network roll out are:**

- It has used Ground-Based Masts or GBMs, which are just so much cheaper to rollout and operate. Incumbents have Ground-Based Towers (GBT), which are more expensive but were the only means to deploy active network ten years back. However GBTs provide multiple-tenancy-based rental incomes
- Extensive Intra-city optic fiber connectivity of the sites
- Samsung as network vendor



Ground based tower illustration... and live 4G GBM site supporting the service

### **Ground Based Mast — A lean and mean structure**

While incumbents have rolled out their wireless networks on GBTs, Jio has chosen GBMs, which offer significant cost efficiencies vs. GBTs but do not provide future rental revenue streams based on increase in tenancy. GBMs, which support only a single tenant, entail lower initial capex, have lower operating expenses, do not need as much space, and can be constructed faster than GBTs.

Source: Company, PhillipCapital India Research

## Differences between GBM & GBT

PASSIVE INFRASTRUCTURE	GBT	GBM (R-JIO)
Tenancy	Upto 4x	1
Height of tower	40-60mtrs	25mtrs
Capex	Rs 3-3.5mn	Rs 1mn
Area needed	upto 4000 sq. ft	20 sq. ft
Equipments	DG set, Battery-bank, equipment shelter with air conditioning	Battery, energy meter
Construction time-frame	45 days	10 days
Operating expenses (Rs/month)	Rs 22,000-25000	Rs 11,000-Rs 12,000
Battery type	Lead acid	Li-Ion

Jio's network operating cost is strikingly lower than the incumbents due to a combination of savings in the passive as well as the active network infrastructure. The highly energy-efficient light-weight eNodeBs will incur a cost of just Rs 18,000 to Rs 20,000 per-site-per-month.

ACTIVE INFRASTRUCTURE	2G/3G BTS	SAMSUNG E-NODE B
Power rating /BTS	1.6KW for outdoor BTS' & 5-6 KW for indoor BTS'	1 KW
Air conditioning	Required for indoor and legacy BTS	Not required
Energy cost Rs/month	17,000	7,000

## Incumbents' legacy infrastructure has ballooned their cost structure

The average operating costs of incumbents works to ~Rs 50,000 per-site-per-month, of which half would be site-operating costs (assuming the company owns and operates the site) and the other half are energy costs. Three factors drive high energy costs:

### 1. Air conditioning:

The legacy 2GBTS' or 'indoor BTS' function properly only at an ambient temperature of ~20°C. The power rating of a single indoor BTS site is 5-6KW (including air-conditioning). One BTS needs 1.8TR (Ton of Refrigeration) and this moves in multiples of 0.9TR for additional BTS'.

### 2. Electronics and Radio Access Network:

This includes the BTS' power consumption, antennae, amplifier and other related equipment. Active infrastructure power rating ranges from 1.5KW to 2.1KW depending on the size of the BTS. From 2008, the market saw an introduction of outdoor BTS', which can function at significantly higher ambient temperatures. The technology of an outdoor BTS is markedly different from an indoor BTS but the functionality is not different. The power rating for a single site outdoor BTS on an average is ~1.6KW

### 3. Diesel Generator set

Incumbents extensively use DG sets (Diesel Generator Set) in areas where power connectivity is weak. This is an expensive source of power as the energy cost works out to Rs 20/unit against an average prevailing electricity supply tariff of ~Rs 8/unit. Unlike incumbents, Jio doesn't use a DG set and relies solely on battery backup.

## Jio will set a new benchmark in network costing

Jio's GBM and LTE-based network costs are lower because the operating costs of its passive infrastructure and its energy expenses are significantly lower than incumbents'. To illustrate:

- The site operating costs of GBMs are ~2/5th of GBTs because of significantly lower rentals and maintenance. GBMs need only 20 square feet vs. 1,000-4,000 square feet for GBT. GBM site paraphernalia is very lean and only includes a battery bank (vs. GBT's air conditioning and shed) which translates to significantly lower maintenance costs.

- **Jio's energy costs will be significantly lower** because of the highly efficient eNodeBs, which have a power rating of ~1Kw and do not need a conditioned environment. All of Jio's eNodeBs are outdoor and do not have diesel generator backup (use lithium ion batteries with four-hour backup capacity). Jio's energy costs for its active infrastructure works out to ~Rs 7,000 per-site per-month, much lower than incumbents' costs for an outdoor BTS with DG backup at ~Rs 17,000.

Source: Company, PhillipCapital India Research



## Jio uses lithium Ion batteries vs. incumbent's lead acid

GBMs have provision for only one LTE eNodeB and one battery bank — Jio is using highly advanced Lithium Ion batteries while incumbents primarily use lead-acid battery banks as power back up. The lithium Ion battery bank provides a 4-hour backup, which should be largely sufficient in circles that have good energy supply (Gujarat, Mumbai, Delhi, Madhya Pradesh). However, on the downside, GBMs have no provision for diesel generators in the tower, and if the power supply is not restored in four hours, the site goes down.

## Jio will use incumbents' GBTs for enhancing its coverage

Jio has signed a >US\$ 2bn infrastructure sharing agreement with Reliance Communications to use the latter's (up to) 45,000 towers for its 4G rollout. It has also signed agreements with Bharti Infratel and Viom to use their GBTs to enhance its coverage and reach in areas where it may not be practically possible to own a site. These types of agreements will be critical in cities such as Mumbai, where space constraint is a significant hurdle in rolling out a network. On a pan-India average basis, the going rentals for GBTs are Rs35,000 per-month, per-location. However, under its agreement with RCOM, the rentals will work out (prima facie) cheaper – at Rs 18,000 per-month, per-location.

### Comparison of marginal cost for 3G & LTE

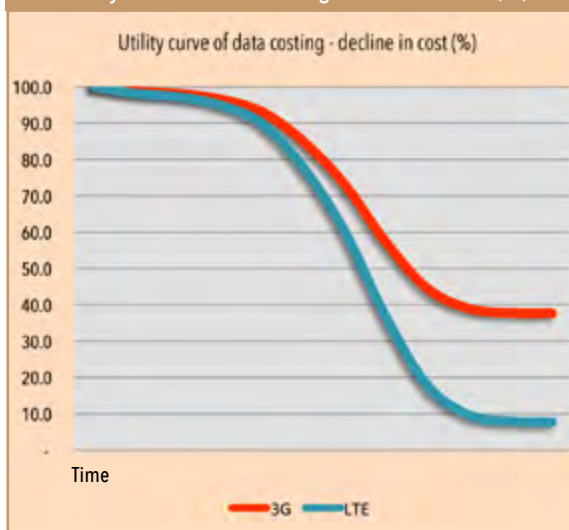
Illustrative computation of cost per GB	3G	LTE
Network Operating cost (Rs/month)	(incumbents)	(Jio)
Loading	23,000	18,000
Dedicated BTS'	40,000	18,000

#### COVERAGE FACTOR DURING INITIAL COVERAGE PHASE

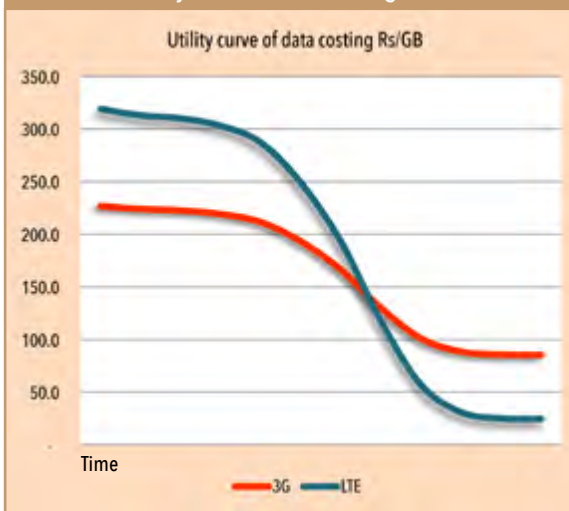
Coverage phase- 1 year	1.2	1.3
Capacity utilisation build-out phase	30%	10%
Capacity phase	1.0	1.0
Peak Speed (Mbps)	12	50
Carriers	3	3
Peak load QoS (Mbps)	2	5
No. of subscribers serviced peak load (Prob factor 0.1x)	216	360
Peak hour monthly download (GB)	475	1,978
Total monthly consumption (GB)	593	2,472
Other opex (Rs/month)	10,633	42,633
Total GB generated per site/day	20	82
<b>Build-out phase - Cost/GB (Rs)</b>	<b>227</b>	<b>319</b>
<b>Marginal cost/GB (Rs)</b>	<b>75</b>	<b>16</b>

Source: Company, PhilipCapital India Research

### Utility curve of data costing - decline in cost (%)



### Utility curve of data costing Rs/GB



Source: Company, PhilipCapital India Research

## Data pricing: Advantage Jio

Jio's cost-efficient network coupled with the LTE's higher data-handling capacity will provide significant economies of scale in the long run. A retail pricing of Rs 60-80 per GB is workable on Jio's network when it transitions from the coverage phase to the capacity phase, with a marginal cost ~Rs 16 per GB. Marginal costing for 4G is much lower than 3G, and more importantly, any improvement in network utilisation will translate to a much faster drop in cost per GB.

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## Fiberisation is the mantra to success in Data

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Jio's network will use extensive intra-city fiberisation — wireless telecom operators use microwaves or optic fiber to transmit data from BTS to BTS or from BTS to Base Station Controller (BSC); however, since microwaves are too constrained by capacity limitations, fiber optic cable with their almost unlimited capacity, are a popular choice. According to Vishant Vora, Director Technology, Vodafone India, "Global 4G success has been on the back of fiberisation and high ARPU. Proactive government policy has aided fiberisation and successful 4G markets are marked by high ARPU and low competition". In the Indian context, fiberisation is not relevant in terms of competition and high ARPU. However, Jio's fiber rollout is far advanced in terms of quality and quantity vs. incumbents — for example, in Ahmedabad, Jio will have an intra-city fiber network of ~3,000km at the time of its rollout vs. the market leader Vodafone's ~400-500kms network. Jio's fiber grade is also far superior to competitors, ensuring enough data capacity for the next few (telecom) generations on its existing fiber backbone.

### **Smaller city fiber rollouts are easier/cheaper than larger metros**

The biggest challenge in rolling out its fiber network is getting approval for right of way and the costs associated with it. In a city like Mumbai, the right of way costs range from Rs 20m to as high as Rs 40mn per kilometer. However, Reliance Industries' track record in project execution and getting approvals from various government bodies has been prodigious.

***"Global 4G success has been on the back of fiberisation and high ARPU. Proactive government policy has aided fiberisation and successful 4G markets are marked by high ARPU and low competition"***

- Vishant Vora, Director Technology, Vodafone India

***Samsung is keenly interested in becoming a major mobile network supplier. I am sure it is willing to bundle handsets at attractive prices to this end. Samsung, so far is a niche player focusing solely on pure LTE. It has contracts with Sprint in the USA, 3 in the UK as well as several in its home market. It lacks GSM & WCDMA and hence cannot compete for contracts where backward compatibility is required'***

- Per Lindberg, an analyst with Sweden-based firm ABG Sundal Collier, who tracks the global telecom equipment vendors

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## Samsung as network vendor, a masterstroke?

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Jio's decision to use Samsung as its equipment and network vendor is a strategic one. Says Per Lindberg, an analyst with Sweden-based firm ABG Sundal Collier who tracks the global telecom equipment vendors, "Samsung is keenly interested in becoming a major mobile network supplier. I am sure it is willing to bundle handsets at attractive prices to this end. Samsung, so far is a niche player focusing solely on pure LTE. It has contracts with Sprint in the USA, 3 in the UK as well as several in its home market. It lacks GSM and WCDMA and hence cannot compete for contracts where backward compatibility is required". The fact that it has chosen Samsung (leader in next generation smart-phones) indicates that it may not opt for regressive 2G technological platform for voice services, which is still the mainstay of the Indian wireless telecom market. The technological platform and choice of vendor raise fundamental questions on how it will implement its voice network and how it is going to use its recently won 1,800-MHz spectrum.

# Why did Jio buy the 1,800MHz spectrum and what technology will it choose for voice?

## The 1,800-MHz has seen greater LTE deployment; the device ecosystem will mature faster

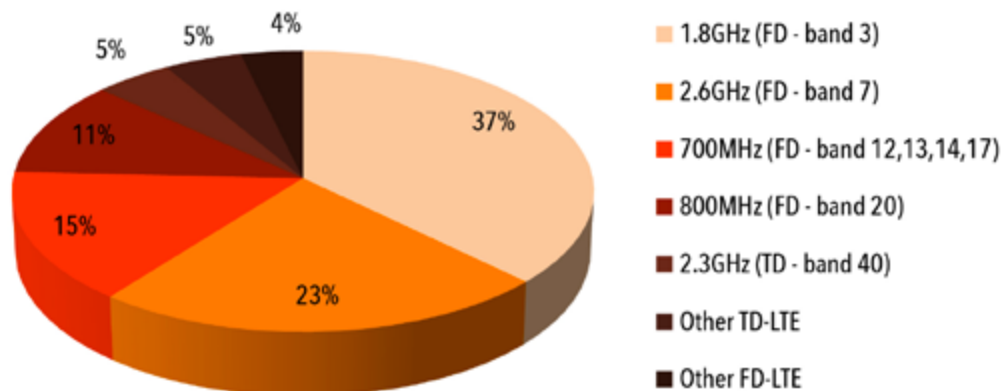
In the February 2014 auctions, Jio won contiguous 5MHz spectrum blocks in the 1,800-MHz band in 14 of India's 22 circles. Market speculations are rife that it could launch voice services that are similar to incumbents'. Voice services are not optional for any operator that has mass-market ambitions. More importantly, in India, mass-market and sizeable subscriber market share are not optional for building a successful business model.

However, according to Reliance Industries, Jio will use its 1,800-MHz spectrum to launch LTE-FDD, which stands for Frequency Division Duplex-Long Term Evolution, and is a slightly more mature technological platform as compared to TDD-LTE (Time

Division Duplex), which is Jio's primary platform currently. FDD was deployed before TDD globally and thus the handset ecosystem for FDD is more evolved. Per Lindberg contends that China Mobile's adoption of TDD has given this technology platform a significant impetus and it will be almost on par with FDD in the near future.

**'Almost a third of the 1,240 LTE devices available globally are on the 1,800MHz band,'** says Mr. Sandeep Girotra, India head, Nokia Solutions. FDD has certain benefits in terms of better choice of handsets and a more evolved chipset ecosystem. The 1,800-MHz band also offers better in-building coverage, which can complement the 2,300-MHz roll out, prompting Jio to aggressively acquire the 1,800-MHz contiguous blocks. Considering the

37% of global LTE deployments are on 1.8 Ghz FD-LTE



FDD and TDD are two different methods of packing data and phone calls into the mobile connection to a phone tower. Duplexing is when a phone can transmit and receive at the same time (vis-à-vis a walkie-talkie that can only do only one transmission at a time). TDD means the transmission and reception happen at the same frequency, alternating between the two. This is good for mobile Internet use as you can use more bandwidth available for either downloading or uploading. In FDD, a slightly different frequency is used for uploading and downloading and is said to have better reception. It is possible that most of the world's 4G market is based on FDD; however, TDD is seeing increased deployment. Samsung has begun producing handsets that support both FDD and TDD.

Source: GSACom, PhilipCapital India Research

technological platform used by Jio and Samsung being its equipment vendor, it is difficult to picture Jio opting for a regressive Circuit Switch Fall Back (CSFB) option by deploying a 2G network.

### **CSFB is a halfhearted attempt and does not sound like Reliance**

CSFB is an interim solution for providing voice offering to 4G customers but it requires a traditional circuit switch network. Most operators globally have evolved from a basic GSM platform to LTE (4G). Bharti Airtel offers CSFB to its 4G customers in Bengaluru, but then it also owns 2G and 3G network in the circle.

Jio does not have a traditional 2G or 3G network — to offer CSFB, it will have to either roll-out a 2G network or lease it from an incumbent operator (RCOM could be considered) but both these options are suboptimal in nature as competing with the incumbents on their technology platform is not a winning strategy. But something does not sound right here. Both these options — forging roaming arrangements with other operators and using CSFB as an interim solution — are not Reliance's way of working (dependence on a third party to provide a crucial part of service would be unthinkable for the company). This aspect somewhat tilts the scale towards Voice over LTE solution (VoLTE).

