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26 March 2012

**India**  
**Internet**

<b>Google</b>	<b>GOOG US<sup>1</sup></b>
Rec	BUY <sup>2</sup>
Market cap	US\$209.2bn
Price	US\$645
Target	US\$745
Up/downside	16%

<b>Reliance Ind</b>	<b>RIL IN</b>
Rec	O-PF
Market cap	US\$47.6bn
Price	Rs736
Target	Rs885
Up/downside	20%

<b>Bharti Air</b>	<b>BHARTI IN</b>
Rec	U-PF
Market cap	US\$24.3bn
Price	Rs324
Target	Rs355
Up/downside	10%

<sup>1</sup> Covered by Credit Agricole Securities (USA)  
<sup>2</sup> Rec relative to local benchmark



**Time to log in**  
**Online commerce taking off**

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All prices quoted herein are as at close of business 22 March 2012, unless otherwise stated

**Finding more online**

**CLSA China internet**  
Sector outlook - Overweight

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1 September 2011

**China**  
Internet

**China: The Transformation**

Forecast	70.0%
Fac.	BUY
Market cap	US\$25.50Bn
Price	US\$276.83
Target	US\$276.83
Up/Overval	+0%

**Sina** SINA US

Fac.	BUY
Market cap	US\$1.25Bn
Price	US\$84
Target	US\$113.00
Up/Overval	+34%

**Sohu.com** SOHU US

Fac.	BUY
Market cap	US\$5.07Bn
Price	US\$79.24
Target	US\$82.50
Up/Overval	+4%

**Social revolution**  
Harnessing people power online

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**CLSA Japan internet**  
Social-network sector initiation - OVERWEIGHT

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23 October 2011

**Japan**  
Internet

**DENA** DENA JP

Fac.	BUY
Market cap	US\$6.82Bn
Price	€3,140
Target	€4,000
Up/Overval	+40%

**Gree** GREE JP

Fac.	BUY
Market cap	US\$7.05Bn
Price	€2,423
Target	€3,700
Up/Overval	+52%

**Mixi** MIXI JP

Fac.	BUY
Market cap	US\$4.79Bn
Price	€2,140.00
Target	€3.70,000
Overval	+74%

**Social butterflies**  
Spreading wings, going mobile

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**CLSA China online**  
Sector outlook

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28 February 2011

**China**  
Internet

**Vancl** VANCL US

Fac.	BUY
Market cap	US\$45.02Bn
Price	US\$115.00
Target	US\$45.00
Up/Overval	+0%

**Sina** SINA US

Fac.	BUY
Market cap	US\$4.63Bn
Price	US\$76.04
Target	US\$90.00
Up/Overval	+17%

**Tencent** TENCENT HK

Fac.	BUY
Market cap	US\$45.07Bn
Price	US\$210.40
Target	US\$240.00
Overval	+12%

**JD.com** JD.COM US

Fac.	BUY
Market cap	US\$1.84Bn
Price	US\$23.00
Target	US\$24.00
Up/Overval	+4%

**Add to cart**  
E-commerce heads for hypergrowth

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**Indian internet at an inflection point**

**Converting potential to growth**

**Some hurdles to clear**

**Select business models have scale-up potential**

**Winners take all**

**Factors in play for India's internet growth**

## Time to log in

Indian internet companies should enjoy a sevenfold rise in market cap to US\$15bn as the sector tracks China's path, albeit with a seven-year lag. A 2.5x jump in users to 275m in the next five years will drive this growth and when consumers go online, internet commerce should triple to US\$30bn. There are obstacles ahead, such as regulatory concerns and an underdeveloped ecosystem, but for the companies that can navigate these, the prize will be a dominant position in the second-largest internet community in the world.

Private initiatives are reordering the Indian internet ecosystem, helping them gain momentum in the country's lucrative market. Exciting prospects lie ahead for firms that are already in the space. Indian internet commerce totalled US\$10bn last year, about a tenth that of China. However, between 2006 and 2011, China's internet commerce grew by 25x from US\$4bn to US\$100bn. As India follows a similar path, a tipping point seems near. Favourable demographics, with 75% of internet users aged 15-34, the proliferation of cheap-access devices and increasing wireless availability will be the drivers.

Exponential growth in the sector over the next few years, however, will demand that India clears some key hurdles. These include logistical issues, payment challenges, uncertain regulatory action, the lack of a local-language ecosystem and telecom operators' unfavourable mindset towards 3G services. While the recent past has been good for new businesses with abundant capital, the next 12-18 months are likely to be tougher, with economic pressures shaking-out uncompetitive players.

The future is bright for well-funded category-agnostic e-tailers like Flipkart. Wide gross margins will also see select online apparel and fashion e-tailers thrive. Prospects for ad networks like InMobi and Komli expanding beyond India are good. But businesses reliant on online-ad money will take time to scale-up, though some classifieds sites look promising. Meanwhile search, social networking and entertainment remain the preserve of global internet firms and commoditised businesses like payment gateways and internet service providers also seem unlikely to create significant market cap.

We see disproportionate market-cap gains for a few internet companies while the majority will lag. Monetising the Indian internet opportunity demands a presence in successful niches combined with good execution. Incumbent leaders like InfoEdge and MakeMyTrip should maintain their positions, even as Flipkart and InMobi become forces in their domain. A slew of listings domestically and in the USA should open up new investment opportunities for investors. Global leaders like Facebook and Google have good brand equity and market share in India and will benefit from strong growth.

### Indian internet

Enablers	Opportunity	Hurdles
Number of internet users crosses 100m in 2011	273m users by 2016	Current telecom operators have a "voice-centric" go-to market strategy
75% of these are under 34 years	US\$30bn internet commerce opportunity	Poor infrastructure makes cost-effective logistics and delivery a challenge
Only 3.1% of Indian households have a PC & internet, showing much headroom for growth	Generating market cap of US\$12-15bn over the next five years	Regulatory uncertainty around online payments, government monitoring and so on

Source: CLSA Asia-Pacific Markets



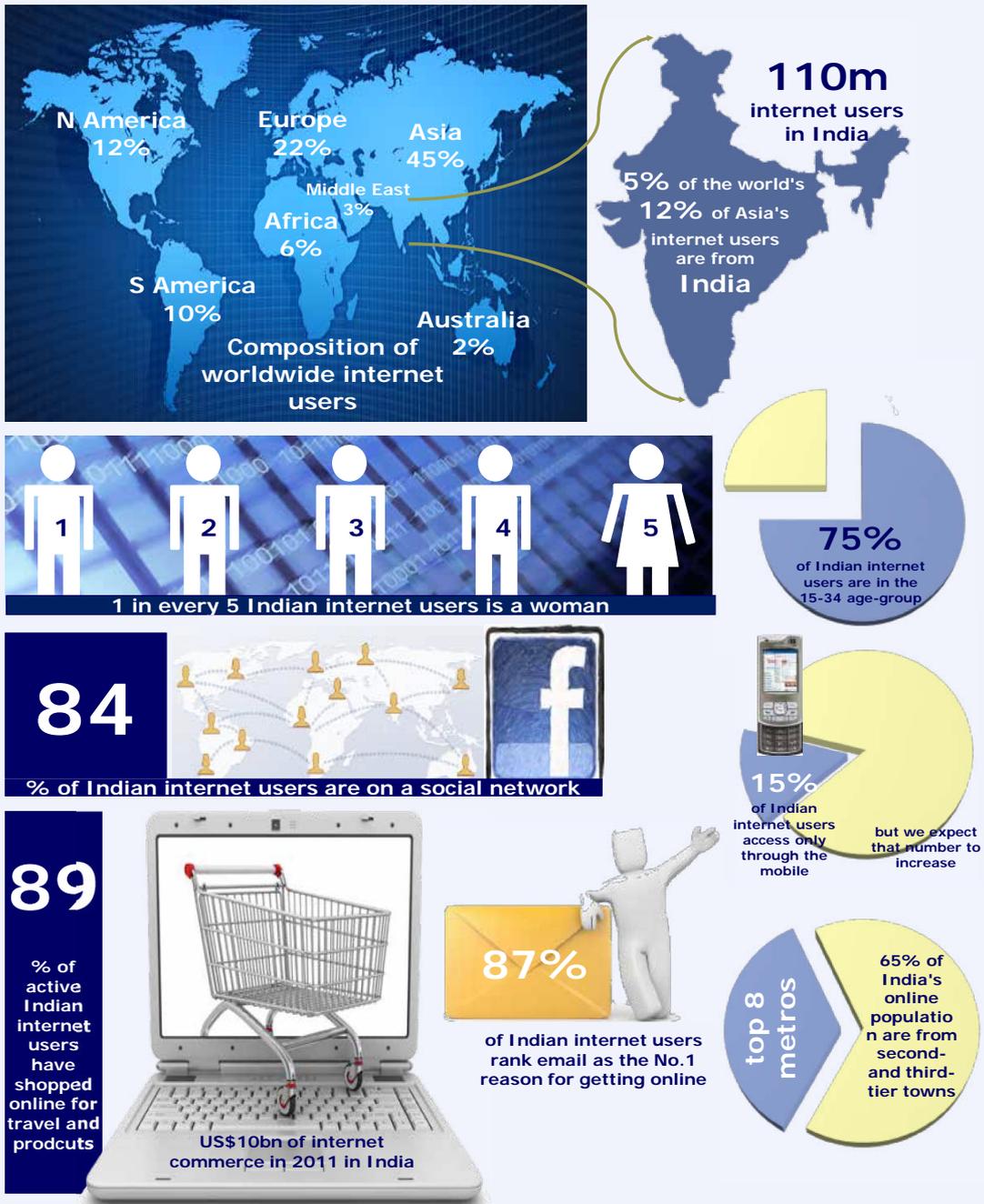
**Latent Indian internet opportunity**

## Converting potential to growth

India has missed most estimates for internet expansion over the past decade. While demographics are the bedrock for growth, it is the access to and availability of online services and content that will convert this opportunity into a customer base with high usage intensity. While demographics have always been supportive, access issues related to PC and broadband penetration have prevented India's internet user base and commerce from expanding to plan. Thus headline statistics do not make for good reading.