### **This is just the beginning and challenges start from here!**

While it is most likely that Jio's network infrastructure will be world class in terms of quality and cost efficiency, deployment has taken time, but this is deliberate on the part of the company as timing the market is a crucial part of its strategy. The greatest achievement of the project will be fiberisation of the network, which is the most tedious task in the deployment, but Reliance has tremendous experience in project execution and the company is managing this aspect of the execution very well.

Difficult as the initial groundwork is, especially in the Indian context, Jio's key challenges will actually start after its network deployment. The Indian telecom market suffers from the problem of having too many players—the market is not really looking forward to a new telecom operator as was the case with the much-anticipated launch of Reliance Infocomm in 2002. Everything depends on Jio's ability to understand the market, how it structures its product to suit market needs, and how it follows and improves on the industry best practices.

## Voice in LTE network with Circuit Switch Fall Back

**LTE** is the next-generation mobile technology that delivers true all-IP communications where all services, including voice, messaging, video and data, use a common IP infrastructure — there are no separate dedicated speech channels.

The deployment of LTE is accelerating and LTE is now the fastest (ever) growing mobile technology. Operators are focusing on LTE as part of their business strategy due to its lower cost of operation (about 5x cheaper to carry data over LTE than 3G and 20x cheaper for voice than compared to 2G) but also as a way to provide the high-throughput (the rate of successful message delivery over a communication channel), low-latency data service demanded by their subscribers with their media hungry laptops, tablets, and smart phones.

Although initially LTE was seen as a way to provide improved data service, the availability of LTE smartphones means that operators need to address how to continue to provide a high-quality voice service on a technology with no dedicated speech channel. Providing a high-quality voice service is not optional as it is predicted that in 2013 voice revenue will still account for 61% of global mobile service revenue (Source: GSMA). Similarly, SMS needs to continue not only for its role in subscriber ARPU, but as it is just a basic service expected to be available always.

However, the all-IP nature of LTE presents a challenge to operators as Voice over LTE (VoLTE) requires the introduction of a new core network architecture based on IMS (IP Multimedia System). This is because VoLTE, being based on VoIP (voice over internet protocol), doesn't use the existing circuit switch MSC/VLR (Mobile Switching Centre/ Visitor Location Register) infrastructure.

The challenge is — can a Mobile Network Operator invest in new radio technology, Evolved Universal Mobile Telecommunications System Terrestrial Radio Access Network (E-UTRAN), a new packet core, Enhanced Packet Core (EPC), and at the same time provide voice and SMS service continuity via a new IMS core network for their high ARPU subscribers who adopt LTE smart phones?

Standards bodies recognize that not all operators will be ready or willing to immediately switch to the new IMS-based VoLTE architecture and as a result, they have defined an alternative standard for providing voice and SMS services to LTE devices — this is called Circuit Switch Fall Back, which continues to use circuit-switched main-switching center (MSC) network for voice calls. A device registered on the LTE network must detach from the E-UTRAN and attach (i.e. fallback) to the 2G/3G network prior to originating or receiving a voice call.

The benefit of CSFB is that it offers a fast time-to-market for LTE voice by not requiring an immediate transformation to a new IMS core network for voice and messaging services. The continued use of existing circuit switch infrastructure for voice means that there is no impact on other key elements to provide a full-voice service such as charging, legal intercept, and emergency services. CSFB also enables SMS delivery without changes to HLRs (Home Location Register) or SMSCs (SMS centre) and does this without requiring the device to fall back to the CS network. Furthermore, CSFB allows the re-use of interconnect, roaming agreements, charging, and settlement processes as well as being mandatory (per GSMA) for incoming roamers from other 3GPP operators.

## THE MARKET



Source: PhilipCapital India Research

Amdavad's Ratanpol market has leading brands

## 2G & 3G- Yes! **4G-What is that?**

Consumers spending more on handsets and are turning brand-conscious while preferring Samsung

Suraj Patel scurries around his 12 feet by 7 feet overcrowded mobile shop in Ahmedabad's bustling Ratanpol market as he talks about the changing consumer preferences while he deftly installs a screen guard for a customer's Samsung S Duos. Ratanpol market is the largest market for mobile handsets in Ahmedabad with some of the biggest wholesalers in operation. The market prides itself on the plethora of brand choices ranging from the ultra-low-cost Chinese-made 'Chilli mobile' to premium brands including Apple, HTC, and Samsung. Suraj says, "Consumers want faster internet



While housing low-cost Chinese brands as well

Source: PhillipCapital India Research

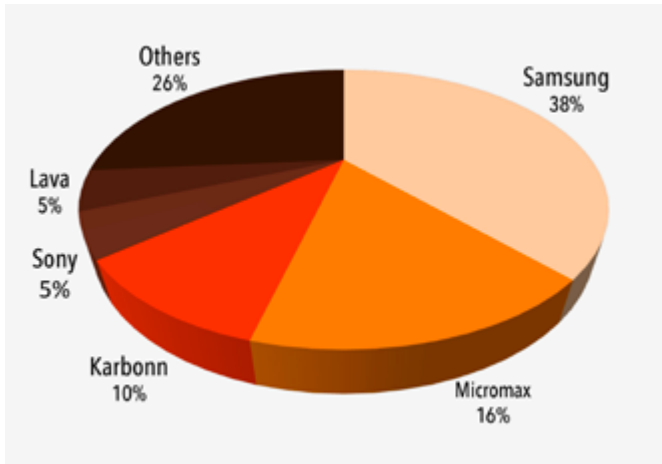
speed to download and upload videos on Whatsapp, stream videos on YouTube, and browse pictures on Facebook". According to him, the average selling price for handsets is in the Rs 8,000-10,000 range and Samsung is his best-selling brand. The average selling price has moved up in the last year by around 15% clearly indicating rising consumer spend on functionality. He also mentions that prospective customers do a thorough online inquiry before visiting — customers particularly demand 3G-enabled handsets and are finicky about RAM requirements and memory speeds. He says that even as 3G adoption is picking up, less than half of the people who own 3G handsets actually use 3G data.

When asked about Reliance, Suraj says that the brand has lost traction. He hasn't heard anything about Jio either from the company or from handset vendors such as Samsung. In another outlet at Ratanpol, the in-shop promoters of Samsung mobile phones raved about the benefits of Samsung vs. other handsets such as Micromax and Lava. Samsung has three distributors and more than five service centers in Ahmedabad, which cater to a fast-growing user base. Micromax and others have significantly higher failure rates and their after-sales service is considerably weaker than Samsung.

**On-the-ground proof confirms breakneck data growth**

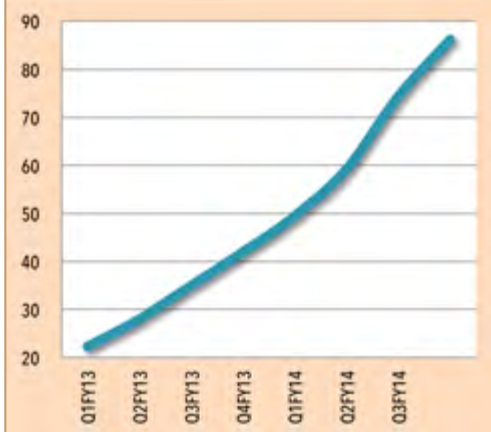
A significant portion of data users are now recurring customers,' says Sachin, a Vodafone distributor at Anand, Gujarat. He adds that increased in-shop promotional activity is encouraging more customers to adopt data and the current quarter is witnessing double-digit QoQ data revenue growth. Gujarat's consumers are among the savvier data users of the country with 20%

Smartphone sales (Q4 2013) (%)

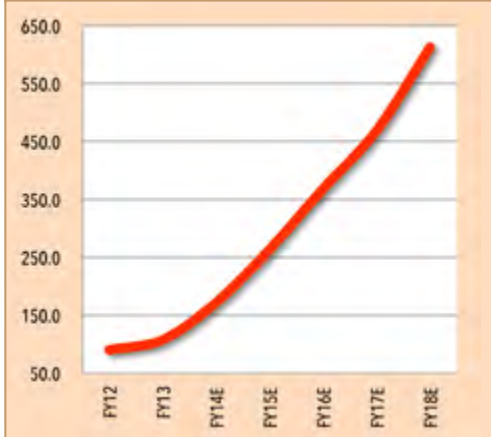


Source: PhillipCapital India Research

Data Consumed by incumbents (bn MB)



Data revenue - Telecom Sector (₹ Bn)



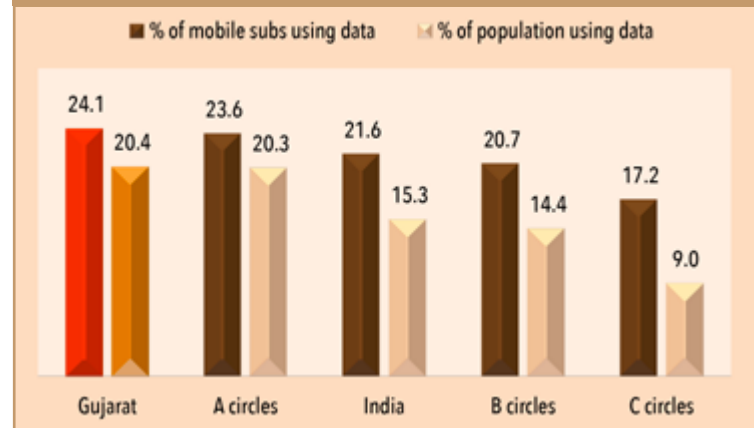
of them consuming wireless data, higher than the national average of 15%. There are seven serious players in the market including four players possessing 3G and 4G spectrum.

Data consumption of incumbents (Bharti, Idea, and Vodafone) has clocked a compounded quarterly growth rate of 18% for the past 8 quarters. Importantly, the telecom sector appears to be following a J-curve of rapid growth in data consumption and revenue. PhillipCapital India estimates data revenue to grow at 40% CAGR in FY13-18 with the contribution of data to telecom operator revenue increasing from 7% in FY13 to 26% in FY18.

*“Smartphones priced between Rs 6,000-Rs 13,000 accounted for almost 50 percent of Samsung’s shipments. Most of the shipments were of its Galaxy Star and Star Pro smartphones.”*

Manasi Yadav, Senior market analyst - mobile phones, IDC India

Data penetration - Gujarat; higher than national averages



Source: TRAI, DoT, PhillipCapital India Research

### Gujarat Q2FY14

Wireless subscribers (mn)	52.1
Teledensity (%)	84.5
Wireless data subs (mn)	12.6
GSM ARPU (Rs)	98

Operator	Spectrum	Data offering	Rev. mkt share
Vodafone	900/1800/2100	GPRS/EDGE/3G	44.0
Idea	900/1800/2100	GPRS/EDGE/3G	20.8
Airtel	1800	GPRS/EDGE	12.7
Tata	800/1800/2100	CDMA/EVDO/GPRS/EDGE/3G	6.9
RCom	1800	CDMA/EVDO/GPRS/EDGE	4.7
Uninor	1800	GPRS/EDGE	5.0
BSNL	1800/2100	GPRS/EDGE/3G	4.8
SSTL	800	CDMA/EVDO	0.4
Aircel	1800	GPRS/EDGE	0.7
Videocon	1800	GPRS/EDGE	0.1
Jio	1800/2300	LTE	-

Source: TRAI, DoT, PhillipCapital India Research

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## ...but data is largely used for OTT/bandwidth-light applications...

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While there is no doubt that data consumption is increasing, there are two key issues — users tend to go for bandwidth light OTT applications such as whatsapp, or Facebook, or games and even if users do own a 3G-enabled phone they opt for 2G packs on their phones as they find 3G packs too expensive.

“Hum poore hafte mein jitna nahi kamate hain, utna yeh college ke bacche ek din mein online Teen Paati khelke banate hain,” (what we earn with great difficulty in a week’s time, college kids make in a day playing ‘Teen Patti’ game on their mobile handsets),” says Kalpeshbhai of Vishal Mobile corner, Anand, a small Gujarat town located between Ahmedabad and Vadodara.

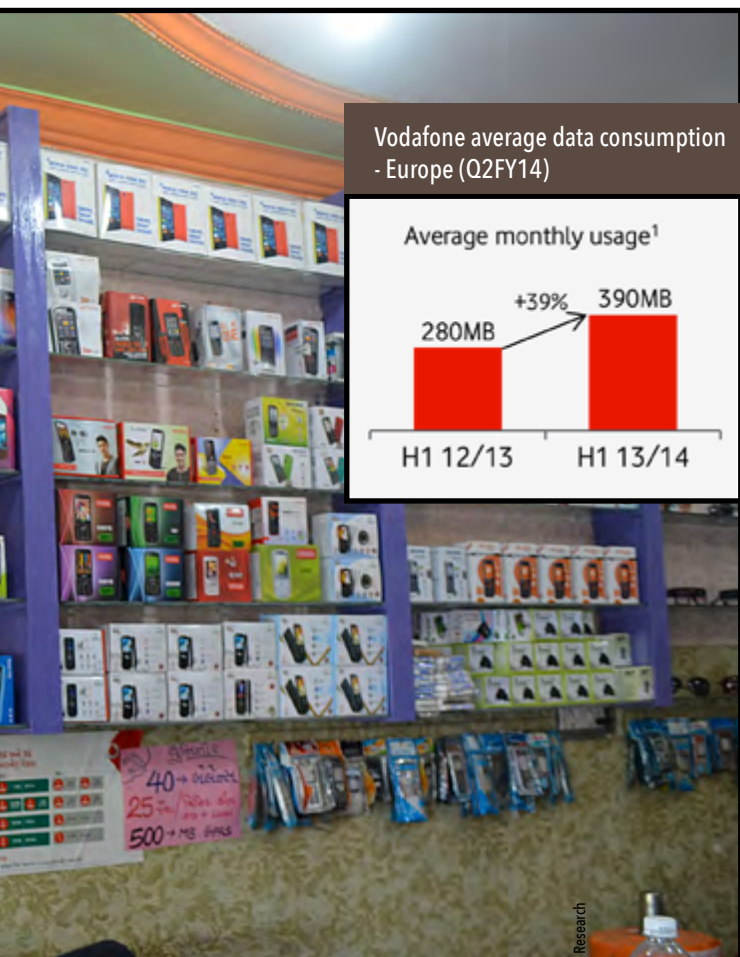
Kalpesh says that the internet is providing new avenues of income for the modern youth. Teen Patti is one of the favorite online games in town and enthusiasts trade their accumulated earnings for a particular price. He adds that expert players are able to make Rs 8,000-10,000/day by trading the virtual cash that they accumulate in a day’s work. People log onto the gaming platform using their Facebook account.



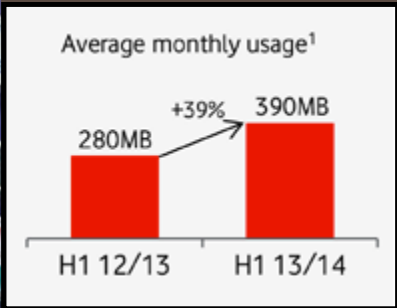
In the same town, Moin, who runs KGN Mobile, an outlet that sells handsets, mobile recharge vouchers, and SIM cards, contends that the average handset selling price has increased by ~15% to Rs 7000-8000. While he acknowledges the sharp increase in data consumption, especially among the youth, he adds that most customers who have 3G handsets opt for 2G data packs as they find 3G too expensive. Clearly, 3G adoption is much lower in Anand, compared to Ahmedabad.

Just 10-16% of incumbents’ (Bharti/Idea/Vodafone) subscribers possess 3G/HSPA handsets, of which only 30-60% subscribe to 3G data services. Data remains a 2G-centric market as the app consumption pattern of subscribers reveals a marked tilt towards bandwidth-light over-the-top (OTT) applications such as Facebook and WhatsApp.





Vodafone average data consumption - Europe (Q2FY14)



Source: Vodafone, PhillipCapital India Research

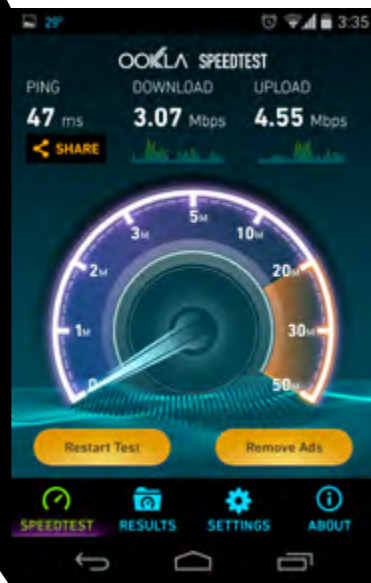
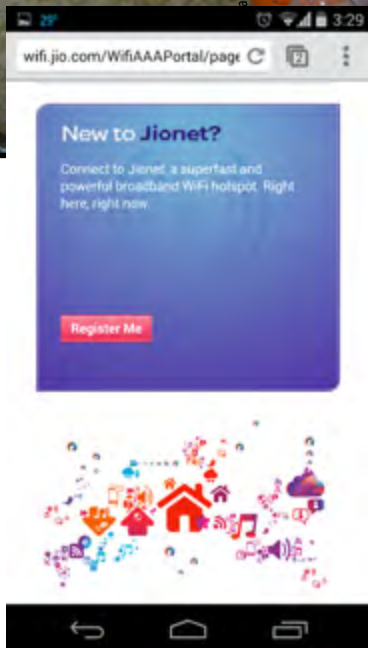
...hence the challenge is to drive data usage and create a need for fast wireless internet

The pickup in data consumption in the Indian telecom space is currently driven by both subscriber addition and per subscriber data consumption. For incumbents, the average data consumption per subscriber stands at 240MB/month (as of Q3FY14, 2x Q1FY13 levels) led by 3G subscribers who comprise 19% of the data subscribers of incumbents, up from 11% in Q1FY13. However, sustaining data usage per subscriber seems to be a key challenge as discovered even by players such as Vodafone.

Jio's 4G branding started but awareness is uninspiring as of now



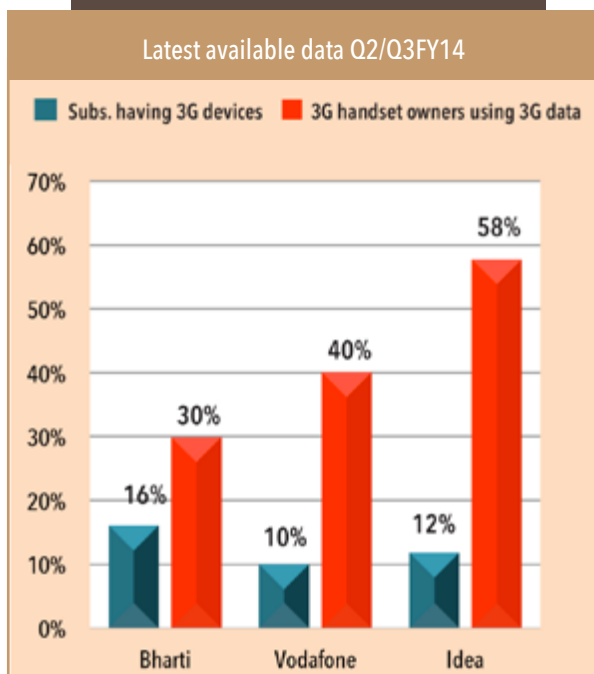
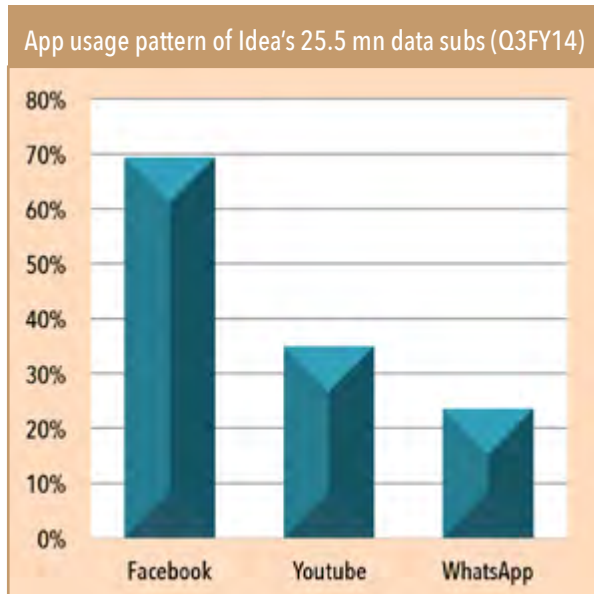
Jio is providing WiFi network for free on trial basis in eight areas of Ahmedabad. The on-the-ground awareness of the network was uninspiring in spite of the attractive offer. Jio is not aggressively marketing the WiFi network at present and promotional activity in the hotspot areas has not been sustained. Marketing and other activities are yet to begin in a big way.



Source: PhillipCapital India Research

***'India mobility voice market still remains underpenetrated with only 60% all India VLR (active subscribers) penetration and just 40% consumer penetration in rural India. Actual people penetration is even lower given the presence of multi SIM users and dual SIM handsets'***

**- Mr. Himanshu Kapania, Managing Director, Idea Cellular**



## 3G is likely to dominate Indian telcos' wireless broadband strategy for at least half a decade

GSM services were launched in India in 1994-95, but saw meaningful growth only from 2004-05. While the gap between 3G's launch and rapid growth has not been as long (launched in India in 2010 and started growing at a rapid pace from 2013-14), the fact is that there seems little space for another new technology to make headway in a meaningful way in India as of now. Even globally, experts expect 3G (and not 4G) to be the mainstay — GSMA projects an addition of 1.7bn 3G subscribers by 2020. While LTE could see substantial deployments, the fact is, it is still at a very nascent stage with just over 200mn subscribers (3% of total connections) globally. Global 3G adoption continues to grow at a rapid pace and as per GSMA data, total 3G connections in 2013 stood at over 2bn, trebling from ~600mn in 2009. Idea Cellular believes that India is a laggard market both in terms of adoption of technology and per-capita income and hence 3G can remain prominent for the next six years. Both Bharti Airtel and Idea Cellular have highlighted that the development of the 4G ecosystem is contingent on investments made by China (as China has taken the lead in developing TD-LTE technology), which could take two-three years to fructify and result in mass-adoption.

## ...while voice remains the mainstay of the market

"Idea has expanded its coverage by 46,500 towns and villages in the last calendar year and this is nearly a 15% expansion of our coverage," says Mr. Kapania. Operators continue to invest in the voice business and the rapid data growth notwithstanding, India's voice market remains very relevant. As per the TRAI, in Q2FY14, voice (including rentals) contributed 80% of GSM telecom revenues. This clearly indicates that for Reliance Jio to succeed, voice needs to be offered to its consumers.



Source: PhillipCapital India Research

## Product, Price & Promotion:

## Another *Hungama* offer in store?

### **Pensive: Lets drop down into 2003 – Reliance’s monsoon hungama offer**

Ghanshyamdas Garg of Om Ayurvedic Agencies in Kotla Mubarakpur, Delhi is a very happy man as he has received his monthly commission cheque from Reliance Infocomm. In the last month alone, he made more profit than he made in the last two years. Garg prides himself in selling more than 2,500 mobile connections under Reliance Infocomm’s Monsoon Hungama offer. Like Ghanshyamdas, thousands of Direct Sales Agents (DSA) and telecom retailers celebrated Diwali every month during the launch phase of Reliance Infocomm’s CDMA wireless services.

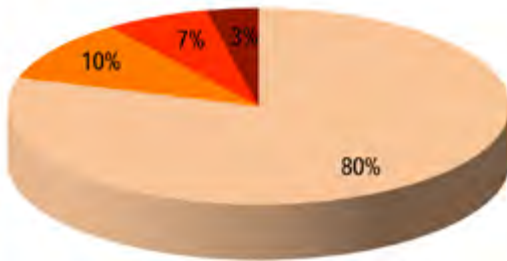
Year 2003, month July — Mukesh Ambani created a telecom revolution by selling CDMA handsets at Rs 501 in the most exciting and unmatched telecom offer till date. The Monsoon Hungama offer was certainly an offer that no one could refuse — at least, not if one were to ignore the fine print.

### **Is Jio’s strategy going to be similar for its 4G launch? Capturing the market by actually breaking it?**

Of course, it has been almost 11 years since the famous Monsoon Hungama launch and since then Reliance Infocomm has not only changed its name but also ownership — it has transitioned to being a dual technology operator and it is now a mere specter of its heady past. One aspect emerges very clearly from the RCOM debacle — the choice of product belongs to the customer and competitive markets are always fraught with choices. The challenge that Reliance Infocomm faced from 2002-2008 will also be a challenge that Jio will face over the next few years, which is, to design a mass market product in-line with consumer preferences and achieve and sustain a sizeable market share. This brings us to the next part...

## GSM revenue split - Q2FY14

Voice Data Other VAS SMS



Source: TRAI, PhillipCapital India Research



Source: PhillipCapital India Research

# Jio *has to* offer a compelling voice proposition

Voice accounts for 80% of Indian GSM operator revenue and continues to grow — incumbents saw voice revenue grow at a CAGR of 10% from FY12-14, and Phillip Capital India expects growth to continue led by increased rural penetration. Jio needs a compelling voice product to achieve mass market in the wireless domain. The voice market in India is characterized by world's lowest tariffs, established brands, limited differentiation, and wide distribution. For a new player it is a very difficult to establish differentiation in this category. All new entrants in voice in the last six years have not been able to scale up their business and are now in the process of consolidating their services. Jio will have to offer a high-quality voice product bundled with a superior data offering. The choice of its technological platform for implementing voice will have long-term ramifications.

## THE OPTIONS ARE

Broadly, the company has these options, each with their own limitation

- Voice over 4G – Bundle handsets with a handset subsidy model
- VoIP – Voice over internet protocol
- CSFB – using roaming arrangements, or by deploying a 2G network
- Buy out a pan-India telecom operator like Aircel, RCOM, or Tata Teleservices

## VoLTE: A long-term solution but it is shooting yourself in the foot, again

While VoLTE might seem the panacea for all of Jio's voice-related problems, it has serious drawbacks, as it requires a specific chipset support which will entail bundling of handsets. Past experience has shown that customers do not like their handset choices to get restricted just to avail of a new service (Reliance Infocomm and the great CDMA debacle of 2002) nor do they like buying a new handset just to get onto a new technology. In such a market, unless a company comes up with a 'Killer Handset' like an iPhone at a competitive price point, customer acceptance will be limited.

This presents a serious dichotomy for any operator to achieve economies of scale while catering to customers choices. In all probability, VoLTE as a long-term solution will be similar to CDMA services. And hopefully, since Mukesh Ambani launched CDMA services with Reliance Infocomm in 2002, he understands the pitfalls of trying to be different (or pinning down customers to company-made choices) in a mass-market category.

Nonetheless, VoLTE has significant long-term advantages of spectrum efficiency and high-quality voice, but in the medium term, adoption and market acceptance is likely to be limited and it will have problems achieving scale. This seemingly viable and a long-term solution might not be the best possible option for the company now, but since Samsung is Jio's equipment vendor, bundling of handsets will certainly be part of its long-term strategy. For all we know, come July 2015, we could see Samsung S3 at Rs 5,001 as a part of Monsoon Hungama part Deux!!!

### Voice Over LTE (VoLTE)

#### What is VoLTE?

It is an IP-based voice solution on LTE, which is a data network.

**How is it different from conventional voice?** Conventional voice uses a circuit-switched domain while VoLTE is entirely IP-based. As opposed to a conventional network, which has two parallel core networks – one for voice and one for data – VoLTE is an IP multimedia system that runs as one service over the unified core IP network.

What does VoLTE need? IP Multimedia systems, LTE Radio Access Network (RAN), and the packet core needed to support multimedia telephony. Compatible device and chipsets need to be developed by vendors.

Current status of VoLTE:

- Commercial devices include Samsung Galaxy S III LTE, LG Connect, LT Sprint, and Asus Padfone. These are devices launched in South Korea and the US.

#### Issues with VoLTE:

- o Carrying voice over LTE requires a migration to a Voice over IP (VoIP) solution. Until this migration occurs, LTE-capable handsets need to revert to 2G or 3G for voice calls, which can reduce quality or even suspend Packed Switched (PS) services
- o Patchy LTE networks and hence integration with CSFB is needed
- Globally VoLTE is still at a nascent stage as various operators such as Verizon, AT&T, and Optus are still in the testing phase. Operators may be reluctant to invest in VoLTE due to device-ecosystem limitations.

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## OPTION 2

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### VoIP: A complicated solution to a simple problem

VoIP termination to mobile phones is not currently legal in India, but regulations could be accommodative due to growing demand from OTT players (Facebook, Whatsapp, Viber, Jio) and a perception that such a move could be 'pro-consumer.' Jio can launch VoIP services as it has a world class data network with very low latency. However, VoIP does not appear to be a pragmatic, scalable, and long-term solution for providing a compelling voice proposition. It is fraught with multiple challenges:

- Initially VoIP would probably be offered only 'on-net,' hence both caller and receiver would need the 'Jio VoIP' app running
- Quality, but more importantly, consistency, of VoIP cannot be compared to a traditional circuit switched voice. Coverage is a key challenge, as a full-scale VoIP service would need a consistent and high-quality network with significant population coverage. Also, congestion is an aspect that could affect VoIP more than conventional voice due to the asymmetric nature of data consumption, which could result in clogging of data networks
- Device capability could be a limitation in achieving mass scale. Smartphones with faster processing speeds provide better quality VoIP than feature phones
- Learning curve for consumers is also a limiting factor
- Lastly, in a market with a plethora of choices (with tariffs as low as 25paise per minute), the relevance of VoIP to the market will always be a question mark



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## OPTION 3

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### CSFB — Suffers from implementation issues, but acceptance will be widespread

If Jio chooses the CSFB, the most widely accepted product, implementation will be a big issue — Jio does not own a 2G network and may not launch a 2G network in the near future as it will be regressive, with inefficient bandwidth utilization, and more importantly, a negative NPV investment as India already has enough voice capacity available.

If it does want to go for the CSFB option, a better option for Jio will be to use/lease network from RCOM or Tata Teleservices and launch voice services. While it can work out low rates for leasing active infrastructure and intra-circle roaming, the drawback of this strategy is that Jio will not have any control over the quality of voice service as it will depend on the lessor's network quality and QoS changes with subscriber growth. If implemented, this will be, at best, an interim solution.

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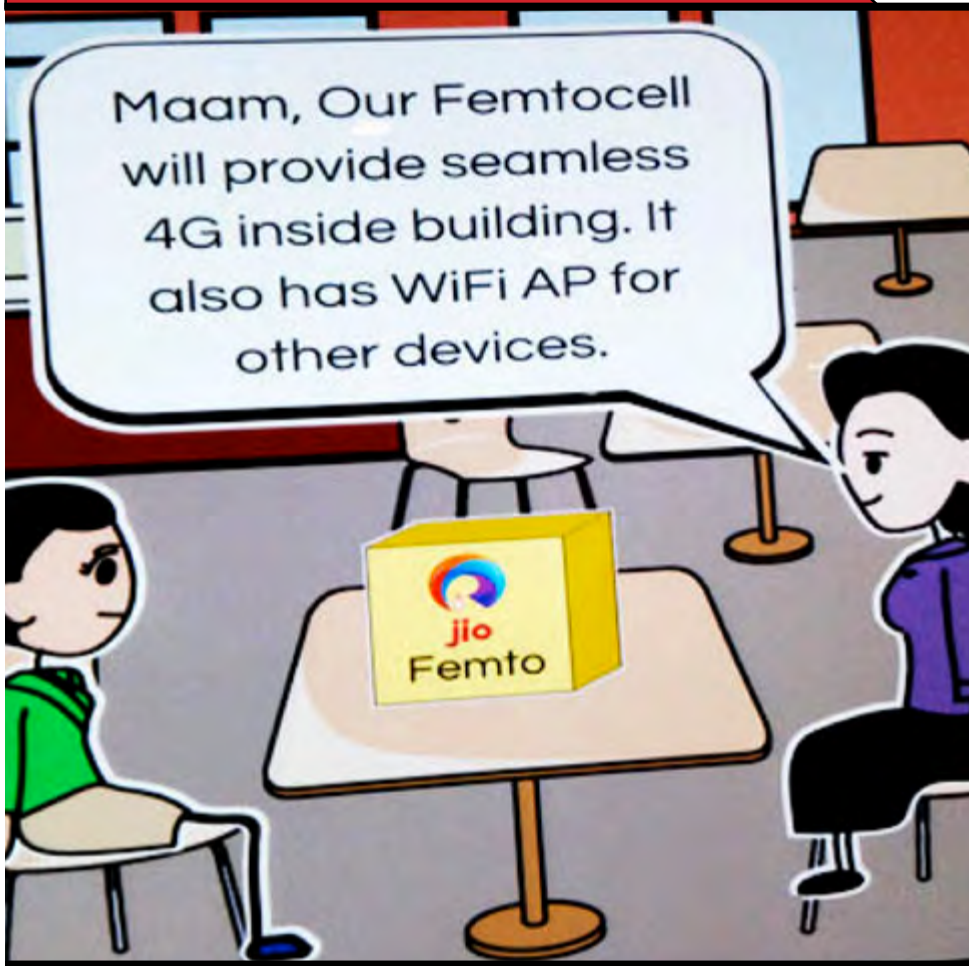
## OPTION 4

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### Buy a 2G operator — but no options available as such

The advantages are obvious as the company will get an established subscriber base, ready distribution network, and the required active 2G network — the biggest problem is getting a company at a reasonable price. Most companies are heavily indebted, making them unviable as acquisition candidates. The only operator with healthy balance sheet and operational traction is Idea Cellular. Whether Idea Cellular will sell (and at what price) is a big question mark.