Figure 1

**Indian internet - Quick facts**



Source: Comscore, Media, Vizisense, CLSA Asia-Pacific Markets

India's internet headlines are poor compared with other emerging countries

Only 9.5% of India's 246m-plus households have a PC, while only 3.1% are connected to the internet. At 110m users, India's internet penetration continues to be abysmally low at 9% compared with other emerging economies where penetration is 30-40%. Similarly, online commerce in India stands at just US\$10bn versus US\$50-90bn in some other emerging markets.

Figure 2

Segments in global internet space and Indian opportunity

	Global mkt cap	Key global players	Indian opportunity	Comments	Indian names
Search and social	US\$322bn	Google f Baidu Tencent 腾讯	---	Global players to remain dominant. Unlike China, there are no language/regulatory barriers in India.	ibibo bigadda.com
Online marketplace	US\$86bn	ebay Rakuten 淘宝网 Taobao.com	-	eBay India has a strong presence. The likes of Indiamart are active but we remain skeptical of scale-up potential.	indiamart
Mass e-tailers	US\$85bn	amazon.com 当当网 dangdang.com	+++	Market opportunity is huge. Likely to be dominated by couple of players. Flipkart is in pole position.	flipkart.com HOME SHOP 18
Online travel	US\$44bn	priceline.com Expedia ctrip 携程网	++	Penetration in India is high. Little room for anyone beyond the top 3-4 players. The likes of redBus provide some differentiation.	makeMytrip.com cleartrip redBus.in
Portals and others	US\$39bn	Y! Yahoo! DeNA @mail.ru	--	Domination of global players like Yahoo. Indian portals have been unimaginative and are uncompetitive.	rediff.com
Online gaming	US\$30bn	zynga NCISOFT 网易 NETEASE WWW.163.COM	--	Limited bandwidth and aversion to pay for online content has limited growth. Do not see that changing anytime soon.	hungama GAMES2WIN GET ADDICTED!
Online entertainment	US\$16bn	NETFLIX YOUKU 优酷 .com	--	Likes of Youtube dominate. Paid models unlikely to take-off in India.	gaana BIG Flix
Online classifieds	US\$16bn	monster 搜房 SouFun	++	Industry-specific classifieds have grown nicely. Expect horizontal classifieds to grow faster ahead.	Quikr Justdial 99acres.com OX naukri.com India's No. 1 Job Site
Niche e-tailers	US\$6bn	ASOS YOOX.COM mecoxlane	++	Lifestyle/apparel e-tailers can do better, driven by wider gross margins. Unsure about other niche categories.	FASHION YOU MYNTRA.com

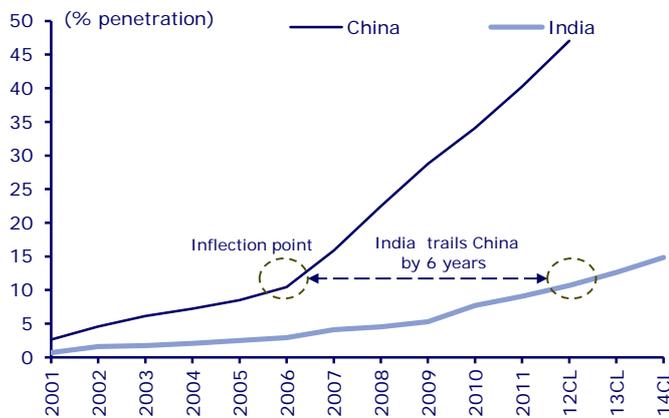
Source: CLSA Asia-Pacific Markets

**India lags neighbour China, especially for e-commerce**

The inevitable comparison with China reveals sharp differences in growth and scale. India is six to seven years behind on many metrics, most significantly for online shopping volume and broadband penetration, while it is about eight years behind in terms of installed PC base. However, we believe it is time to move beyond these direct comparisons and recognise emerging trends, which suggest the Indian internet sector is finally coming into its own. A country's internet ecosystem has a way of building itself over the years and rests on common pillars, but in India, it is evolving somewhat differently to China's.

Figure 3

**India's internet penetration at sub-10%**



Source: CLSA Asia-Pacific Markets, IAMA

Figure 4

**India trails China by around six years**

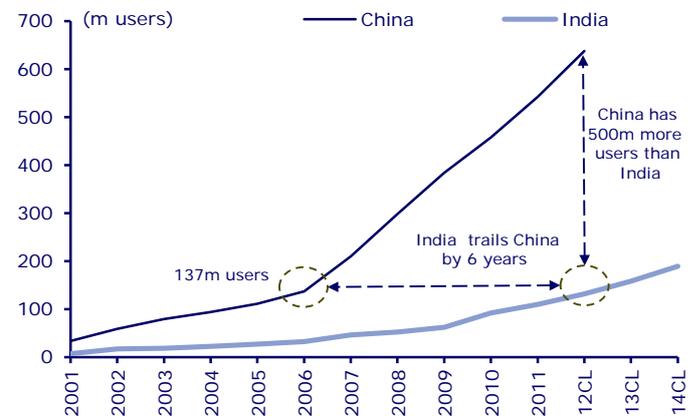
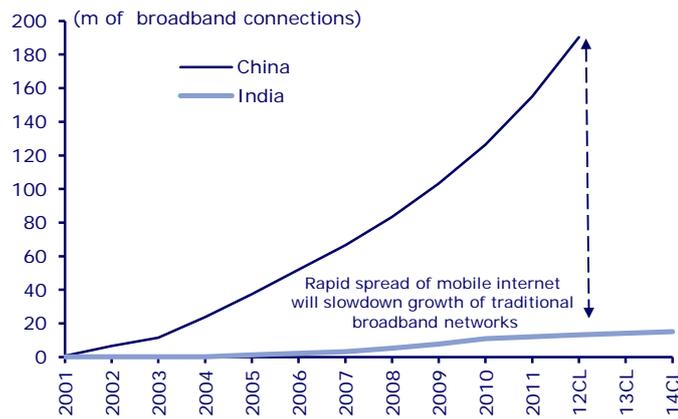


Figure 5

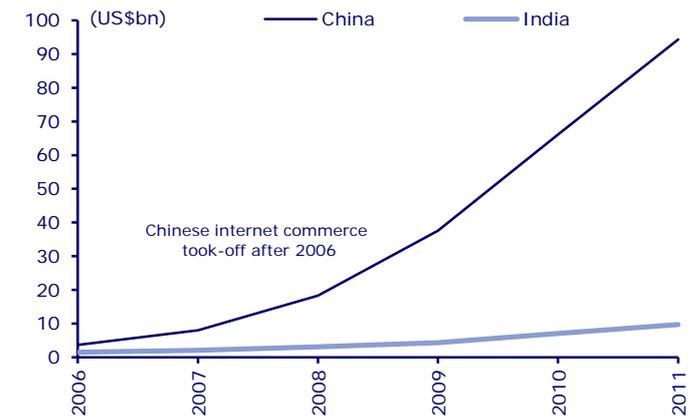
**Traditional broadband likely to be a pipedream**