Jio faces the dilemma of balancing its short-term and long-term aspirational goals for voice — VoLTE offers a long-term solution, but in the medium term, CSFB offers a significantly better reach and acceptability. The path Jio takes will depend on what it wants to achieve over the next few years. The option of using both (targeted at different markets) also cannot be ruled out. Meanwhile, the choice of product will continue to remain shrouded in mystery.



*'My monthly data consumption is more than 100GB. My wife and I watch HD sitcoms on YouTube and we download English sitcoms and movies. We spend Rs 4,100 per month on our telecom needs and primarily our consumption is data'*

- Pawan Kumar, an early 30s entrepreneur who is an IIM Lucknow graduate

Source: Media reports, PhillipCapital India Research

## Choosing the right customer *or is there a choice actually?*

### **Churn-based strategy: Disruptive pricing or changing the rules of the game, or both?**

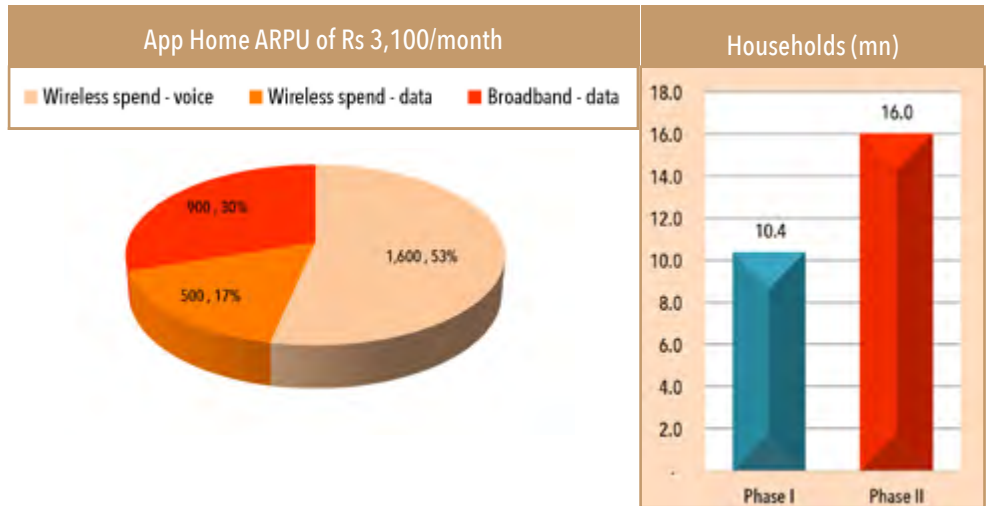
Any telecom operator with ambitions of a sizeable market share in India will have to forge a strategy that completely straddles the consumer pyramid. This will be the long-term ambition of all large telecom operators and even for Jio, considering its scale of investment. The initial launch will be crucial in terms of choice of target market since this will have far reaching ramifications on brand positioning, market

perception, systems, processes, and in turn profitability. The company does not have the luxury of penetration-led growth in urban markets as most are fully penetrated. The only option for a new entrant is to resort to a churn-based strategy, which will hinge on its choice of target market and how it structures its product offering.

### **Target market: Home vs. Individual**

Home as the target market was the cornerstone of Jio's product development strategy, but things are changing rapidly.

"My monthly data consumption is more than 100GB. My wife and I watch HD sitcoms on YouTube and we download English sitcoms and movies. We spend Rs 4,100 per month on our telecom needs and primarily our consumption is data. We have 4 different telecom service providers — I am on Vodafone postpaid and my monthly bill is ~Rs 1,800. My wife has an Airtel Postpaid connection and her monthly outgo is around Rs 500. My parents have a prepaid Idea Cellular connection with a monthly outgo of



A typical urban household's mobile & internet spend

Sizing up the market for an urban play

Rs 200 and finally my unlimited Smartlink broadband service with a monthly unlimited data plan of 8 Mbps for Rs 1,600," says Pawan Kumar, an early 30s entrepreneur who is an IIM Lucknow graduate. Pawan's home represents an upcoming urban telecom consumer whose data needs are not just growing but they are also evolving at a very brisk pace.

In India, telecom services have evolved significantly over the years but operators have not been able to target households in an effective manner. Target market 'Home', refers to fulfilling all the communication needs of a household. From the product and network capability standpoint, Home as the target market is intuitive for

Jio. The products that Jio showcased at the IIT Bombay Techfest catered to the needs of the urban household and appeared suitable for consumers like Pawan.

Jio's network has the capability of addressing all these simultaneously. The benefits of this strategy are that the company can target very-high-ARPU customers. The strategy presents an interesting business case of 'changing the rules of the game'.

A large part of the ARPU's of telecom players currently comes from voice. Data accounts for less than a 10th of the total ARPUs of GSM players. If Jio targets "Home" as its target market, it turns the value proposition on its head.





Jio has a business case by inverting this value proposition, with data being the mainstay and voice offered alongside. The company could offer a LTE-To-The-Home or Fibre-To-The-Home (FTTH) unlimited broadband plan (subject to market prevailing fair usage limits) costing Rs 800/month and offering higher speeds. Additionally, it can also provide 600 minutes of voice and 2GB of data on the mobile handsets for the household members. Such a strategy would fetch Jio income of Rs 2,000/month from an urban household, which has a significant data usage potential.

**The following could be Jio's game-changing paradigms:**

1. Total ARPU of Rs 2,000
2. Home broadband at just Rs 800 for the family – at a faster speed (2-5Mbps instead of 1Mbps) and a more favourable pricing compared to Rs 1,000 currently charged by operators
3. Mobile voice and data connections at Rs 300/month/per family member (for a four-member family).

Such a proposition would be a win-win for Jio as well as the customer, as Jio would be able to earn the aggregate of consumer spends on telecom, including household data, while a high-usage household could end up saving almost 50% on their telecom spends.

Jio's target market would be the 26mn homes that are in the 'million-plus' cities including the metros. For a meaningful revenue from such a strategy, Jio could look at targeting 10-15mn households, which would generate a revenue of Rs 20-30bn (nearly as much as Idea Cellular's current revenue). Of course, this could be difficult to achieve, as it means

that ~50% of the target market will have to subscribe to Jio's services.

**The world is all that is the case: Real world vs. Excel model and Customer is always the king**

While this 'home' strategy sounds very good, the greatest challenge is driving data consumption — and this is not in the control of a telecom operator even if it offers the best quality of service. Telecom operators have been targeting households for some years now — in its last major restructuring, Bharti Airtel had changed its target market from individual to household, but going by its headline numbers, its strategy is not working well. Even with the luxury of time and its experience, the strategy has not worked for Bharti — Jio on the other hand has to fight many battles before it gets into the war.

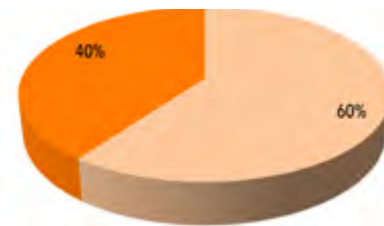
***"Bundling has not worked in the past in the prepaid market and it is difficult to predict the value of this strategy in targeting the mass market"***

**Individuals as target market seems to be the new tune at Jio**

Home as the target market will be integral part of Jio's long-term strategy, but in the medium term, a pragmatic approach will be to target individuals and aim for a sizeable market share. It can use its 1,800-MHz spectrum win to provide voice by sharing active infrastructure and this is a lead indicator that Jio is looking at a product with mass-market appeal. Jio may pursue a mass-market churn-based strategy using disruptive voice and data pricing — while disrupting pricing has not worked (tried by RCOM, Tata Teleservices and others), pricing

RJio home ARPU target ~Rs 2,000/month

■ Mobile voice & data (Rs 300/mo\*4) ■ Broadband for home



backed by a USP of data could see some traction.

Jio is likely to resort to providing high quality and quantity of data at extremely competitive prices and providing voice largely at cost. In voice, termination cost is Rs 0.2 per minute and providing outgoing at Rs 0.2 and on-net calling for free could help Jio churn customers from established operators. Initial target market could be the high-ARPU postpaid and corporate customers and the company may have to resort to bundling of handsets, but the acid test will be the prepaid market.

Bundling has not worked in the past in the prepaid market and it is difficult to predict the value of this strategy in targeting the mass market. On the other hand, a pure churn-based strategy like that of Uninor will lead to the brand being perceived as a discount one, which will jar with Jio's product on offer. Jio will have to balance these aspects to develop a business model that straddles across the consumer pyramid and addresses multiple consumer needs at varying price points.

This is the biggest challenge for Jio and it's the DNA (core competence) of the company that will decide whether the company has the "Right to Win" in the most hostile telecom market in the world.

# Now the Multi-Billion Dollar question: **Does Mr. Ambani have the right to win?**

*'Even incumbents like Bharti, Idea and Vodafone find it difficult to get the desired quality of circle CEOs as complexities of telecom businesses are immense'*

### **It's all about the management!**

"You press every lever, but the lever which you cannot press, cannot locate is the management lever. Some of the levers are simple ones like capacity utilization, negotiation and advantages of economies of scale and this and that. But telecom is a very management intensive business and it requires a lot of decentralization, lot of processes, lot of application of mind and the impact of all this touches every cost. But it is hard to demarcate it, so I think that is something which is also helping us." This was the comment made by Mr. Sanjeev Aga, ex Managing Director of Idea Cellular in its July 2010 earnings call at the peak of price war in the Indian telecom industry.

The Indian telecom industry is not very profitable and even the successful companies are marred by dismal return ratios. Bharti used to make astounding margins of 40%+ and return on equity of 40% until 2010, before the 3G auctions and the hyper-competition era. Competition, compounded by capex requirements for spectrum, has depressed return ratios. The true success story in the last six years of Indian telecom is that of Idea Cellular. The success of the company is built on the solid foundations of imaginative management thinking, motivated work force, and decentralization of decision making, which led to superior execution and consistent above-market growth rates.

### **Circle-level management plays critical role in execution of the vision**

Decentralization works in the Indian context because it is a diversified country and most of the action takes place at the circle level. All telecom

operators have strong and weak circles. Circle CEOs play a very critical role in executing the company's vision. Getting quality talent at the circle level is a big challenge for telecom operators. Even incumbents like Bharti, Idea, and Vodafone find it difficult to get the desired quality of circle CEOs as complexities of telecom businesses are immense. Telecom is highly complex because there are four interplays in the industry:

#### **1. It is a consumer business:**

Branding and distribution drive revenues

#### **2. It is a services industry:**

customer care sustains revenues

#### **3. It is a highly capital intensive industry:**

continuous investments are needed for growth

#### **4. It is a regulated industry:**

sometimes negative; sometimes positive

Circle CEOs should be capable of handling multiple issues ranging from branding to regulation. There have been enough examples in the past where uninspiring managements at the circle level have led to significant underperformance and loss of market share for operators. Delhi Circle for Airtel is one such case in point. The performance of Delhi circle from 2009-2013 has been short on execution, notwithstanding the circle being the company's home market and one of the most important and profitable. On the other hand, Idea's performance in Mumbai and Gujarat circles has been exemplary. Success in telecom business depends on the vision of the top management and execution at the circle level with sufficient degree of freedom at various levels backed by innovative and motivated workforce.

## Decoding the DNA of Reliance Group

The DNA of Reliance comes from years of driving efficiency in the petrochemical business. Reliance's style of management is contrarian to the Indian telecom industry, with a highly centralized decision making structure. Its strengths lie in project execution, sourcing, commercial negotiations, and maintaining strict control over operating expenses. Commercial people in the Reliance Group are more powerful vs. its people in marketing.

Most importantly, Mukesh Ambani himself maintains a very high degree of control over the operations and is part of all major strategic decisions. Mr. Ambani works with a very select group of people and some of them are old-timers — for Jio these include the highly skilled project specialists like Mr. Manoj Modi and Mr. Sanjay Mashruwala, who have tremendous experience in taking up new ventures, nurturing and growing them. Mr. Mukesh Ambani himself is a telecom visionary and his experience in the domain will be one of the deciding factors of success for Reliance Jio Infocomm.

## MUKESH'S PEOPLE

Mr. Mukesh Ambani believes in keeping a vice-like grip on his businesses. He runs his business through his trusted lieutenants, some of whom are old-timers in the Reliance Group.



**Manoj Modi**

**Sanjay Mashruwala**

**Sandip Das**

**Mahendra Nahata**

Mr. Manoj Modi was Mr. Mukesh Ambani's classmate at school and college. He has overseen all large projects of Reliance Industries including petroleum, Infocomm and retail.

**Key points:** considered to be Mr. Mukesh Ambani's right hand man.

Mr. Sanjay Mashruwala is Managing Director, Reliance Jio. He is regarded as a project management specialist in the group and also played a key role in the optic fibre deployments of Reliance Infocomm.

**Key points:** considered to be a project management expert and a Reliance old-timer

Mr. Sandip Das is Group President, Reliance Jio. His illustrious telecom career spans over three decades across leading global telcos. He was previously working as Executive Director and Chief Executive Officer of Maxis Communications Berhad, the largest telecommunications company in Malaysia, prior to which he was deputy Managing Director at Hutchison Essar Limited (now known as Vodafone India Limited).

**Key points:** vast experience in global telecom services.

Mr. Mahendra Nahata, Managing Director and co-founder of HFCL. Reliance Industries entered the telecom space by acquiring 95% stake in Infotel Broadband; an HFCL venture and is now known as Reliance Jio Infocomm Limited. HFCL is executing the fibre optic linkages for Reliance Jio.

**Key points:** responsible for deploying the fibre optic network for Reliance Jio

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# The true visionary of Indian Telecom — but also a case of Abhimanyu and the Chakravyuh

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All said and done, the Indian telecom sector's success is built on the vision of Mr. Mukesh Ambani. Reliance Infocomm changed the rules of the game when it launched in 2002. Mobile, from being a product of conspicuous consumption, became a necessity after the launch of Reliance Infocomm's CDMA services. Reliance Infocomm was the brain-child of Mr. Mukesh Ambani.

Mr. Ambani conceptualized the business, launched it, and scaled it up, but had to part with it midway because of the family restructuring. The experience with Reliance Infocomm helped MDA to gain keen insights into the business of telecommunications, but his experience in managing the prepaid business is very limited and most shortcomings of Reliance Infocomm's CDMA product occurred in the prepaid business. Reliance Infocomm launched prepaid products in mid-2004 and the change of ownership was completed in early 2006. MDA did not have to deal with the problems of the CDMA handset ecosystem, issues of distribution expansion, and multiple other issues that operators have faced over the years. This limits his expertise to launching and scaling up the business, but sustaining the scale and managing the business profitably over the longer run was an experience that he was unable to gain.

Incumbents, on the other hand, have had years of experience in driving efficiency and profitability in an industry marked by continuous price wars. Now, with an impending data revolution, the market will again discover new ways of doing business and running operations more efficiently. The incumbents are preparing themselves by recruiting younger people in the management, but Jio's adaptability to the changing paradigms will have far-reaching consequences on the Indian telecom market.