Source: CLSA Asia-Pacific Markets

Figure 6

**Value of internet commerce transactions**

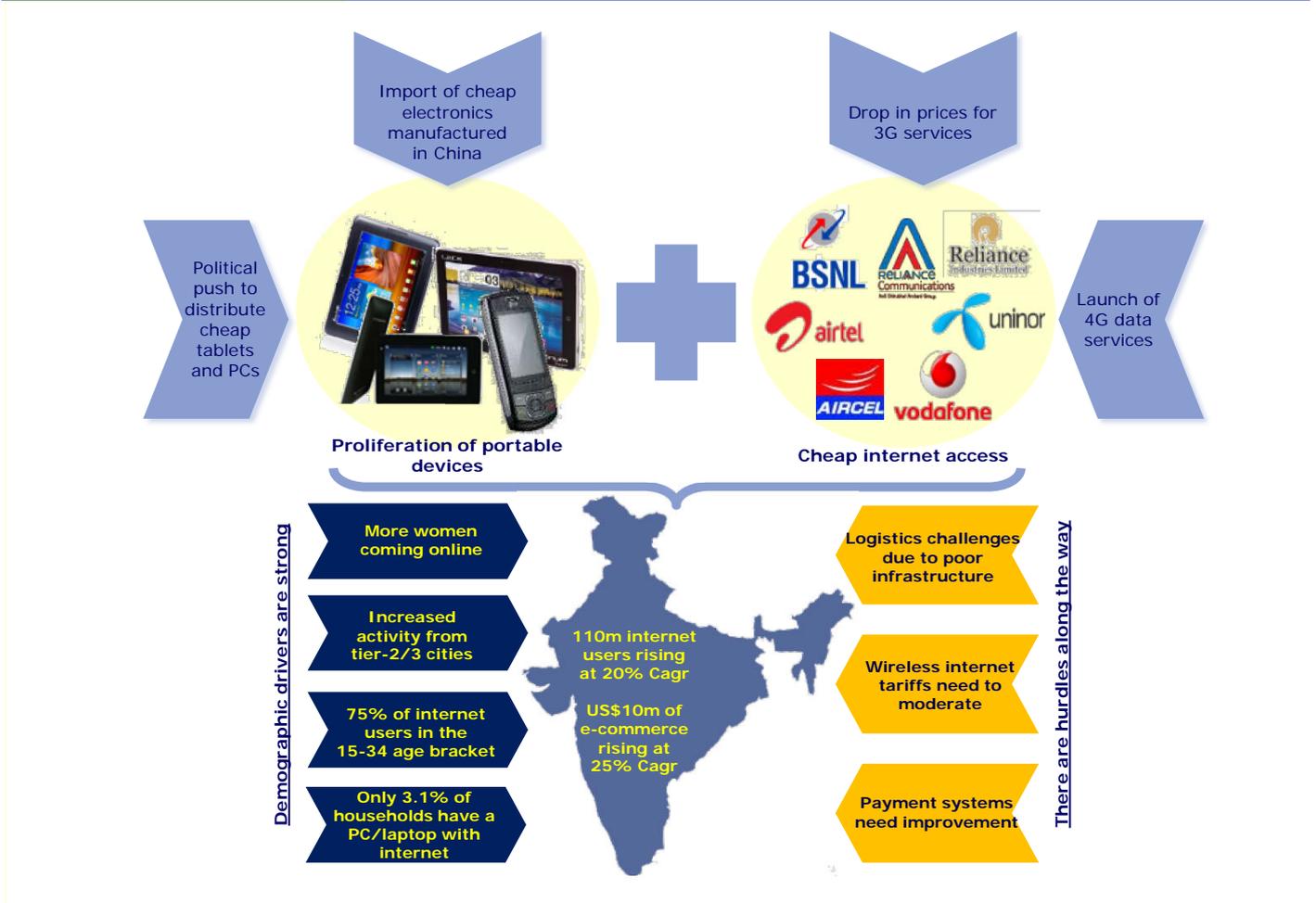


**Drivers for Indian internet falling into place**

Components of India's internet revival are slowly coming together. Almost 35% of users are below 24 years' old, and comprise less than 10% of online shoppers by number, and an even smaller percentage in value terms. The shift of this PC-literate demographic into the earning bracket is a key future driver for the sector. Other growth trends include greater political will, which could drive PC penetration, availability of cheaper and portable access devices, the benefits of wireless internet, other favourable demographics, the high potential of smaller towns, and the rising power of women.

Figure 7

Components of India's internet revival are slowly coming together



Source: CLSA Asia-Pacific Markets

**Greater political will should push up PC penetration**

**Political push likely to drive PC penetration and access**

Election manifestos are a good gauge on the needs and aspirations of the populace, especially in smaller towns and cities. By that yardstick, India seems to be on the path to greater PC penetration. The last 12 months have seen a slew of political parties promising free or subsidised laptops or tablets to students if elected.

While the promise of freebies ahead of elections is quite common in India, rising aspirations are evident from the change in what is being promised. Ahead of the 2009 vote, the Samajwadi Party (a regional party in Uttar Pradesh, India's largest state) promised to curb the use of computers if elected. The same party has now done a complete U-turn with the highlight of its manifesto ahead of the 2012 assembly elections being its promise to provide a free tablet to every government-school student passing Class X and a laptop to those passing Class XII. Shiromani Akali Dal, a regional party in Punjab has gone a step further and promised free laptops with internet data cards as well.

While we do not expect most political parties to keep their promises, we are enthused by the trend, which even partially met, would significantly drive up PC penetration. The Tamil Nadu government has even selected Lenovo and HCL Infosystems to supply almost a million laptops, in-line with its pre-election promises.

Laptops and tablets are high priority promises

Aakash project shows government intent on internet access

The world's cheapest tablet

Figure 8

**Overview of promises made by political parties in recent elections**

State	Party	Promise	Potential mkt (units, m)
Tamil Nadu	AIADMK	Free laptops to students of Class XI and XII and arts and science colleges	1.0
Punjab	Akali Dal	Free laptops with internet data cards to students of Class XI and XII in government schools	0.5
Uttar Pradesh	SP	Free tablets to students passing Class X and laptops to students passing Class XII from government schools	2.0
Uttar Pradesh	BJP	Subsidised PCs for students. Tablets for Rs1,000 and laptops for Rs5,000	2.0

Source: CLSA Asia-Pacific Markets, Respective Party manifestos

**Aakash: Multiple challenges but still a move in the right direction**

Aakash, a low-cost tablet is a central government initiative to bridge the digital divide existing in India. The government plans to distribute the tablet to all students free of cost. The tablet costs US\$40 and the government will subsidise half while respective educational institutions will bear the remainder of the expenses. For open-market buyers, Aakash costs more. Like most government programmes, even Aakash has had its share of problems.

The device is beset with technical issues on battery performance, touchscreen interface and its processor, added to which it is also suffering because of confusion between manufacturers (Datawind), IITs and the government. However, for once the government is acting fast on correcting some of the defects. A new version Aakash 2 has been planned for an April launch. The battery power will be 1.5x more so that it does not freeze. Processor speed will be upgraded from 366 MHz to between 700MHz and 800MHz. Resistive touchscreens will be converted to capacitive touchscreen.

The government is planning to distribute five million Aakash tablets by the end of this year and a tender is likely to be floated over the next two months. Media reports also indicate that a Union Cabinet note is being prepared to have the money sanctioned from the Ministry of Finance, as the Rs40bn five-year fund of National Mission for Education (NME) is going to expire by the end of FY12.

Figure 9

**Aakash's key features**



**Hardware**

Processor	Conexant with graphics accelerator & HD Video processor
Memory (RAM)	256MB RAM / Storage (Internal): 2GB Flash
Storage (External)	2GB to 32GB Supported
Peripherals	Push Pull Micro SD, 2 USB ports
Audio	Stereo sound earphone jack
Display and Resolution	7 inch display with 800x480 pixel resolution
Battery	2,100 mAh

**Software**

OS	Android 2.2 Froyo
Connectivity & Networking	WLAN WiFi IEEE 802.11b/g
Web browser compliances	xHTML 1.1 & JavaScript 1.8 compliant
Applications	PDF viewer, Text editor, Multimedia & Image Display, YouTube player

Source: CLSA Asia-Pacific Markets

## Pawan Agarwal on internet access in higher education



**Pawan Agarwal**

We asked Pawan Agarwal, who advises the planning commission on topics related to higher education, about the thought process behind *Aakash* and the Indian government's initiatives on facilitating internet access in universities across the country.

Immediate technology gains in higher education are overstated but long-term gains are understated. This happened with e-learning a decade ago, but perhaps now we are at an inflection point where we can start seeing the results of those changes in the teaching and learning process, and the way classroom interactions take place. Some of it is already happening, but devices like *Aakash* and ubiquitous access to broadband, will further facilitate the process. It is difficult to specify how long it will take, but it is surely happening. We are seeing disruption in classrooms with increased presence of online teaching.

The government recognises that these changes are set to happen and we want to leverage these changes in the interest of the larger public. Therefore the programme that we started in the 11<sup>th</sup> plan, the National Mission in ICT, will continue. The exact contours of the programme remain on the drafting board. As we get a better idea of the funds available, we will be able to take a view on what exactly should be our action ahead.

***One proposal for higher education involves giving access devices like Aakash to students for free with the subsidy split between the government and the university. Where are those universities placed on this proposal? Do they have enough funds?***

Somehow, personally, I am not very comfortable with the idea of free distribution. Anything distributed for free isn't valued. At the same time, we need to ensure that even the poorest have access to these devices, and we do not accentuate the digital divide. Mass-scale production is pushing the costs down, and so we need to work out the details of the extent of subsidy on these devices in the coming years. Although we agree that whatever is distributed free isn't valued, if mass-scale production and fund allocations allow, we would like to distribute these devices freely as teaching and learning tools.

***In the past, the government has focused on private player involvement in the ICT programme. Do you envisage something similar as you target greater internet access in universities?***

The government is looking for private partnerships across a variety of activities, but how to structure these is yet to be decided. Particularly in content development where much of the content we are trying to develop is using public institutions. We have looked at tying up with faculties in acclaimed universities, recording their lectures and putting them on the web. Quality and timeliness of content delivery are issues, which we hope to resolve by bringing in the private sector. But structuring these private-public-partnerships is very difficult. Getting it done via private institutes would be 10-12 times more expensive than approaching the faculty in our own universities, and so we will need to structure private participation to ensure improvement in quality and timeliness.



***The question of access is critical. How do you plan to resolve related concerns?***

We have begun to provide universities and colleges with free broadband access, and already implemented it in a few hundred institutions. Here again however, we, in the planning commission, were of

the view that it needn't be given free of costs, but we have seen the costs plummet with time. The current programme has funding for 10 years, and initial setup and running costs will be incurred by us. So we see broadband penetration only increasing significantly. One of the issues that keeps bothering us is how we use this huge bandwidth optimally. We are trying to get a better sense of this for the next plan.

***What about funding? Is this an area where the government has committed to spending?***

Government spending in this area is unlikely to be hit, despite any fiscal pressures. The commitment has been given upfront by the Deputy Chairman of the Planning Commission, that education, health and infrastructure will get top priority. But if the fiscal situation remains under stress, we are unlikely to get the raise in outlays we were expecting. This may make planning quite tricky as we have to optimally deploy our resources. An efficient use of public funds will have some user charges coming in.

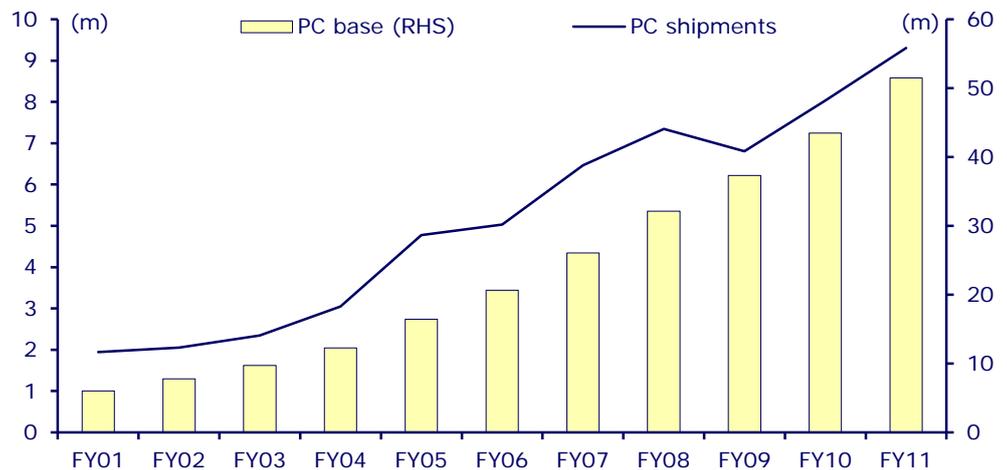
**Installed base of PCs stands at 55m in India**

While PC sales in India have grown well, there has been no real inflection point in annual sales. India has missed PC-shipment forecasts for much of the past decade. China took just five years to reach the 10m annual PC-shipment mark from two million in 1996. India hit the two million mark in 2001, five years later and 10m only in 2011, 10 years behind China. India's current installed base of 55m PCs is equivalent to about one for every 25 Indians.

Almost 75% of Indians access the internet only through a PC. Thus, while mobile and the resulting internet penetration is welcome, the installed base of PCs/tablets needs to rise for internet commerce to take off. With political will clearly aligned towards that end, we expect greater momentum on PC/tablet ownership. This could be the single biggest trigger for greater internet penetration and commerce in India over the next few years.

Figure 10

**Annual PC shipments and installed base of PCs**



Source: CLSA Asia-Pacific Markets, Manufacturers Association of Information Technology (MAIT)

**Government efforts can boost installed PC base**

**Proliferation of cheap and portable access devices**

India's internet marketplace has clear divisions along economic (wealthy and poor), demographic (old and young) and regional (urban and rural) lines. However, availability of cheaper access devices like mobiles/tablets coupled with data services provided by telecom operators will likely shift the internet access dynamic in India. We expect internet access to gradually shift away from PCs (75% Indians access internet only through a PC today) towards mobile phone and tablets over next few years.

**Cheaper devices have potential to bridge the digital divide**

**Tablets have higher potential for internet commerce than mobile phones**

With feature-rich phones being retailed for just Rs3,000-4,000 (US\$60-80), mobile internet will take-off in India. However, given the form factor limitation, we remain a tad sceptical on mobiles' utility in driving internet commerce even as access goes up. We are much more sanguine on tablet's potential in driving internet commerce. A number of Indian firms (Wespro, Vox, LACS, Fujezone and Maxx Touch) have started selling tablets for just Rs6,000-8,000 (US\$120-160) and monthly unit sales have already crossed 5,000 at this price point. Indian internet users spend much less time online than other emerging-market countries.

**Activities going online**

In our view, a direct upshot of such easy-to-carry devices is likely to be greater internet usage. As a result, users are likely to conduct more activities online beyond information searching or casual communication. While there has not been any concrete study that suggests that greater amounts of time spent on internet translates into more online shopping, we would expect some boost to the online advertising market.

Figure 11

**A number of cheap and reliable devices available in the market now**



Source: CLSA Asia-Pacific Markets

**Wespro Digital: Leading charge on cheap tablets**



Wespro is an online brand of netbooks and Android tablets priced aggressively in the Rs5,999 to Rs7,999 range. Using resistive touchscreens, the seven-inch tablet is priced at Rs5,999 and is seeing 2,000 unit sales per month (up 4x in past six months), 60% of which are from second- and third-tier towns. Tablets compatible with 4G networks are still a while away, although Wespro's tablets are 3G compatible and have a slot for modem dongles. It is planning to launch a tablet with slots for 2G simcards soon.

The Indian buyer's price sensitivity can be gauged by the fact that the eight-inch and 10-inch tables priced at Rs6,999/7,999 sell just 100 pieces a month. However, as scale kicks in, Wespro sees the price of seven-inch tablets to fall to Rs4,999 by May 2012 and then

Rs3,999 by December 2012, at which point it expects to sell around 15,000 tablets per month. Wespro claims a 40% market share in this price range. Competition at the lower end comes from Indian companies like Vox, LACS, Fujezone and Maxx Touch, among others.

Wespro's products are manufactured in China and fully packaged items are imported. The company's adverse experience with offline electronics retailing in 2001-02, made it focus on leveraging only online channels to keep margins healthy, even at aggressively low price points. However, delivering to far-flung locations (over 2,000 cities so far) stretches its receivables to 60 days. Wespro stocks around 1-1.5 months of inventory. It also provides a 15-day money-back guarantee and cash-on-delivery services. Wespro's products are carried by many e-tailers, with HomeShop18 and Naaptol driving bulk of the sales.

Mobile/tablet access could push up internet usage in India

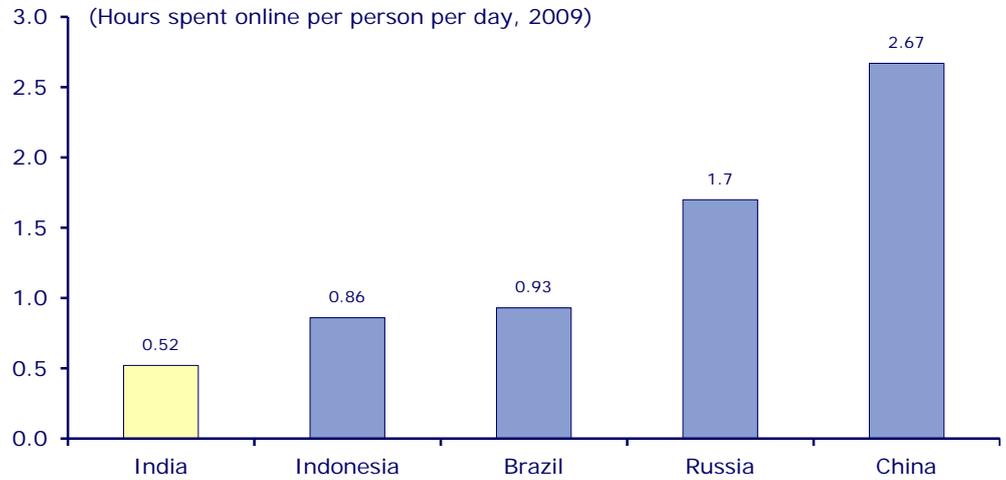
Mobile data users should drive internet usage ahead