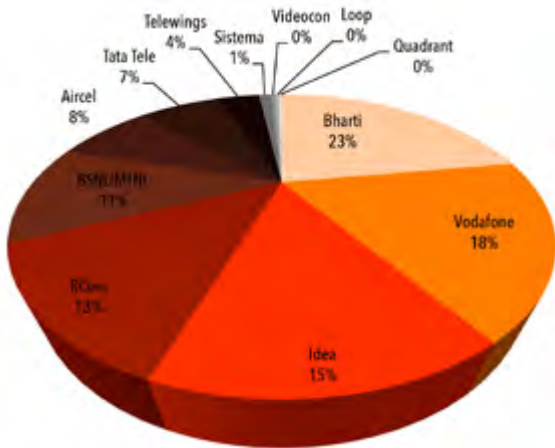
## **Only the paranoid survive!**

The road ahead for Jio is tough — this would be an understatement of the real challenge before Mukesh Ambani and team. The industry is at an inflection point with changing consumer preferences, usage patterns, and changes in technology. Jio has the edge in technology, but technological advantages are not sustainable as technology in telecom is not proprietary (from the operator's standpoint); however, an understanding of the consumer and ability to build and scale brands are long-term sustainable advantages.

Jio will definitely come up with a very attractive offer and the company will also manage to scale up the subscriber base but the real challenge will be to sustain business momentum. Reliance Infocomm faltered after an initial big launch — it had to change its technology platform from CDMA to GSM as the former suffered from scalability issues. While Reliance Infocomm had the advantages of under-penetrated market and low competitive intensity in 2002, Jio in 2014 has none of these advantages as the market has evolved with multiple operators in operation.

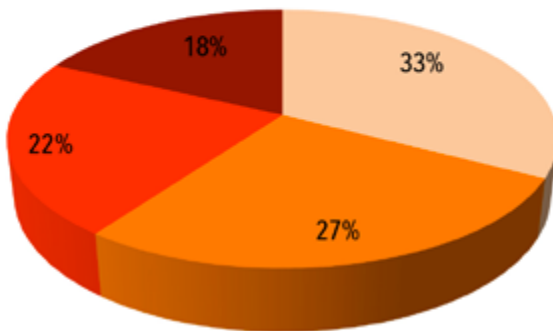
Jio will have to look at completely new strategies apart from product offering, as there is a plethora of telecom products. It will not only have to manage its offers, marketing and other aspects better than incumbents, but will also have to manage the market structure in order to attain profitability — however, with the backing of Reliance Industries, it does have the financial muscle to consolidate the industry.

Jan 2014 subscriber market share (India)



Share of data spectrum wins (in Feb 2014 auctions)

■ Bharti ■ Vodafone ■ R-Jio ■ Idea



Source: TRAI, DoT, PhilipCapital India Research

There is an opportunity to consolidate the market, but the wait for profitability is very long!

In our telecom industry, the industry structure determines profitability and Jio is widely seen as a consolidator. Typically, the top 4 (at max) players are profitable in any telecom market. The Indian market has 10 active players — Jio will be the 11th. In the current market structure, Jio does not seem to have a business case, but the structure is likely to change in the forthcoming years.

After Jio's launch, the service provider space will be bifurcated — between those who can effectively cater to the needs of mobile data users and those who cannot. The latter may be compelled to combine, collaborate, or consolidate with other players, as they will not be able to compete on the parameters of quality of service and range of services. Clearly, the steps taken will have an incisive influence for the competitive landscape for many years to come. The recent auctions have shown the way for consolidation — the amount of spectrum held (for data use) by telecom operators is a key indicator of where telephony is headed.

The current M&A norms are not very conducive for acquisitions but considering the possibility of a new government with an outlook on easing the exit barriers for telecom players, one can expect a new set of norms, which will hasten the process of market consolidation. Jio, with its need for a quality voice product and a dedicated front end for faster access to the market, is likely use any relaxation in norms to consolidate the market. It will have to tread cautiously, build a quality brand with a mass-market appeal over the next few years, and bide its time to consolidate the market — this will decide the profitability of the company and the industry.

# Dissecting battleground KASHI

NaMo wave blowing strong

Ground Zero's interactions with residents and local political workers reveal that NaMo, although from Gujarat, finds a lot of acceptance in Varanasi and UP in general. His backward class credentials and Kalyan Singh would help the BJP to consolidate votes along with the traditional vote bank of the Brahmins and other upper castes.

BY KINSHUK TIWARI



Varanasi, one of the most important spiritual centers for Hindus has also become the most sought-after political destination in the upcoming LS elections. Two similar-sounding words have caught the general fancy and have become local favorites. First is the unassuming Momo (the North Eastern food delicacy) and the second is NaMo (Narendra Modi – the National Democratic Alliance’s Prime Ministerial candidate). It is quite interesting to know that neither of them really originated in Varanasi but still are omnipresent. Everyone seems to be discussing the upcoming elections and how this time round it is going to be different vs. previous ones.

### Yes there’s a strong ‘NaMo wave’

Whether it was the taxi driver, “Is baar toh Modi hi jeetengey (this time only Modi will win),” or a student at Benaras Hindu University, “Hamara man hai BJP ko vote dene ka, sabko toh deke dekh liya (I feel like voting for the BJP, have tried voting for all others),” or the boatman, “Atal ji ki party se hain toh mahangayi toh kam kar dengey” (If he (Modi) is from former PM Atal Vajpayee’s party (BJP) at least he will be able to tame inflation) — Ground Zero observed that the NaMo mantra was the common thread across voters.

### BJP workers confident of success in UP

The local BJP workers, like one Kshetriya Adhyaksh (regional in-charge, UP BJP) who is in charge of the party work in 14 districts sounded very confident of BJP’s performance in UP, “Hamara target toh 60% of the seats lane ka hai (our target is to win 60% of UP’s 80 seats)”. He was also confident that, “Modi 1-2 lakh vote se jeetengey (Modi

will win by 1-2 lakh votes in Varanasi)”. He outlined that development, inflation and law and order are the main issues. Ground Zero’s interactions also reveal that people believe without Modi, BJP would have been in shambles, clearly confirming the ‘Modi wave’.

### NaMo’s backward-caste credentials connecting with voters; development mantra an added advantage...

“Apne kabhi socha tha kya ki ek backward class wala aadmi PM banega (have you ever thought that a person from a backward caste can become the country’s Prime Minister),” said Rajesh Patel, a small businessman. In the Hindi heartland, politics continue to remain driven by caste preferences. This has indeed become one of the strongest factors favoring NaMo’s PM candidature and his Varanasi contest.

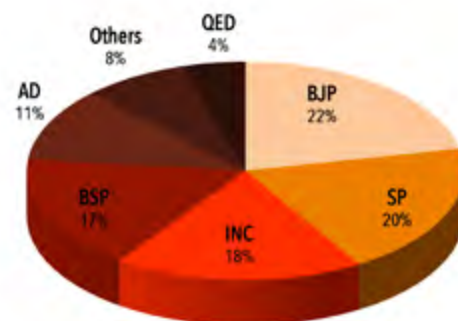
Traditionally the Brahmin and upper caste votes have been the BJP’s strong point until they lost sight of the game and other political parties like BSP and SP gained. If one peeks into the electorate in Varanasi, one gets the clear idea on how these caste dynamics play a critical role in the elections — out of the total of close to 1.6mn voters in Varanasi, the so-called upper-caste (Brahmin, Baniya, Bhumihar, Patel (Kurmi) and Rajpoot) votes constitute 42-49% of total votes. These votes are expected to go towards BJP. With local tie-ups like the Apna Dal (predominantly Patels) BJP stands to gain. Development, corruption, and law and order are points people discuss, but at the polling booth, caste preferences remain dominant.

### ...bolstered by Kalyan Singh, a regional champion

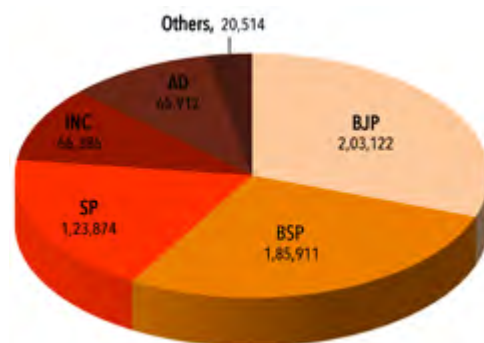
### BATTLEGROUND VARANASI

As per election commission data for the 5 Varanasi assembly constituencies – Rohaniya, Varanasi North, Varanasi South, Varanasi Cantt and Sevapuri, the voters in the upcoming Lok Sabha elections are 1.66mn. The polling trends in the past two elections, viz. UP Assembly 2012 and Lok Sabha 2009 are as follows:

### 2009 Assembly verdict - electors 1.56mn



### 2012 Assembly verdict - electors 1.57mn



Interesting aspects of the upcoming Lok Sabha election from Varanasi’s perspective include: 1) the entry of Aam Aadmi Party’s founder Arvind Kejriwal in the election fray, 2) the alliance between the BJP and AD, and 3) a proxy of Mukhtar Ansari (a 2009 Lok Sabha runner from Varanasi) now contesting through QED

### Abbreviations:

AD = Apna Dal, BJP = Bharatiya Janta Party, BSP = Bahujan Samajwadi Party, QED = Quami Ekta Dal, SP = Samajwadi Party

“Kalyan Singh ji ka 8-10 seat pe achha pakad hai, backward class ka vote kheechhega (Kalyan Singh, former UP CM will attract votes from backward castes, he’s got a stronghold over 8-10 seats),” said one of the local BJP worker. This is perhaps the only strongly local tailwind to BJP and NaMo’s campaign.

### **BJP’s competition in UP: SP facing massive anti-incumbency while BSP is regrouping**

The SP government in the state seems to be facing massive anti-incumbency. People sight law and order, power, and development as shortcoming. BSP seems to have got

its act right in terms of having a cadre-based system for choosing candidates and will be a force to reckon. Congress seems to be in bad shape as its mindshare is very limited.

### **NaMo: Not a son of the soil; but no outsider stigma**

Ground Zero’s interactions with residents and local political workers reveal that NaMo, although from Gujarat, finds a lot of acceptance in Varanasi and UP in general. His backward class credentials and Kalyan Singh would help the BJP to consolidate votes along with the traditional vote bank of the Brahmins and other upper caste. While

everyone is confident of hitting the jackpot, it remains to be seen which way the hawa (wind) blows. The BJP is basking in the mass appeal of its PM candidate, BSP appeals to all the castes by giving tickets to upper class candidates and backward alike, and the SP and Congress are confident of their ‘secular’ credentials getting them the votes. Whatever may be the outcome, the elections always are ‘different’ in India.

PS: things not be missed when you visit Kashi 1) Evening Arti on the Dasaswamedh Ghat 2) Kashi Chat centre near the ghat , 3) Banarasi Paan , 4) Banarasi Lassi and last but not the least MOMOs..

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## **Not so kind words for Arvind Kejriwal**

The Aam Admi Party and congress did not announce their candidates until 24th March, so Ground Zero could not get many reactions from the public. This is what a student, Rameshwar Majhi, had to say about Arvind Kejriwal — “Bahot tej peak out ho gaye — He’s peaked out very soon; thoda Delhi ka sarkar chalayey, fir baaki ka desh main fight kartey toh achha rahta’ — if he’d effectively governed Delhi and then asked for a national mandate, it would’ve been more appropriate”.





# Google of the *Indian Television Industry*



In an interaction with Ground Zero, Mr. Paritosh Joshi, a technical committee member of the Broadcast Audience Research Council talks about Evolving trends in the television space, how audience measurement is helping capture consumer preferences and the prospects of monetising reach

**BY VIVEKANAND SUBBARAMAN & NAVEEN KULKARNI**

**The BARC was started a year and a half ago (Sep 2012) by the Indian Broadcasting Foundation (IBF), the Indian Society of Advertisers (ISA) and the Advertising Agencies Association of India (AAAI). Paritosh is regarded as the 'Google of the TV industry' and he runs Provocateur Advisory, an independent media and communications consultancy. He also chairs the technical committee for the Indian Readership Survey and sits on the board of the Media Research Users Council. Earlier he was CEO, STAR CJ Network India Pvt. Ltd., a 24x7 home-shopping channel and his eclectic career path spans 27 years, including FMCG at P&G, ITC and the Maharaja Organisation, Sri Lanka, and the media at Business Standard and STAR, among others.**

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Here are some excerpts from our interaction:

**Q: What is the key objective of a television audience measurement system and what are the trends emerging in the Indian television viewing landscape?**

A: Considering the size and diversity of India, we need 'television audience measurement' to develop better consumer insight. Television still remains the cheapest mode of entertainment and information — people get a TV set when they rise from poverty and become a part of the consuming classes. Urbanisation and better electricity availability are also driving television penetration — now almost two-third of India's households have television sets and half the TV homes in India are digital. FY15 is the tipping point and by year-end over half of the television industry will be digital.

Talking about trends...I see several from the Indian television viewing perspective...

**One is that audiences are splintering** – This is because there are more channel options, there is more localisation of content.

**The other change I can see is that television is shifting from community to individual viewing** – broadcasters and television distribution companies (Star, Zee, Tata Sky, Dish TV) are offering alternate means of consuming content...what we call OTT content (see box below). This is driving a change in the way people are watching TV....

from a community or living room phenomenon, TV has become more of an individual viewing phenomenon. Another important trend is that the days of appointment-based TV viewing are also changing because we have things like digital video recorders, video on demand, and of course, thanks to the internet, OTT viewing.

**The most important takeaway that I see from these changing viewing trends is that audience measurement also needs to be dynamic enough to continue capturing viewer prefer-**

**Over-the-top content refers to delivery of video, audio and other media over the internet. The provider may be aware of the contents of the Internet Protocol packets but may or may not be responsible for, nor be able to control, the viewing abilities, copyrights, and/or other redistribution of the content.**

**ences. So the mantra of audience measurement is evolving from measuring print, TV and radio to text, video and audio.**

**Q: Considering the changes in the viewer dynamics, how will BARC keep pace with the consumer?**

A: The BARC wants to ensure that audience preferences can be measured irrespective of the mode of video access. For this it has developed an audio encoding solution. What happens is broadcasters will have to send out an encrypted and encoded ultrasound signature along

with their content. Because that signature has a frequency of greater than 20 kHz it is essentially inaudible. The signature contains the channel ID and a timestamp that is relayed every 10 seconds – so for example it will read something like this -- Star Plus, 25th March 2014, 10:20:40 AM. The signature is part of the audio track of the programming and cannot be stripped out of the signal. The advantage of this approach is that the encryption can be detected across devices – from the people-meter on the television set, on a digital device, and so on.

Even if two channels show the exact same content (movie/event), the time and channel stamps will make it easy to know exactly which channel was watched. Another good feature is that timestamp is compared with the system time and this helps broadcasters understand if the content was played real-time or time-shifted.

With alternate device viewing happening on digital media like laptops, through mobiles via apps, on YouTube and so on, audience measurement has become more broad-based as digital is completely addressable. BARC's audio-encoding solution is future ready and can facilitate measurement even if the video-consumption pattern changes and even if it happens through alternate viewing modes.

**Q: What is your view on the recently issued policy guidelines for television rating agencies by the Ministry of Information and Broadcasting (MIB)?**

A: What I believe is that the guidelines will strengthen the television ratings framework that the BARC has established. The television industry and its stakeholders have been working on improving audience measurement since mid-2006. The guidelines cover several operational aspects of television audience measurement that BARC has already deliberated -- these include principles

of conflict of interest, ownership, panel selection and so on. There is no subsidy or handout that the government is providing. Public funding is also limited and is only indirectly made available through Prasar Bharti, which is part of the IBF.

To my mind the MIB's guidelines are just about the government making itself 'feel good'; but, there are some positive aspects such as the panel-size criterion, which entails that television rating agencies need to start off with at least 20,000 households and will have to expand their panel size to 50,000 households in three years. Mandating a panel size is good as it puts pressure on the BARC to achieve a sizeable scale.

**A panel is a statistical sample and basically means a decided number of families/homes that accept the installation of a 'people meter' on all the TV sets in their home. These homes provide the statistical estimates of television viewing.**

**Q: For a while now, the industry has been concerned about the high cost of panel expansion. What is BARC's solution to this?**

A: The people meter cost has been brought down significantly — it used to cost 150,000 rupees per device but now costs 20,000 rupees. Even with the other overheads, with the same budget, more meters can now be installed.

Another important thing is that costs will get defrayed easily now because of the new opportunities that can arise with the increased granularity of data. For example, decisions on launches of regional channels may be taken on the basis of viewership in these areas.

I believe that the cost of panel expansion is not going to be a challenge as India's growing discretionary spending justifies investment in an audience-measurement system that reveals a lot more than just ratings.