Over 10x increase in number of mobile data subscribers

RIL's 4G launch could force telecom operators to reduce 3G tariffs

Figure 12

**Increase in time spent online could boost advertising/commerce somewhat**



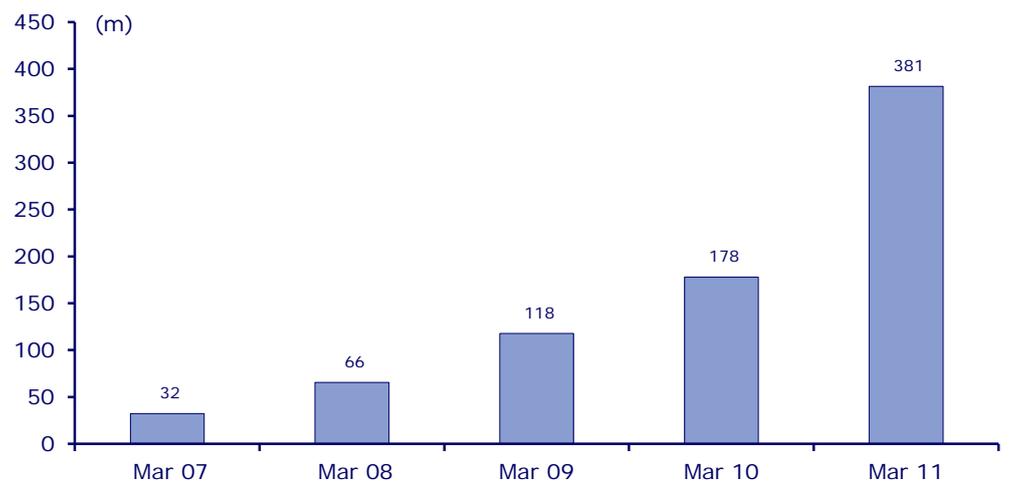
Source: CLSA Asia-Pacific Markets, BCG

**Wireless internet should solve access puzzle**

The absence of last-mile connectivity in India has led to the country leapfrogging the fixed-line phase and directly adopting mobile phones. With mobile tariffs among the lowest in the world, India today has around 900m mobile subscribers (from two million in 2000). Contrast that with the country's stagnant fixed-line base that still stands at just 40m. The Telecom Regulatory Authority of India (TRAI) has asserted that over 380m mobile subscribers use data, 60% of which are active (at least once per month). This rapidly growing pool of data users is likely to be the key driving force of wireless internet ahead. Within just a year of launch, the active 3G subscriber base at over 14-15m is already ahead of the broadband subscriber base of 12m in India.

Figure 13

**Mobiles subscribers subscribing to data services**



Source: CLSA Asia-Pacific Markets, TRAI

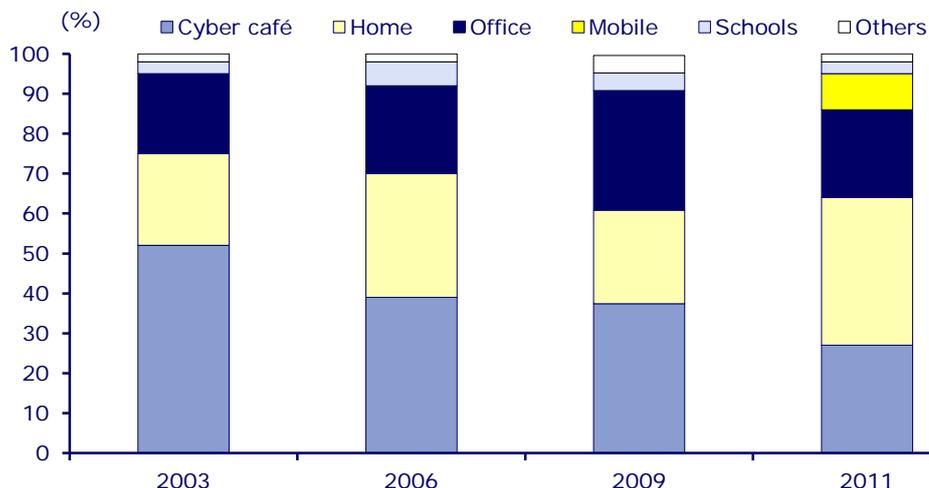
Six leading mobile operators led by Bharti, Vodafone and Reliance Communications have launched 3G services in key markets. While 3G ramp-up has been sluggish so far, driven by a lack of adequate spectrum and operators' continued higher focus on voice, we expect some of that to change going ahead. Telecom operators have invested US\$15bn in 3G licences and

Per IAMA survey, 9% respondents have mobile as primary internet access point

return on that investment is possible only through data traffic. RIL's subsidised 4G services are likely to make it tough for the existing 3G service providers, who have paid large amounts to get their licences.

Figure 14

**Primary access point for internet**



Source: CLSA Asia-Pacific Markets, IAMA

Mobile-device access is conducive to more consumption-orientated activities like entertainment, social interaction and information searches. However, for transactions, users will need to develop the habit on PC-type devices before migrating to a mobile interface. Also, we expect most Indian websites to move to an app-based interface to meet this access demand.

Figure 15

**Current 3G coverage of leading mobile operators**

Operator	Launch date	No. of circles	Current coverage	Licence fee paid (US\$bn)
Bharti	Jan 11	13	20 circles including roaming agreements	2.7
RCom	Dec 10	13	over 333 towns across 13 circles	1.9
Idea	Mar 11	11	2,300 towns	1.3
TTSL	Nov 10	9	9 circles	1.3
Aircel	Feb 11	13	13 circles	1.4
Vodafone	Mar 11	9	over 1,100 towns	2.6

Source: CLSA Asia-Pacific Markets, Department of Telecommunications

Reliance Industries could disrupt the market driving mobile data usage

**4G/ LTE launch could be a big catalyst**

Unlike incumbent mobile operators whose business model is still voice centric, 4G/long-term evolution operator Reliance Industries (RIL) intends to focus mainly on data offerings, which is largely an untapped area compared with the mature market for voice services. LTE's primary objective is to enable operators to cost effectively transport the rapidly growing volume of mobile IP data traffic on their networks. Given that India is a very price sensitive market, the level of success for 4G/LTE will be driven by the tariff offered by operators. RIL in the past (when it launched CDMA services) has shown a penchant for a disruptive entry by reducing prices substantially and this adds to our optimism on the mobile-internet revolution.

## Tikona CEO Prakash Bajpai on 3G/4G services in India



**Prakash Bajpai**

*Will broadband-wireless-access (BWA) operators adopt Wimax or LTE? How will 3G/WCDMA compare with BWA/LTE/4G? Should India have skipped 3G and gone to 4G? How long will it take for LTE handsets to be available at 3G levels?*

It seems like this debate has been settled. Around the world, top telecom operators have announced plans to invest in LTE and India will not be an exception. Unified ecosystem of convergent devices, based on multimode chipsets (2G/3G/4G LTE, Wi-Fi), with much higher spectrum efficiency, will help operators to build much-needed broadband capacity and coverage in a cost-effective manner. A 4G LTE ecosystem is set up to ramp up much faster than prior wireless technology transitions, given several key ingredients for success, ie, ecosystem, experience and economics.

Markets such as the USA and Europe are likely to have comprehensive LTE coverage in the next 12-24 months. Verizon, in particular, has been aggressive with its LTE rollout and almost all leading global operators have announced plans to roll out LTE networks through 2012.

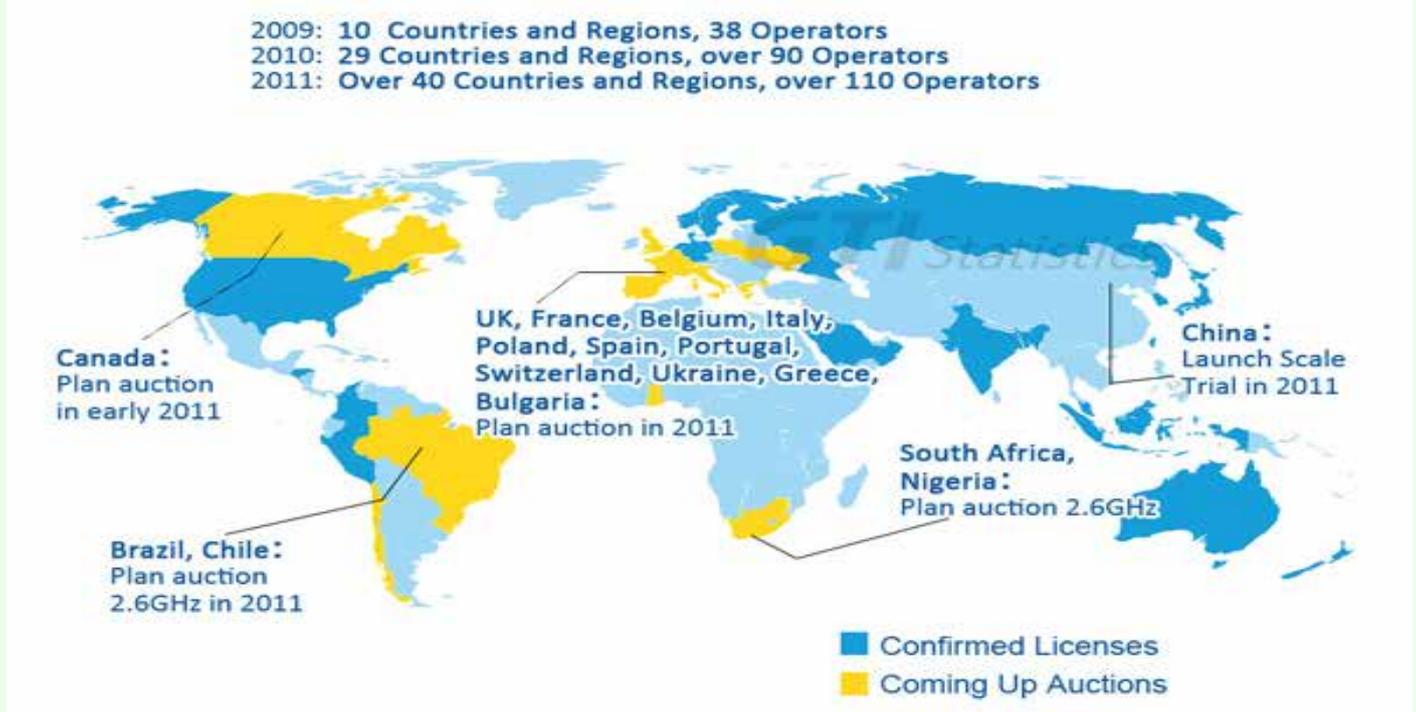
3G will play its part in initiating users in India to the world of mobile internet and deliver interesting VAS applications. However, as users become prolific on

internet usage and begin to consume multimedia content on their smartphones, notebooks, tablets and pads, a much larger capacity will be required - a critical need that can only be met by 4G LTE networks. So, in my view, a collaborative framework among 2G, 3G and 4G players will develop to deliver superior value to customers, ie, voice, data speed, download capacity and VAS on a single device.

As far as LTE handsets are concerned, component cost gets directly driven by volumes. So, if 4G networks get created and services become available within a span of two to three years, we will see 4G devices having the same price points as 3G ones. There is normally a lag of two to three years between technologies, so today the industry is asking vendors to match prices of 3G devices to those of 2G handsets. After two years, I reckon that nobody will ask to choose between 2G or 3G, as all devices will be 3G. Again, I would expect that within two to three years, all devices will be multimodal (2G/3G/4G).

Advocacy for globally harmonised band of 2.3GHz for LTE-TDD and 2.6GHz for LTE FDD globally is likely to result in reduced complexity, leading to cheaper and smaller devices, greater economies of scale and hence more choices and lower prices, more coverage and longer battery life for TDD devices and an interference-free RF environment. All of the above benefits will drive companies to create better business models and greater investment initiatives.

### Spectrum licence allocation



Source: GTI Statistics

**How soon are LTE deployments expected in India and which variant of LTE (FDD or TDD) is more appropriate for the market and why?**

India will only see LTE-TDD deployment in this phase as the spectrum given is the TDD spectrum, which is more suitable for asymmetric internet applications. There is no paired spectrum available and it is increasingly difficult to find paired spectrum across the globe. So, TDD will become a very large part of the world's ecosystem for 4G services. India and China are following this model and this covers almost half of the world's population. I would expect networks to start getting deployed now with continuous rollouts over the next two to three years.

**Will LTE/4G business model in India work on data alone? Also can Reliance Industries' (which owns pan-India BWA/4G spectrum) LTE plans be a disruptive technological change in the sector?**

Existing 2G/3G networks have already solved India's voice problem. LTE is likely to leverage existing mass-scale proliferation of 2G/3G ecosystem by using software-defined radio (SDR) as well as multimode chipsets, which will allow seamless transfer among all these networks. This will also allow traffic-choked 2G/3G networks to pass data or IP traffic to 4G LTE or 4G Wi-Fi networks. Therefore, various types of collaboration, cooperation and competition among networks will emerge. I don't think any 4G operator is eager to offer voice services other than limited VoIP-embedded in applications. Hence, it may not be a disruptive force for existing voice business of 2G operators.

**How will the challenge of LTE handsets/devices be resolved in a price-sensitive market like India? What are the prospects for products like tablets?**

Cost of devices is a function of volume and as the global LTE ecosystem develops, the prices for 3G and 4G devices will begin to converge over the next few years. Tablets are fast becoming a worldwide

phenomenon and are likely to be relevant to all segments of the Indian market, i.e. for high-end business users as an alternative to heavy laptops; as a second computer at home for children and housewives; or as a first computer in a no-PC home at a much lower entry cost and that is less complicated to learn.

**What will be the future trends in infrastructure sharing and roaming arrangements for 3G and 4G/BWA services? Specifically by operators who have missed out on BWA/4G spectrum in all or some circles?**

All forms of 4G LTE and 4G Wi-Fi collaborations will be relevant and will emerge. Operators who do not have data-carrying capacity will tie up with data-network operators. India's 2G/3G operators have a large user base, many billing arrangements and their customers are carrying devices that have Wi-Fi capabilities and need additional data capacities. This is a concept of collaboration between a network operator and a service company. Network operator and service provider need not be the same. Service operators who want to offer data services can take the shared capacities of network operators and market it as their own. These kinds of arrangements will become prolific and is good for India as it helps boost infrastructure-capacity utilisations by multiple entities and are more economical.

One of the leading pan-India mobile operators has recently tied up with Tikona and has launched Wi-Fi internet services for its customers across its 40,000 hotspots. Through this kind of partnership, a mobile operator would take data capacity from Tikona and market the services to its customers. Likewise, we could see collaborations for the following services in the near future: 2G operators without 3G spectrum; 3G operators for capacity offload to 4G LTE or 4G Wi-Fi network; 4G LTE operators - intra-circle and inter-circle roaming in India and abroad; and 4G Wi-Fi alliance within India and abroad.

**What is so special about LTE?**

It is the primary technology behind 4G – the evolution of 3G networks. Where 3G made mobile data a reality, 4G will make it a much better one. LTE stands for long-term evolution. It has been in development for around 10 years now, and has begun to see some releases worldwide. The very first LTE network was launched by TeliaSonera in Norway and Sweden. But it is one very lonely 4G network, as most of the rest of the world is still at the trial stage. Boiled down to its basics, here is what LTE does:

Much faster speeds than 3G - Under ideal conditions, LTE can easily reach download speeds of over 150 megabits per second, and upload speeds of over 80 megabits per second.

More capacity than 3G – An LTE network can support more users in a single area.

Larger cell size - A single LTE cell tower can cover up to 100km. While that size will be greatly diminished in a heavy urban area, it's still a lot better than 3G.

Compatibility - LTE is designed to be compatible with existing standards.

Ease of upgrade - Part of the reason it has taken so long to develop LTE is that it is planning forward a lot. The networks are being designed so that implementing upgrades further down the line will be much easier.

**Leading the 4G charge**

Data charges could be one tenth of those offered by 3G service providers

RIL 4G rates could be in-line with landline tariffs

Easier access through mobiles and wider content/service suite driving growth

Figure 16

**RIL is betting big on 4G**

Operator	No of 4G/ BWA licences (circles)	Fees paid (US\$bn)
Reliance Infotel	22	2.8
Aircel	8	0.7
Bharti	4	0.7
Qualcomm	4	1.1
Tikona	5	0.2
Augere	1	0.0

Source: CLSA Asia-Pacific Markets

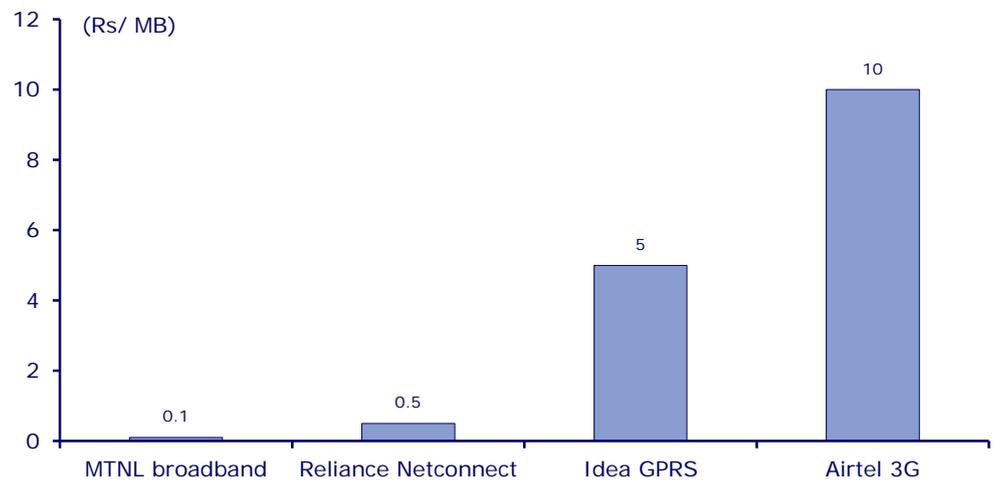
**Reliance Industries' 4G launch can disrupt wireless internet space**

We expect RIL to launch its 4G play with competitively priced tablets across 700 cities bundled with data plans priced at just Rs10 per GB. The data services at a subsidised rate of Rs10/GB are almost one tenth of the present 3G plans. Some reports suggest 4G tablets will be launched by end-2012 in a price range of Rs3,500-5,000. This approach is, similar to the one the company used in telecom where it launched a bundled offering (phone plus service) at a very competitive rate, setting off a price war that ultimately led to the exponential growth of the mobile telephony market in India.