**Q: Is the BARC to ramp up and cover 20,000 households in the initial phase?**

A: The BARC has already placed orders for the requisite amount of people meters. The baseline study that will be used to recruit the panel is complete and the data will be available to BARC very soon. Then 20,000 homes need to be recruited to be part of the panel and people meters need to be deployed in their homes. BARC will be up and running by Q4 2014. Please note that BARC's deployment will be independent of the existing TAM setup.

**Q: Can ad-yields grow for broadcasters once the panel expansion covers newer areas? Can the industry make a transition from cost-per-rating-point (CPRP)-led ad-pricing to cost-per-thousand-(CPT)-households-reached model?**

A: Broadcasters will be able to realise the full potential of advertising revenue only if there's a robust method to measure the audience reached. Till now, the system would measure only 60% of the Indian TV landscape. So the current TV CPTs are a fraction of print CPTs even as print CPTs are already very low vis-a-vis regional/global benchmarks. Marketers are actually enjoying very low rates for the audience that they reach. Over the long-run, as reach improves, there is significant scope for advertising rates to increase.

However, there are challenges on the path such as the mindset of Indian advertisers who rely primarily on intuition and gut feel. Also, the advertising space is dominated by FMCG players who will resist ad-rate increases as such a move will severely impact their profitability.

Even so, in the long-run, as advertisers become data-driven, rate increases commensurate to the increased reach will happen. Additionally, with the growth of newer categories on television (such as financials, auto, telecom, and online and offline retail), there's been a fragmentation

of advertisers and because of this broadcasters' bargaining power is improving.

One thing you should note is that better measurement systems help broadcasters design viewer-centric content. This also contributes to the monetisation of the investment made in metering and reaching new areas.

**Q: What is your take on the road ahead for broadcasters?**

A: Broadcasters will need to compete harder to stay relevant in a market where viewership is splintering and driven by anywhere-anytime consumer behaviour. However, there are some key trends emerging that can increase the bargaining power of broadcasters...

The most important I believe is that advertisers are getting fragmented — so it's not only FMCG...there are so many new categories such as telecom, e-commerce, retail and so on... and the dominance of FMCG is decreasing. As a result, broadcasters are at a better bargaining position vis-a-vis advertisers. With the increase in rates, advertisers will also focus on driving 'premiumisation' through television advertising. What is adding to this trend is that revenue contribution from subscription is rising and this will reduce broadcaster' dependence on advertising.

# Indian Economy – Trend Indicators

## Monthly Economic Indicators

Growth Rates (%)	13-Jan	13-Feb	13-Mar	13-Apr	13-May	13-Jun	13-Jul	13-Aug	13-Sep	13-Oct	13-Nov	13-Dec	14-Jan	14-Feb
IIP	2.5	0.6	3.5	1.5	(2.5)	(1.8)	2.6	0.4	2.7	(1.2)	(1.3)	(0.2)	0.1	-
PMI	53.2	54.2	52.0	51.0	50.1	50.3	50.1	48.5	49.6	49.6	51.3	50.7	51.4	52.5
Core sector	8.3	(2.4)	3.2	2.3	2.3	0.1	3.1	3.7	8.0	(0.6)	1.7	2.1	1.6	-
WPI	7.3	7.3	5.7	4.8	4.6	5.2	5.9	7.0	7.0	7.2	7.5	6.4	5.0	4.7
CPI	10.8	10.9	10.4	9.4	9.3	9.9	9.6	9.5	9.8	10.2	11.2	9.9	8.8	8.1
Money Supply	12.7	12.8	13.6	12.4	12.1	12.8	12.5	12.2	12.5	13.0	14.5	14.9	14.5	14.5
Deposit	13.2	12.8	14.4	13.4	13.5	13.8	13.5	13.1	14.1	14.4	16.1	15.8	15.7	15.9
Credit	16.1	16.3	14.1	14.6	14.2	13.7	14.9	17.1	17.8	16.6	15.5	14.5	14.7	14.4
Exports	1.6	5.9	7.0	1.7	(1.1)	(4.6)	11.6	13.0	11.2	13.5	5.9	3.5	3.8	(3.7)
Imports	4.8	1.7	(2.9)	11.0	7.0	(0.4)	(6.2)	(0.7)	(18.1)	(14.5)	(16.4)	(15.2)	(18.1)	(17.1)
Trade deficit <sup>(USD Bn)</sup>	(19.0)	(14.1)	(10.3)	(17.8)	(20.1)	(12.2)	(12.3)	(10.9)	(6.8)	(10.6)	(9.2)	(10.1)	(9.9)	(8.1)
Net FDI <sup>(USD Bn)</sup>	2.7	2.6	1.3	2.8	1.9	1.8	1.7	1.7	3.3	1.8	2.4	1.9	0.8	-
FII <sup>(USD Bn)</sup>	6.1	4.2	1.2	1.6	6.7	(8.7)	(4.7)	(2.0)	0.2	(0.4)	-	2.9	2.6	-
ECB <sup>(USD Bn)</sup>	3.5	2.3	5.1	1.1	2.5	2.0	3.7	2.3	3.3	1.9	2.2	4.6	1.8	-
NRI Deposits <sup>(USD Bn)</sup>	0.7	0.7	0.7	1.3	1.7	2.5	1.3	1.2	5.9	4.5	14.6	2.0	0.7	-
Dollar-Rupee	54.3	53.8	54.4	54.4	55.1	58.4	60.6	63.0	63.8	61.6	62.6	61.9	62.1	62.2
FOREX Reserves <sup>(USD Bn)</sup>	295.8	291.9	293.4	296.4	287.9	284.6	280.2	275.5	276.3	283.0	291.3	295.7	292.2	291.1

## Quarterly Economic Indicators

Balance of Payment <sup>(USD Bn)</sup>	Q3FY12	Q4FY12	Q1FY13	Q2FY13	Q3FY13	Q4FY13	Q1FY14	Q2FY14	Q3FY14
Exports	71.1	80.2	75.0	72.6	74.2	84.8	73.9	81.2	79.8
Imports	118.8	131.7	118.9	120.4	132.6	130.4	124.4	114.5	112.9
Trade deficit	(47.7)	(51.5)	(43.8)	(47.8)	(58.4)	(45.6)	(50.5)	(33.3)	(33.2)
Net Invisibles	28.3	29.8	26.8	26.7	26.6	27.5	28.7	28.1	29.1
CAD	(19.4)	(21.8)	(17.1)	(21.1)	(31.8)	(18.2)	(21.8)	(5.2)	(4.1)
CAD (% of GDP)	4.2	4.4	4.0	5.1	6.5	3.6	4.9	1.2	0.8
Capital Account	8.0	16.6	16.5	20.7	31.5	20.5	20.6	(4.8)	23.8
BoP	(12.8)	(5.7)	0.5	(0.2)	0.8	2.7	(0.3)	(10.4)	19.1

GDP and its Components <sup>(YoY, %)</sup>	Q3FY12	Q4FY12	Q1FY13	Q2FY13	Q3FY13	Q4FY13	Q1FY14	Q2FY14	Q3FY14
Agriculture & allied activities	6.7	2.0	1.8	1.8	0.8	1.4	2.7	4.6	3.6
Industry	4.4	3.9	(0.6)	0.1	2.0	2.0	(0.9)	1.5	(1.2)
Mining & Quarrying	(0.4)	4.2	(1.1)	(0.1)	(2.0)	(3.1)	(2.8)	(0.4)	(1.6)
Manufacturing	4.5	3.6	(1.1)	-	2.5	2.6	(1.2)	1.0	(1.9)
Electricity, Gas & Water Supply	9.7	5.6	4.2	1.3	2.6	2.8	3.7	7.7	5.0
Services	6.4	7.5	6.7	6.5	6.1	6.3	6.3	5.8	6.7
Construction	7.6	6.9	2.8	(1.9)	1.0	4.4	2.8	4.3	0.6
Trade, Hotel, Transport & Communications	3.9	6.1	4.0	5.6	5.9	6.2	3.9	4.0	4.3
Finance, Insurance, Real Estate & Business Services	11.0	11.3	11.7	10.6	10.2	9.1	8.9	10.0	12.5
Community, Social & Personal Services	4.7	6.0	7.6	7.4	4.0	4.0	9.4	4.2	7.0
GDP at FC	6.1	6.0	4.5	4.6	4.4	4.8	4.4	4.8	4.7

## Annual Economic Indicators and Forecasts

Indicators	Units	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14E	FY15E
Real GDP growth	%	9.5	9.6	9.3	6.7	8.6	8.9	6.7	4.5	4.6	5.2
Agriculture	%	5.1	4.2	5.8	0.1	0.8	8.6	5.0	1.4	4.0	2.4
Industry	%	8.5	12.9	9.2	4.1	10.2	8.3	6.7	0.9	-	2.6
Services	%	11.1	10.1	10.3	9.4	10.0	9.2	7.1	6.2	6.0	6.6
Real GDP	Rs Bn	32,531	35,644	38,966	41,587	45,161	49,185	52,475	54,821	57,486	60,475
Real GDP	US\$ Bn	733	787	967	908	953	1,079	1,096	1,008	958	1,008
Nominal GDP	Rs Bn	36,925	42,937	49,864	56,301	64,778	77,841	90,097	1,01,133	1,13,205	1,26,723
Nominal GDP	US\$ Bn	832	948	1,237	1,229	1,367	1,707	1,881	1,859	1,887	2,112
Population	Mn	1,106	1,122	1,138	1,154	1,170	1,186	1,202	1,219	1,236	1,254
Per Capita Income	US\$	753	845	1,087	1,065	1,168	1,439	1,565	1,525	1,526	1,685
WPI (Average)	%	4.5	6.6	4.7	8.1	3.8	9.6	8.7	7.4	6.0	5.0-5.5
CPI (Average)	%	4.2	6.8	6.4	9.0	12.4	10.4	8.3	10.2	9.5	7.5-8.0
Money Supply	%	15.5	20.0	22.1	20.5	19.2	16.2	15.8	13.6	13.0	14.0
CRR	%	5.0	6.0	7.5	5.0	5.8	6.0	4.8	4.0	4.0	4.0
Repo rate	%	6.5	7.5	7.8	5.0	5.0	6.8	8.5	7.5	8.0	8.0
Reverse repo rate	%	5.5	6.0	6.0	3.5	3.5	5.8	7.5	6.5	7.0	7.0
Bank Deposit growth	%	24	24	22	20	17	16	14	14	14	15
Bank Credit growth	%	37	28	22	18	17	22	17	15	15	16
Centre Fiscal Deficit	Rs Bn	1,464	1,426	1,437	3,370	4,140	3,736	5,160	5,209	5,245	5,798
Centre Fiscal Deficit	% of GDP	4.0	3.3	2.9	6.0	6.4	4.8	5.7	5.2	4.6	4.6
Gross Central Govt Borrowings	Rs Bn	1,310	1,460	1,681	2,730	4,510	4,370	5,098	5,580	5,639	6,656
Net Central Govt Borrowings	Rs Bn	954	1,104	1,318	2,336	3,984	3,254	4,362	4,674	4,233	4,759
State Fiscal Deficit	% of GDP	2.4	1.8	1.5	2.4	2.9	2.1	2.3	2.2	2.5	2.5
Consolidated Fiscal Deficit	% of GDP	6.4	5.1	4.4	8.4	9.3	6.9	8.1	7.4	7.1	7.1
Exports	US\$ Bn	105	129	166	189	182	251	310	307	317	326
YoY Growth	%	23.4	22.6	28.9	13.7	(3.5)	37.6	23.4	(1.0)	3.3	3.0
Imports	US\$ Bn	157	191	258	309	301	381	500	502	466	500
YoY Growth	%	32.1	21.4	35.1	19.7	(2.5)	26.7	31.1	0.5	(7.2)	7.4
Trade Balance	US\$ Bn	(52)	(62)	(92)	(120)	(118)	(130)	(190)	(196)	(149)	(174)
Net Invisibles	US\$ Bn	42	52	76	92	80	85	112	108	111	120
Current Account Deficit	US\$ Bn	(10)	(10)	(16)	(28)	(38)	(45)	(78)	(88)	(38)	(54)
CAD (% of GDP)	%	(1.2)	(1.0)	(1.3)	(2.3)	(2.8)	(2.6)	(4.2)	(4.7)	(2.0)	(2.6)
Capital Account Balance	US\$ Bn	25.5	45.2	106.6	7.8	51.6	62.0	67.8	89.3	52.5	64.5
Dollar-Rupee (Average)		44.4	45.3	40.3	45.8	47.4	45.6	47.9	54.4	60.0	60.0