RIL's 4G services will be based on Qualcomm's LTE technology. RIL's 4G services are intended to be location and device agnostic, and will target both wired and wireless devices.

Figure 17

**Tariffs for data beyond bundled usage**



Source: CLSA Asia-Pacific Markets, Companies

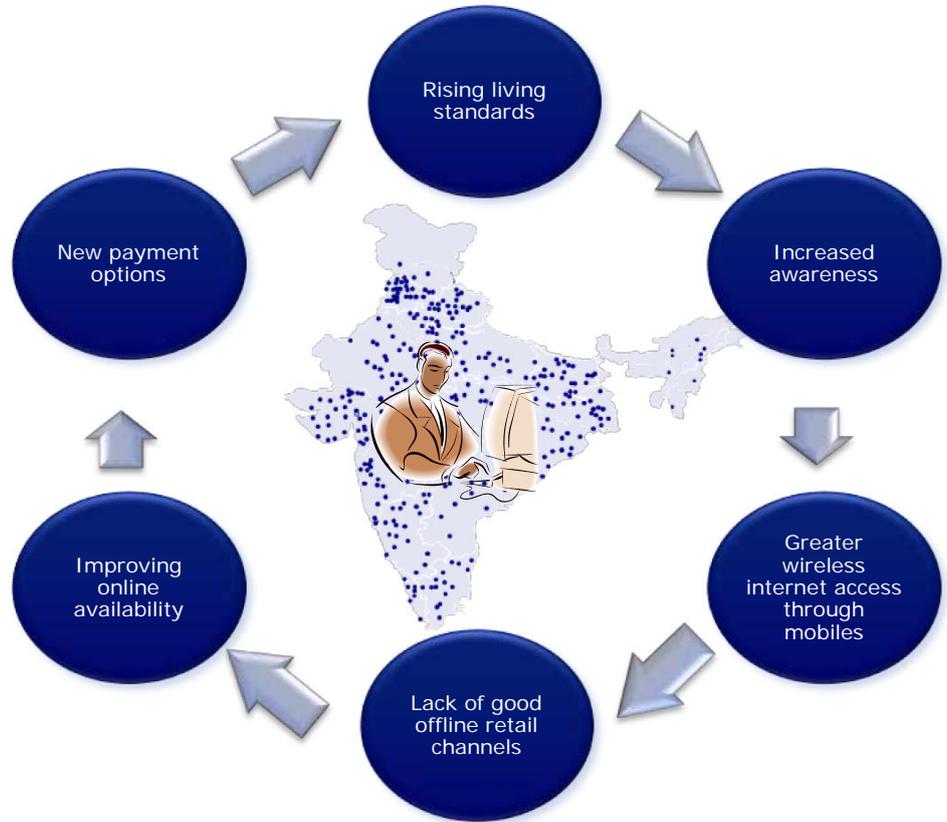
**Smaller towns and cities will be key drivers**

Internet access has so far been the privilege of India's wealthy urban population living in the bigger cities. However, we see India's internet user base profile shifting towards the smaller towns/cities gradually mirroring the success seen in mobile phone services. There are already more than 30m active internet users in the smaller cities and towns. These make up almost half of India's active internet user base. While cheaper access devices and improving connectivity is definitely a factor, a widening range of content and services complete the positive feedback loop required to accelerate usage.

Virtuous circle to drive rising internet adoption in smaller cities

Figure 18

Better access and availability of more services/content will be key drivers

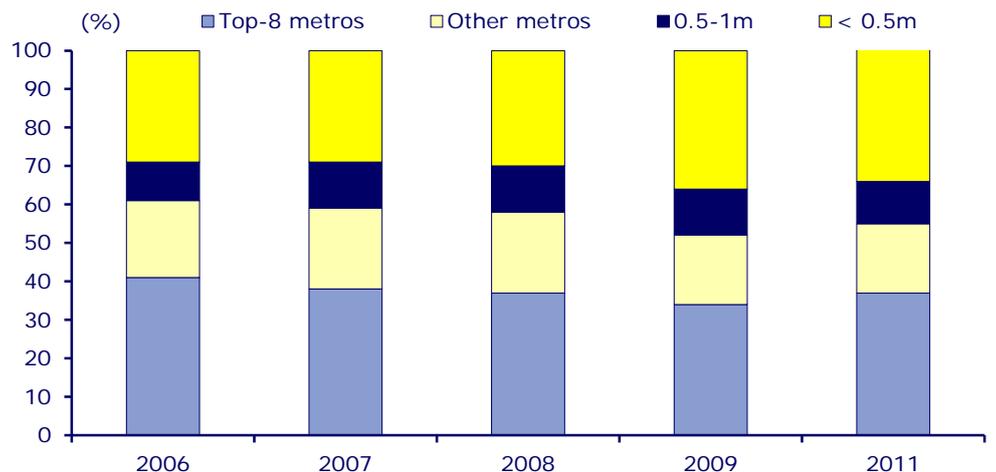


Source: CLSA Asia-Pacific Markets

Smaller towns/cities gradually making their presence felt

Figure 19

Distribution of internet users by city/town size



Source: CLSA Asia-Pacific Markets, IAMA Report 2011

Lack of offline retail option driving e-commerce in smaller towns

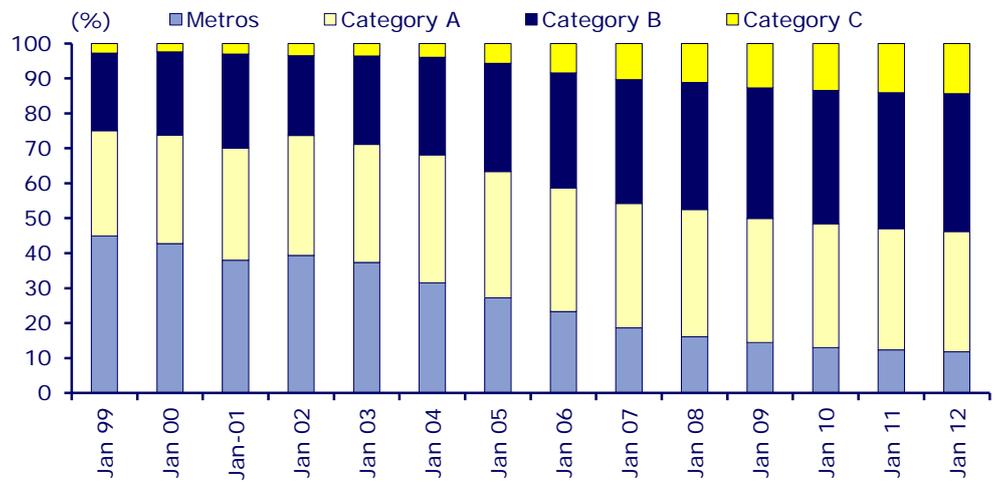
While metros continue to have a dominant share of internet commerce, second- and third-tier cities are catching up fast. An eBay census in 2011 showed that metropolises (metro) contributed 51% of all e-commerce transactions, while tier-two and -three cities contributed about 40% and rural India 9%. Most e-commerce companies in India are getting 40-45% sales

**Increasing proportion of mobile subscribers in smaller cities/towns**

from smaller towns and that proportion is going up. A lack of options in the offline retail sector in the smaller cities and towns has meant that a larger number of people are turning to the internet to make their purchases. Delivering to smaller towns is an issue, but conversations with e-commerce companies indicate that buyers from smaller towns are more forgiving in terms of delivery times due to a lack of offline options. Another thing working in favour of internet commerce in smaller cities and towns is the cash on delivery (COD) option. Lower card penetration and high trust deficit in paying online were issues that have been addressed by COD.

Figure 20

**Proportion of mobile subscribers by type of circles**



Source: CLSA Asia-Pacific Markets

## Suvidhaa Infoserve: Revolutionising small-town payment



Suvidhaa provides an 'assisted internet' service to users with key focus on second- and third-tier towns helping people to make online payments for a range of services. Suvidhaa has developed proprietary software that simplifies and bundles the user interfaces of different websites (namely service partners) providing a single integrated and simplified user interface for a variety of online payments. At the heart of the business model is a Suvidhaa outlet which could be a small grocery store or a travel agent or any local retail outlet.