# PhillipCapital India Coverage Universe: Valuation Summary

Name of company	Sector	CMP Rs	Mkt Cap Rs mn	Net Sales		EBITDA		PAT		EPS (Rs)		EPS Growth (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)			
				FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E
Chambal Fertilisers	Agri Inputs	40	16,751	86,903	87,441	6,120	7,829	2,595	3,260	6.2	7.8	14.5	25.6	6.5	5.1	0.8	0.7	8.5	6.2	13.2	15.2	4.7	6.0
Coromandel Fertilisers	Agri Inputs	219	62,073	99,682	1,09,141	7,886	10,010	3,686	5,348	13.0	18.9	-14.8	45.1	16.8	11.6	2.6	2.3	11.5	9.0	15.3	19.6	13.9	18.4
Tata Chemicals Ltd	Agri Inputs	286	72,911	1,61,003	1,55,404	19,820	20,983	5,331	6,588	20.9	25.9	-41.6	23.6	13.7	11.1	1.1	1.0	6.6	5.7	7.9	9.2	7.5	7.3
Deepak Fertilisers	Agri Inputs	118	10,421	31,498	32,744	4,862	4,882	1,901	2,251	21.6	25.5	47.3	18.4	5.5	4.6	0.7	0.7	4.2	3.9	14.1	15.1	9.7	10.1
Kaveri Seeds	Agri Inputs	640	44,016	10,220	11,896	2,194	2,604	2,096	2,456	30.6	35.8	65.4	17.2	20.9	17.9	8.7	6.3	19.4	16.0	41.4	35.3	47.8	40.3
PI Industries	Agri Inputs	270	36,688	16,395	19,702	2,948	3,533	1,773	2,184	13.0	16.0	81.3	23.1	20.7	16.8	5.2	4.0	12.9	10.6	25.1	23.7	24.3	24.6
Rallis India	Agri Inputs	169	32,807	17,345	19,235	2,658	2,822	1,516	1,698	7.8	8.8	27.4	12.0	21.6	19.3	4.7	4.1	12.5	11.5	21.9	21.1	20.3	20.1
United Phosphorus	Agri Inputs	183	78,627	1,04,470	1,16,178	18,002	19,669	8,887	10,566	20.1	23.9	9.7	18.9	9.1	7.7	1.5	1.3	5.8	5.0	17.0	17.5	11.3	12.6
Bajaj Auto	Automobiles	2056	5,94,924	2,00,505	2,23,739	42,374	46,397	34,670	37,851	119.8	130.8	12.0	9.2	17.2	15.7	6.2	5.0	13.9	12.7	36.3	32.0	37.0	33.0
Bharat Forge	Automobiles	409	95,236	59,170	59,525	10,228	11,528	4,204	5,357	18.1	23.0	84.5	27.4	22.7	17.8	3.7	3.3	10.9	9.3	16.5	18.4	11.7	13.0
Hero MotoCorp	Automobiles	2247	4,48,598	2,50,923	2,73,622	35,286	38,087	20,510	26,135	102.7	130.9	-3.2	27.4	21.9	17.2	8.1	6.9	12.7	11.7	37.0	40.1	37.6	42.0
Ashok Leyland	Automobiles	23	60,397	1,07,470	1,27,060	4,499	9,268	(3,314)	1,208	-1.2	0.5	-329.9	-136.4	-18.2	50.0	1.5	1.5	24.3	12.0	-8.3	3.1	-0.2	4.1
Mahindra & Mahindra	Automobiles	967	5,95,722	4,24,945	4,82,519	48,919	55,617	34,833	39,670	56.7	64.6	3.7	13.9	17.0	15.0	3.4	2.9	12.6	11.0	20.0	19.3	17.0	17.0
Maruti Suzuki	Automobiles	1932	5,83,619	4,13,411	4,71,751	52,581	60,317	28,585	33,321	94.6	110.3	19.5	16.6	20.4	17.5	2.9	2.5	10.9	9.4	14.1	14.3	13.7	14.3
Apollo Tyres	Automobiles	157	79,207	1,34,807	1,44,550	17,067	18,011	8,072	9,024	16.0	17.9	39.7	11.8	9.8	8.8	1.9	1.6	5.9	5.4	21.3	19.6	15.0	14.8
Tata Motors	Automobiles	396	11,64,965	23,75,241	27,42,017	3,69,394	4,33,713	1,60,526	1,82,478	50.3	57.2	62.3	13.7	7.9	6.9	2.3	1.7	3.8	3.4	29.4	25.1	16.7	16.0
ABB India	Cap Goods	817	1,73,140	76,158	80,624	4,265	7,354	2,121	4,165	10.0	19.7	-19.6	96.3	81.6	41.6	6.4	5.8	41.1	23.7	7.8	14.0	7.8	12.2
BGR Energy	Cap Goods	120	8,685	35,204	40,640	4,281	4,820	1,329	1,622	18.4	22.5	-18.0	22.1	6.5	5.4	0.7	0.6	6.4	7.0	10.2	11.6	5.9	5.9
BHEL	Cap Goods	199	4,87,807	3,84,099	3,51,777	50,236	42,379	37,275	30,574	15.2	12.5	-43.6	-18.0	13.1	16.0	1.5	1.4	8.2	9.3	11.3	8.6	9.2	7.3
Alstom T&D	Cap Goods	230	58,865	34,326	38,093	3,103	4,015	1,119	1,879	4.4	7.3	-10.8	67.9	52.6	31.3	4.7	4.3	19.8	14.9	10.4	14.3	10.8	12.7
Crompton Greaves	Cap Goods	162	1,01,658	1,34,171	1,44,197	6,762	8,871	2,672	5,181	4.3	8.3	223.4	93.9	38.0	19.6	2.6	2.4	17.0	12.1	6.8	12.0	5.5	8.8
Jyoti Structures	Cap Goods	32	2,633	30,703	30,855	2,964	2,947	722	641	8.8	7.8	11.3	-11.4	3.6	4.1	0.3	0.3	3.7	3.6	8.9	7.4	10.9	10.9
KEC International	Cap Goods	68	17,405	79,751	84,659	5,046	6,293	1,039	1,810	4.0	7.0	59.4	74.3	16.8	9.6	1.4	1.3	7.4	5.9	8.4	13.1	8.4	9.8
Larsen & Toubro	Cap Goods	1288	11,94,142	5,71,938	6,51,897	59,142	69,195	42,338	48,237	45.9	52.3	-7.3	13.9	28.1	24.7	3.7	3.3	20.8	17.7	13.1	13.4	11.2	11.3
Siemens	Cap Goods	747	2,66,057	1,11,452	1,14,451	4,831	6,920	4,313	4,620	12.1	13.0	-18.8	7.1	61.7	57.6	6.6	6.2	53.8	37.1	10.7	10.8	7.8	8.3
Cummins India	Cap Goods	592	1,64,005	39,772	42,175	6,253	6,872	6,048	6,479	21.8	23.4	-8.8	7.1	27.1	25.3	6.2	5.6	25.5	23.3	22.9	22.3	20.1	19.8
Thermax	Cap Goods	750	89,373	51,341	58,176	4,388	5,709	2,569	3,472	21.6	29.1	-15.5	35.2	34.8	25.7	4.4	4.0	20.3	15.3	12.7	15.4	11.3	13.9
VA Tech Wabag	Cap Goods	767	20,396	20,211	27,626	1,557	2,359	912	1,366	34.4	51.4	1.0	49.7	22.3	14.9	2.6	2.3	11.3	7.8	11.6	15.3	10.1	13.2
Volvas	Cap Goods	161	53,372	52,426	54,531	2,427	3,020	1,818	2,340	5.5	7.1	-6.8	28.7	29.3	22.8	3.0	2.8	21.2	16.9	10.4	12.2	10.5	12.1
ACC	Cement	1362	2,55,672	1,09,084	1,24,747	13,690	19,901	10,947	11,876	58.2	63.2	-21.5	8.5	23.4	21.6	3.3	3.1	16.8	12.5	14.0	14.3	11.7	11.4
Ambuja Cement	Cement	199	3,07,320	91,180	2,26,620	15,689	38,888	12,538	17,845	8.1	9.0	-20.6	11.0	24.5	22.0	3.2	2.1	17.1	7.5	13.3	9.6	11.8	13.7
India Cement	Cement	60	18,446	53,635	59,954	6,856	7,778	18	686	0.1	2.2	-99.2	3807.3	1051.0	26.9	0.5	0.5	7.1	5.9	0.0	1.7	3.2	4.2
Mangalam Cement	Cement	122	3,257	7,117	10,171	484	1,289	156	388	5.8	14.5	-79.9	149.2	20.9	8.4	0.6	0.6	15.8	5.9	3.1	7.3	2.4	5.9
Shree Cement	Cement	5612	1,95,517	59,036	68,020	13,252	16,215	6,252	7,542	179.5	216.5	-37.7	20.6	31.3	25.9	4.4	3.8	14.3	11.7	14.1	14.7	13.3	13.9

Note: For banks, EBITDA is pre-provision profit

# PhillipCapital India Coverage Universe: Valuation Summary

Name of company	Sector	CMP Rs	Mkt Cap Rs mn	Net Sales FY14E FY15E	EBIDTA FY14E FY15E	PAT FY14E FY15E	EPS (Rs) FY14E FY15E	EPS Growth (%)		P/E(x) FY14E FY15E	P/B(x) FY14E FY15E	EV/EBITDA(x) FY14E FY15E	ROE (%)		ROCE (%)								
								FY14E	FY15E				FY14E	FY15E		FY14E	FY15E	FY14E	FY15E				
Ultratech Cement	Cement	2137	5,86,040	2,29,854	2,70,893	40,682	57,575	21,234	28,929	77.4	105.5	-20.7	36.2	27.6	20.3	3.4	3.0	16.5	11.8	12.4	14.7	8.7	10.8
OCL India	Cement	184	10,453	19,195	22,072	2,924	3,424	1,050	734	18.4	12.9	-34.2	-30.1	10.0	14.2	0.9	0.9	6.9	6.2	9.1	6.0	6.8	6.0
JK Lakshmi Cement	Cement	114	13,385	20,290	22,694	2,948	3,898	465	635	4.0	5.4	-75.7	36.5	28.8	21.1	1.0	1.0	9.2	7.5	3.6	4.7	4.0	5.1
HeidelbergCement India	Cement	43	9,665	13,824	16,925	1,076	2,082	(195)	136	-0.9	0.6	-163.2	-169.5	-49.6	71.3	1.2	1.1	20.0	10.2	-2.3	1.6	2.2	3.6
JK Cement	Cement	244	17,075	28,178	38,394	3,449	4,737	758	1,363	10.8	19.5	-67.1	79.7	22.5	12.5	1.0	0.9	11.9	7.5	4.3	7.4	4.3	6.2
Dalmia Bharat Ltd	Cement	255	20,707	27,439	36,197	4,411	6,659	29	1,186	0.4	14.6	-98.5	3982.7	712.7	17.5	0.7	0.6	13.2	8.9	0.1	3.7	2.8	4.7
Andhra Bank	Financials	63	37,323	34,785	40,469	34,785	40,469	4,581	7,333	7.8	12.5	-66.2	60.1	8.1	5.1	0.4	0.4	NM	NM	5.3	8.3	0.3	0.4
Bank of Baroda	Financials	730	3,13,645	1,20,572	1,40,879	1,20,572	1,40,879	50,845	61,248	120.3	145.0	11.6	20.5	6.1	5.0	0.9	0.8	NM	NM	15.6	16.6	0.9	0.9
Bank of India	Financials	228	1,46,372	1,06,289	1,28,652	1,06,289	1,28,652	30,691	37,211	47.7	57.9	3.6	21.2	4.8	3.9	0.6	0.5	NM	NM	12.6	13.6	0.6	0.6
Canara Bank	Financials	268	1,23,479	87,188	1,06,493	87,188	1,06,493	22,329	31,779	48.4	68.9	-25.3	42.3	5.5	3.9	0.5	0.5	NM	NM	9.3	12.4	0.5	0.6
Corporation bank	Financials	267	44,717	38,750	44,906	38,750	44,906	13,743	16,500	79.5	85.5	-15.3	7.6	3.4	3.1	0.4	0.4	NM	NM	13.2	13.3	0.7	0.7
HDFC Bank	Financials	745	17,87,173	1,84,234	2,22,367	1,84,234	2,22,367	85,364	1,01,908	35.9	42.8	26.9	19.4	20.8	17.4	4.1	3.5	NM	NM	21.6	21.8	2.0	2.0
ICICI Bank	Financials	1259	14,53,611	1,66,253	1,90,554	1,66,253	1,90,554	97,183	1,08,004	84.1	93.2	16.5	10.9	15.0	13.5	2.0	1.8	NM	NM	13.9	14.1	1.7	1.7
IOB	Financials	52	64,238	57,902	67,318	57,902	67,318	7,740	11,134	6.6	7.9	7.4	20.2	7.9	6.6	0.4	0.4	NM	NM	5.8	7.3	0.3	0.4
Oriental Bank	Financials	221	66,357	51,011	57,045	51,011	57,045	11,180	13,862	37.3	46.2	-18.1	24.0	5.9	4.8	0.5	0.5	NM	NM	8.9	10.2	0.5	0.6
PNB	Financials	752	2,72,277	1,65,127	1,88,758	1,65,127	1,88,758	34,911	45,407	98.8	128.5	-26.5	30.1	7.6	5.9	0.8	0.7	NM	NM	10.7	12.8	0.7	0.8
SBI	Financials	1902	14,20,169	6,73,371	7,93,549	6,73,371	7,93,549	1,36,339	1,60,717	182.6	215.3	-30.3	17.9	10.4	8.8	0.9	0.9	NM	NM	9.7	10.2	0.6	0.6
Union Bank	Financials	133	84,020	78,033	87,433	78,033	87,433	15,610	18,265	24.8	29.0	-31.5	17.0	5.4	4.6	0.5	0.5	NM	NM	9.5	10.3	0.5	0.5
HDFC	Financials	873	13,62,722	74,608	86,872	78,513	91,217	56,585	65,676	36.3	42.1	15.7	16.1	24.1	20.7	5.0	4.4	NM	NM	21.2	21.7	2.8	2.7
Indian Bank	Financials	113	52,388	44,320	52,207	44,320	52,207	11,246	13,504	24.2	31.4	-34.2	29.8	4.7	3.6	0.5	0.4	NM	NM	10.2	11.2	0.6	0.7
Development Credit Bank	Financials	60	14,957	3,693	4,280	3,693	4,280	1,520	1,589	6.1	6.4	48.9	4.5	9.8	9.4	1.4	1.2	NM	NM	14.8	13.5	1.2	1.1
AXIS Bank	Financials	1461	6,86,160	1,17,909	1,32,875	1,17,909	1,32,875	60,539	66,805	128.7	141.3	16.3	9.8	11.4	10.3	1.8	1.6	NM	NM	17.0	16.3	1.7	1.7
Indusind Bank	Financials	501	2,63,065	27,986	34,100	27,986	34,100	13,365	16,657	25.6	31.9	25.9	24.6	19.6	15.7	3.1	2.6	NM	NM	16.8	18.0	1.7	1.7
Shriram Transport Finance	Financials	738	1,67,519	37,012	40,499	30,159	32,179	12,960	14,744	57.2	65.0	-4.7	13.8	12.9	11.4	2.1	1.9	NM	NM	0.2	0.2	0.0	0.0
Hindustan Unilever	FMCG	598	12,92,860	2,75,885	3,06,805	50,462	58,352	35,555	40,640	16.4	18.8	6.2	14.3	36.3	31.8	33.8	23.5	25.1	21.4	92.9	73.9	109.9	87.5
Marico Industries	FMCG	210	1,35,262	48,326	54,548	7,148	8,685	4,654	5,280	7.2	8.2	27.7	13.5	29.1	25.6	9.3	8.4	19.4	15.9	32.1	32.8	19.1	24.0
Jubilant Foodworks	FMCG	1046	68,407	17,518	22,600	2,679	3,113	1,346	1,542	20.6	23.6	-0.4	14.6	50.7	44.3	12.0	9.4	25.6	21.8	23.6	21.3	26.3	23.2
Godrej Consumer	FMCG	815	2,77,493	78,136	89,355	11,451	13,521	7,686	9,132	22.6	26.8	3.4	18.8	36.1	30.4	7.4	6.4	25.2	21.0	20.5	21.0	14.9	18.0
ITC	FMCG	359	28,55,193	3,27,341	3,79,301	1,21,888	1,43,439	84,971	1,00,219	10.8	12.7	13.8	17.9	33.4	28.3	11.0	9.3	23.0	19.3	33.1	32.9	27.4	28.4
Nestle	FMCG	4955	4,77,745	92,304	1,06,565	20,650	23,787	11,536	13,691	119.6	142.0	8.1	18.7	41.4	34.9	20.8	16.6	23.2	20.0	50.2	47.6	38.0	38.2
Colgate	FMCG	1370	1,86,269	35,324	40,825	6,475	7,699	4,879	5,643	35.9	41.5	-1.8	15.7	38.2	33.0	34.7	30.7	28.1	23.6	90.8	93.0	104.3	98.6
Glaxo Smithkline Consumer	FMCG	4291	1,80,473	35,640	41,250	5,271	6,586	5,165	6,289	122.8	149.5	18.3	21.8	34.9	28.7	11.2	9.7	31.2	24.7	32.1	33.9	34.6	36.2
Agro Tech Foods	FMCG	500	12,179	8,342	9,427	709	837	476	581	19.5	23.8	14.2	21.9	25.6	21.0	4.3	3.6	17.1	13.9	16.7	17.4	16.9	17.1
Dabur	FMCG	179	3,11,794	70,891	82,186	11,799	14,523	9,006	11,232	5.2	6.5	16.9	24.7	34.5	27.7	11.1	9.0	26.7	21.3	32.3	32.5	25.3	26.7
Emami	FMCG	439	99,661	18,837	22,014	4,242	4,809	3,815	4,224	16.8	18.6	21.2	10.7	26.1	23.6	10.5	8.2	23.0	19.7	40.0	34.8	38.6	35.0



Name of company	Sector	CMP Rs	Mkt Cap		Net Sales		EBIDTA		PAT		EPS (Rs)		EPS Growth (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		ROCE (%)	
			Rs mn	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E
Britannia	FMCG	828	99,335	69,892	80,179	5,969	7,137	3,950	5,011	33.1	41.9	52.1	26.8	25.1	19.8	9.4	17.1	13.7	14.6	34.9	39.2	28.6	27.6	42.1
Bajaj Corp	FMCG	217	31,985	6,984	8,494	1,801	2,113	1,744	1,986	11.8	13.5	4.1	13.9	18.3	16.1	6.4	6.3	17.3	14.6	34.9	39.2	28.6	27.6	42.1
ZydusWellness	FMCG	496	19,376	4,246	4,898	1,057	1,208	1,101	1,232	28.2	31.5	13.4	11.8	17.6	15.7	5.8	4.6	15.8	13.2	32.9	29.2	37.2	32.7	32.7
Asian Paints	FMCG	538	5,15,905	1,24,901	1,45,719	19,603	22,749	12,298	14,398	12.8	15.0	10.4	17.1	42.0	35.8	12.8	10.8	26.1	22.1	30.5	30.0	30.8	31.0	31.0
Balrampur Chini	FMCG	53	13,062	31,031	33,081	2,677	3,261	374	773	1.5	3.2	-76.8	106.7	34.8	16.9	1.0	1.0	9.2	7.6	2.9	5.7	4.4	6.1	6.1
Tilaknagar	FMCG	54	6,708	8,790	10,626	1,905	2,396	735	927	6.0	7.6	21.3	26.1	9.0	7.1	1.1	1.0	7.3	6.2	12.6	14.1	12.4	13.3	13.3
Radico Khaitan	FMCG	147	19,603	14,188	16,122	2,217	2,612	957	1,204	7.2	9.1	23.8	25.8	20.5	16.3	2.4	2.1	12.3	10.6	11.8	13.1	11.0	11.9	11.9
Berger Paints	FMCG	226	78,132	38,958	45,689	4,340	5,237	2,553	3,041	7.4	8.8	13.5	19.1	30.6	25.7	7.0	5.9	19.0	15.7	22.8	22.8	21.4	21.9	21.9
GMR Infrastructure	Infrastructure	22	84,271	84,578	94,736	25,751	36,678	(14,881)	(5,221)	-3.8	-1.3	226.4	-64.9	-5.7	-16.1	1.0	1.0	15.7	10.7	-17.0	-6.4	2.7	2.6	2.6
GVK Power	Infrastructure	11	17,450	20,272	28,909	10,172	17,228	(2,217)	(7,074)	-1.4	-4.5	-34.0	219.1	-7.9	-2.5	0.6	0.7	22.8	13.7	-7.2	-27.5	1.2	1.0	1.0
IRB Infrastructure	Infrastructure	102	33,768	37,034	36,835	17,237	20,193	4,472	4,238	13.5	12.8	-19.7	-5.2	7.6	8.0	0.9	0.8	7.1	7.1	12.1	10.3	7.1	6.6	6.6
Adani Ports & SEZ	Infrastructure	186	3,85,030	43,542	44,524	28,081	31,870	22,305	23,990	10.8	11.6	22.1	7.6	17.3	16.0	4.1	3.4	15.0	12.8	23.8	21.2	13.6	13.2	13.2
HCL Technologies	IT Services	1407	9,84,055	2,57,694	3,33,109	57,539	86,754	40,142	61,818	56.9	87.5	63.3	53.7	24.7	16.1	6.9	5.3	17.4	11.5	28.1	32.7	26.3	32.7	32.7
Infosys	IT Services	3258	18,70,718	5,01,492	5,48,776	1,33,448	1,49,878	1,04,873	1,16,325	183.5	203.6	11.3	10.9	17.7	16.0	4.1	3.4	12.0	10.4	22.9	21.5	24.5	23.3	23.3
TCS	IT Services	2106	41,24,200	8,22,565	9,84,301	2,53,126	3,02,718	1,89,067	2,32,503	96.5	118.7	35.5	23.0	21.8	17.7	7.9	6.1	16.2	13.5	36.2	34.6	38.9	37.4	37.4
Tech Mahindra	IT Services	1828	4,26,777	1,88,802	2,24,116	42,035	49,886	31,497	33,750	132.6	141.7	48.4	6.9	13.8	12.9	3.9	3.0	9.4	7.7	28.3	23.5	29.2	25.4	25.4
Wipro	IT Services	552	13,60,114	4,35,429	4,92,256	98,016	1,11,221	76,867	89,145	31.2	36.2	25.2	15.9	17.7	15.2	4.2	3.6	13.7	12.0	23.7	23.4	24.1	24.0	24.0
Persistent Systems	IT Services	1042	41,696	16,756	19,969	4,311	5,206	2,579	3,194	64.5	79.9	37.5	23.9	16.2	13.1	3.5	2.9	9.6	7.8	21.3	22.0	20.3	21.6	21.6
KPIITechnologies	IT Services	164	31,857	27,016	31,103	4,179	4,883	2,512	3,134	13.4	16.9	23.0	26.0	12.2	9.7	2.5	2.0	8.0	6.8	20.2	20.5	18.3	19.2	19.2
Zee Entertainment Media	Media	271	2,60,570	43,989	50,435	12,036	15,063	9,102	10,990	9.5	11.5	27.2	20.7	28.4	23.6	6.6	5.7	21.2	16.7	23.3	24.4	23.4	24.3	24.3
HT Media	Media	94	21,878	22,064	23,766	3,114	3,493	1,891	2,183	8.0	9.3	12.8	15.4	11.7	10.1	1.2	1.1	4.5	3.4	10.3	10.5	11.4	11.5	11.5
Sun TV Network	Media	391	1,54,008	22,147	25,169	11,186	13,279	7,145	8,294	18.1	21.0	0.7	16.1	21.6	18.6	4.7	3.9	13.5	11.0	21.6	21.2	22.9	23.1	23.1
Jagran Prakashan	Media	101	33,523	17,243	19,080	4,009	4,331	2,037	2,396	6.4	7.6	-4.1	17.6	15.7	13.3	3.2	2.8	9.5	8.6	20.1	21.0	14.2	13.9	13.9
Den Networks	Media	187	33,341	10,961	18,840	2,951	6,227	411	1,934	2.8	13.2	-42.5	370.0	66.6	14.2	1.5	1.4	9.2	5.5	2.3	9.7	6.3	10.8	10.8
Dish TV	Media	53	56,067	24,066	26,886	5,565	6,390	(1,030)	(247)	-1.0	-0.2	56.0	-76.0	-54.5	-226.9	-21.7	-19.8	11.7	10.0	39.8	8.7	-2.6	9.0	9.0
Hathway Cable	Media	244	37,080	15,734	22,845	3,286	6,028	(823)	1,003	-5.6	6.6	-6.2	-218.2	-43.7	37.0	4.0	3.7	14.4	8.9	-9.2	10.0	1.0	7.7	7.7
Hindalco Inds	Metals	130	2,69,119	8,39,351	9,42,250	83,028	1,03,972	24,848	23,802	12.0	11.5	-23.9	-4.2	10.8	11.3	0.6	0.7	10.0	8.3	6.4	5.8	4.0	4.3	4.3
NALCO	Metals	39	99,481	66,683	72,624	9,126	11,961	6,834	8,591	2.7	3.3	15.3	25.7	14.6	11.6	0.8	0.8	6.3	5.1	5.6	6.8	5.1	6.2	6.2
Hindustan Zinc	Metals	124	5,24,362	1,32,117	1,38,756	68,822	70,356	66,299	69,550	15.7	16.5	-4.2	4.9	7.9	7.5	1.4	1.2	3.9	3.2	17.8	16.3	17.8	16.5	16.5
Tata Steel	Metals	381	3,69,936	14,84,324	15,38,720	1,57,001	1,72,854	36,801	36,567	37.8	37.6	1005.6	-0.6	10.1	10.1	1.0	1.0	6.7	6.3	10.1	9.4	6.4	6.3	6.3
JSW Steel	Metals	981	2,37,153	4,98,936	5,24,669	91,138	1,04,815	23,771	29,093	98.3	121.2	57.5	23.3	10.0	8.1	1.1	1.0	6.1	5.4	11.3	12.3	5.2	8.6	8.6
SAIL	Metals	65	2,67,009	4,63,345	5,11,913	43,534	59,861	19,639	19,884	4.8	4.8	-16.7	1.2	13.6	13.4	0.6	0.6	11.1	9.0	4.6	4.5	4.6	3.8	3.8
Sesa Sterlite	Metals	183	5,42,239	6,40,987	8,38,983	2,11,086	3,06,021	60,165	81,952	20.3	27.6	-23.4	36.2	9.0	6.6	0.8	0.7	5.4	3.4	8.4	10.4	14.5	10.4	10.4
Jindal Steel & Power	Metals	280	2,56,077	2,02,539	2,67,549	61,189	85,247	20,023	21,848	21.4	23.4	-31.2	9.1	13.1	12.0	1.1	1.0	9.5	6.6	8.7	8.7	5.2	5.7	5.7
Jindal Saw	Metals	56	15,372	65,531	70,919	6,474	7,751	1,572	2,222	5.7	8.0	-13.4	41.4	9.8	6.9	0.4	0.4	10.3	9.2	4.1	5.6	3.6	4.1	4.1
ONGC	Oil & Gas	328	28,08,340	17,42,864	19,20,185	5,85,001	7,26,330	2,78,691	3,31,920	32.6	38.8	15.1	19.1	10.1	8.5	1.8	1.5	5.0	4.0	17.6	18.3	12.6	14.5	14.5

Note: For banks, EBITDA is pre-provision profit

# PhillipCapital India Coverage Universe: Valuation Summary

Name of company	Sector	CMP	Mkt Cap	Net Sales		EBIDTA	PAT	EPS (Rs)		EPS Growth (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		ROCE (%)			
				Rs	Rs mn			FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E
Petronet LNG	Oil & Gas	136	1,02,038	3,84,540	4,59,707	14,881	18,121	7,071	8,036	9.4	10.7	-38.5	13.7	14.4	12.7	2.1	1.9	8.3	6.9	14.3	14.6	9.8	9.8
Cairn India	Oil & Gas	331	6,30,662	1,85,715	1,96,352	1,41,577	1,43,606	1,18,871	1,20,022	62.2	62.8	2.4	1.0	5.3	5.3	1.1	0.9	3.5	2.9	20.6	18.0	22.5	18.0
GAIL	Oil & Gas	381	4,83,163	5,86,357	5,92,534	72,420	79,477	48,092	47,649	35.9	37.6	13.1	4.7	10.6	10.1	1.8	1.6	7.8	6.8	16.6	15.5	12.8	11.6
Indraprastha Gas	Oil & Gas	289	40,467	39,432	46,838	7,997	8,293	3,676	3,898	26.3	27.8	3.8	6.0	11.0	10.4	2.3	2.0	5.4	4.9	22.6	20.6	16.6	15.4
Gujarat State Petronet	Oil & Gas	66	36,888	10,770	10,731	9,919	9,867	4,883	4,858	8.7	8.6	0.1	-0.5	7.6	7.6	1.1	1.0	5.2	5.2	15.3	13.5	9.7	8.3
HSIL Ltd	Other	130	8,576	17,759	20,231	2,313	2,976	387	732	5.9	11.1	-33.7	89.0	22.1	11.7	0.8	0.8	7.7	6.0	3.7	6.8	2.2	4.1
Greenply Industries	Other	375	9,058	21,665	23,853	2,795	3,006	1,124	1,240	46.6	51.4	-1.5	10.4	8.1	7.3	1.6	1.3	5.5	4.9	19.3	17.8	12.4	12.6
Transformers & Rectifiers	Other	90	1,291	6,659	7,216	330	432	132	192	10.2	14.9	178.9	45.3	8.8	6.0	0.3	0.3	7.3	5.6	3.8	5.3	4.4	5.6
Kajaria Ceramics	Other	351	26,541	18,603	22,051	2,716	3,418	1,161	1,530	15.4	20.2	8.1	31.7	22.9	17.4	5.3	4.3	10.5	8.3	23.4	24.9	26.2	29.2
Havells Ltd	Other	909	1,13,456	47,520	53,165	6,409	7,283	4,645	5,284	37.2	42.3	25.1	13.7	24.4	21.5	5.1	4.3	16.9	14.4	20.9	20.0	21.7	20.8
Aurobindo Pharma	Pharma	512	1,49,343	77,683	1,16,931	18,178	18,826	11,233	11,435	38.6	39.3	159.7	1.8	13.3	13.0	4.1	3.1	10.1	10.0	30.7	24.1	21.3	17.7
Biocon	Pharma	421	84,100	28,395	33,640	6,682	7,815	4,425	5,205	22.1	26.0	27.0	17.6	19.0	16.2	2.8	2.4	12.1	10.6	13.6	15.1	13.8	14.4
Cadila Healthcare	Pharma	1004	2,05,486	70,120	81,340	12,097	15,430	7,395	9,614	36.1	47.0	10.4	30.0	27.8	21.4	6.1	5.1	19.0	14.9	21.8	24.0	13.0	15.3
Divi's Laboratories	Pharma	1361	1,80,651	25,319	30,991	10,432	12,489	7,838	9,460	59.1	71.4	30.5	20.7	23.0	19.1	5.8	4.7	17.1	14.2	25.2	24.5	0.0	0.0
Dr Reddy's Labs.	Pharma	2617	4,44,986	1,32,881	1,55,422	32,954	37,301	20,858	23,797	122.6	139.9	23.3	14.1	21.3	18.7	4.9	4.0	14.1	12.3	22.8	21.1	15.3	15.3
Glenmark Pharma	Pharma	549	1,48,956	60,036	71,252	12,851	15,679	7,002	9,187	25.9	33.9	10.3	31.2	21.2	16.2	4.4	3.5	13.0	10.4	20.6	21.6	14.0	16.2
Ipsa Laboratories	Pharma	835	1,05,409	31,632	37,016	8,066	9,477	5,097	6,110	40.7	48.8	29.6	19.9	20.5	17.1	5.2	4.1	13.8	11.7	25.4	23.8	20.9	20.6
Lupin	Pharma	947	4,24,679	1,10,145	1,33,189	27,610	33,251	16,635	19,933	37.2	44.5	25.4	19.8	25.5	21.3	6.4	5.1	15.4	12.5	25.1	23.8	31.4	30.9
Sun Pharma	Pharma	564	11,67,066	1,59,192	1,77,877	70,308	75,317	50,831	52,050	24.5	25.1	39.9	2.4	23.0	22.4	6.0	4.9	15.9	14.4	26.3	22.0	25.5	20.7
Phoenix Mills	Real Estate	244	35,306	12,165	15,674	5,634	7,798	2,204	3,470	15.2	24.0	168.8	57.5	16.0	10.2	1.6	1.6	9.9	7.1	11.3	15.4	8.1	10.1
DLF	Real Estate	176	3,13,709	83,499	1,02,193	28,529	36,262	8,199	9,484	4.8	5.6	7.0	15.7	36.7	31.7	1.0	1.0	17.9	14.2	2.8	3.2	5.1	5.4
Unitech Ltd	Real Estate	12	31,767	27,844	32,505	5,012	7,586	3,244	5,141	1.2	2.0	54.8	58.5	9.8	6.2	0.3	0.3	17.3	11.3	2.8	4.3	2.0	2.9
Oberoi Realty	Real Estate	219	71,932	6,748	16,875	3,871	9,474	2,953	6,407	9.0	19.5	-41.5	117.0	24.4	11.2	1.7	1.5	16.5	6.9	6.8	13.3	6.9	14.0
Future Retail	Retail	79	17,721	1,17,347	1,05,209	10,327	9,890	(179)	303	-0.8	1.3	-126.0	-269.6	-102.8	60.6	0.6	0.6	6.7	7.6	-0.5	0.9	4.4	4.3
Shoppers Stop	Retail	381	31,743	38,393	46,532	1,185	1,889	(76)	216	-0.9	2.6	-27.7	-385.0	-418.2	146.8	6.4	6.1	32.4	20.5	-1.5	4.2	-1.2	2.9
Raymond Ltd	Retail	293	17,954	44,908	50,614	4,895	5,821	1,413	2,029	23.0	33.1	145.0	43.5	12.7	8.8	1.2	1.1	6.4	5.2	9.5	12.1	7.8	9.1
Bata India	Retail	1128	72,515	20,649	24,453	3,221	3,937	2,052	2,603	31.9	40.5	19.3	26.8	35.3	27.9	8.6	6.9	21.5	16.9	24.3	24.9	25.4	27.5
Titan Company	Retail	253	2,24,699	1,11,593	1,24,509	10,601	12,700	7,342	8,717	8.3	9.8	1.3	18.7	30.6	25.8	8.9	7.0	21.4	17.6	32.6	30.4	29.5	24.2
Trent	Retail	1016	33,753	25,290	30,836	643	1,471	410	1,012	12.3	30.4	78.7	146.8	82.4	33.4	2.6	2.4	55.4	24.0	3.2	7.3	2.9	5.9
Bharti Airtel	Telecom	318	12,69,175	8,62,528	9,62,625	2,78,232	3,15,423	20,626	54,185	5.2	13.5	107.2	162.7	61.6	23.4	2.3	2.0	6.7	5.5	3.6	8.5	4.7	6.6
Reliance Communications	Telecom	129	2,66,775	2,17,643	2,31,552	74,698	81,152	10,638	17,083	5.2	8.3	42.6	60.6	25.1	15.6	0.9	0.8	8.4	7.3	3.6	5.4	4.0	4.3
Bharti Infratel	Telecom	203	3,84,020	66,512	73,378	43,721	48,620	14,374	17,302	7.6	9.2	43.7	20.4	26.7	22.2	2.1	2.1	8.3	7.2	7.9	9.4	7.0	7.9
Idea Cellular	Telecom	139	4,62,757	2,63,701	3,01,327	82,688	98,080	19,555	24,168	5.5	6.8	81.3	23.6	25.2	20.4	2.5	2.2	7.1	6.7	9.8	10.8	7.6	7.9
OnMobile Global	Telecom	34	3,855	8,970	10,361	1,569	2,207	241	626	2.0	5.1	-52.1	159.9	17.0	6.6	0.4	0.4	1.2	0.5	2.4	5.8	2.6	5.8
Tata Communication	Telecom	302	86,042	1,94,499	2,13,875	30,617	36,731	2,577	6,356	9.0	22.3	-135.4	146.7	33.4	13.5	5.4	4.1	6.4	5.0	16.3	30.0	4.5	6.0

Note: For banks, EBITDA is pre-provision profit

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