The outlet buys a computer, a printer and an internet connection and loads Suvidhaa software onto it. This enables the outlet to provide its users with online services such as payment of electricity bills, cellphone top-ups, flight and railway ticketing. The outlets incur the PC costs, pay a one-time registration fee and maintain a pre-paid account with Suvidhaa. The outlet is allowed to make payments only to the extent of the balance in their account. Suvidhaa then pays the service partners through NEFT, precluding the need for

any payment gateway. Suvidhaa already has over 50,000 outlets across 2,000+ cities/towns with plans to double the outlets over the next two years. More than 60% of these outlets are in second- and third-tier towns and this proportion is likely to go up. Suvidhaa engages a network of local distribution partners, which help the offline stores come onboard the platform and there are more than 250 such distributors.

No costs are incurred by the end-user. Service partners (such as IRCTC, MTNL, BSNL, LIC, Tata Sky and many more) pay Suvidhaa a small fee usually ranging from 1-5% of transaction value. From this 70% goes to the outlet owner, 10% to Suvidhaa's distribution partners and it keeps 20%. Suvidhaa has almost 300 service partners.

Over 8m unique users have transacted on the Suvidhaa platform in the last four years. Currently, more than 1m users transact on the platform on a monthly basis with average transaction size in the Rs600-700 range. Almost 70% of the users are repeat users. Suvidhaa is targeting transactions worth Rs10bn in FY12.

**Companies targeting women have a good future**

**Just 22% of Indian internet users are women and that proportion will go up materially ahead**

**Rising power of women**

A recent report by ComScore came to the following conclusion: *'Once women connect, they engage, once they engage, they embrace, once they embrace, they drive. And that's the future, the Internet, it's women's work.'*

Consumer web companies are growing at a solid pace globally in terms of user adoption and revenue. What seems to have gone unnoticed is that women are the driving force behind the most valuable consumer internet and e-commerce companies. While over 46% of global internet users are women, the proportion is just 20-22% in India. Incidentally, participation rate of Indian women in internet is lowest in Asia. Note that the proportion of women internet users in India was 15% a few years back. However, easier access options, the advent of social networking and increasing avenues for online shopping are changing the landscape for internet access by women in India.

Figure 21

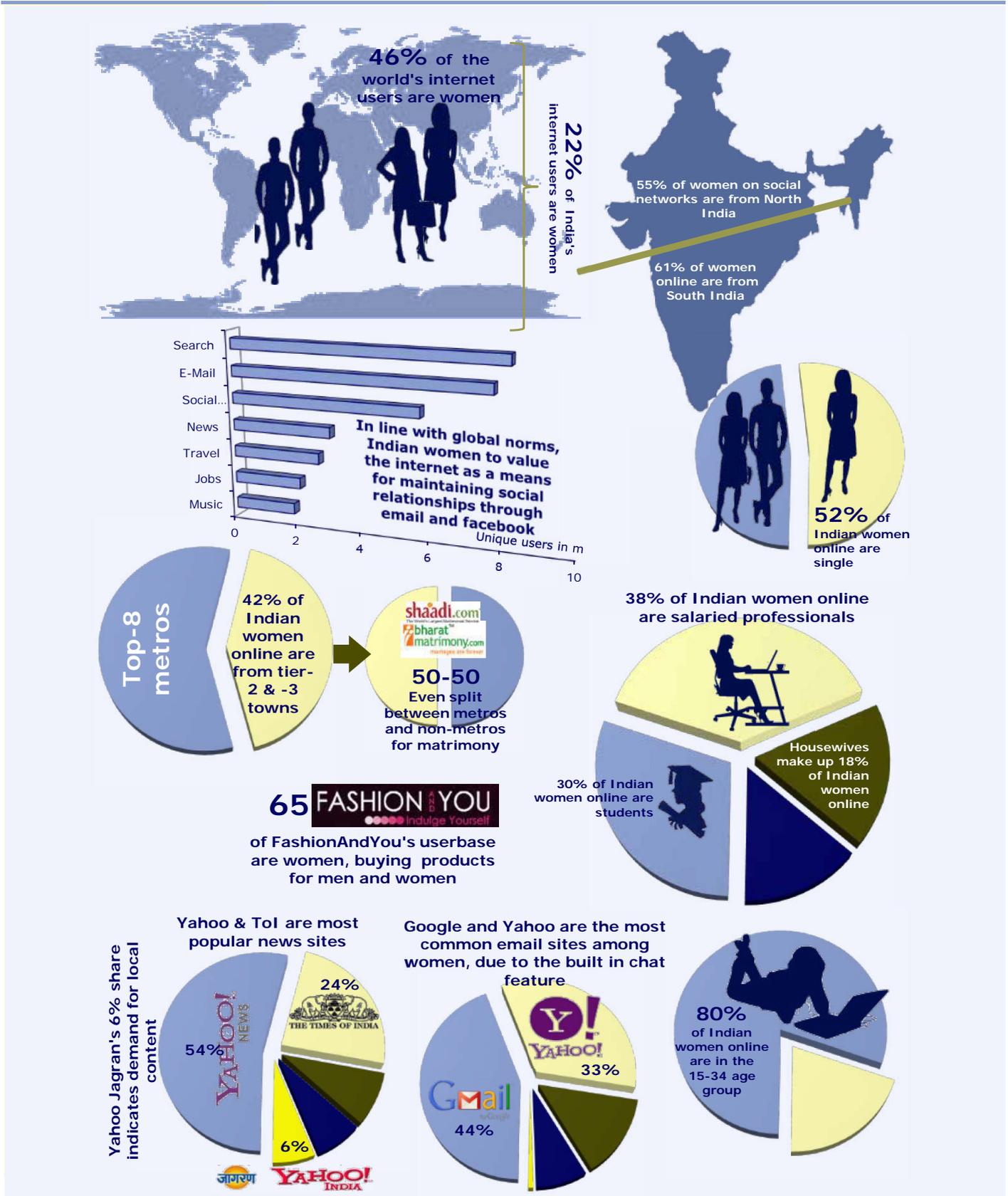
**Globally, women are dominating internet usage and commerce; expect a similar trend in India ahead**



Source: CLSA Asia-Pacific Markets, ComScore, Tech Crunch

Figure 22

Headline statistics on what Indian women do online



Source: CLSA Asia-Pacific Markets, Vizisense

**Women should drive India's internet commerce**

**Internet companies focusing on the youth can scale-up well**

**No other major economy will add as many working-age people until 2020**

The Yahoo Advertising Blog asserts that women make up to 85% of online household buying decisions. According to some reports, women oversee over 70% of consumer spending in India and control the spending when it comes to disposable income. Historically, shopping has however not figured in the priority list of online activities for women in India. However, women are spending a lot of time on retail sites. Also, there is a new crop of e-commerce companies scaling up fast by harnessing the power of female consumers. As e-commerce infrastructure evolves, we see women driving online shopping in India as well.

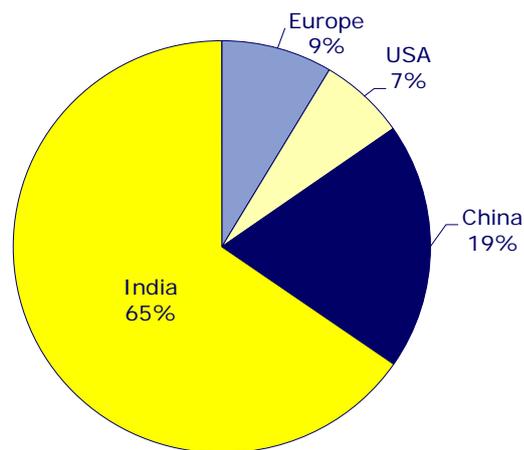
**Rising share of youth is a big boon**

Demographics represent Indian internet's biggest opportunity. The share of population who are of working age (20-64 years) is likely to keep rising in India before peaking at c.61% in about 2040. Adding in those in the 15-20 year age group, India will account for 65% of additions to the 15-64 year age group, worldwide between 2005 and 2020; China will add just 19%. For at least the next 10 years, India is likely to lead the world in terms of the share of youth in its population.

Almost 75% of India's internet usage is dominated by youngsters (under 34 years) compared with global average of 52% and regional average of 57%. Also, youngsters spend much more time online compared with older people. However, this group comprises less than 30-35% of online shoppers by number, and even lower in value of online spending. The shift of this PC-literate and internet friendly population towards the earning bracket is the key demographic driver for Indian internet's future trajectory. We expect online education services (e-learning as well as educational classifieds) to be a big beneficiary of this trend.

Figure 23

**India is adding two thirds to global population of 15-64-year olds (2005-20)**



Source: CLSA Asia-Pacific Markets, United Nations Database

**Three quarters of India's internet users are less than 34 years of age**

Figure 24

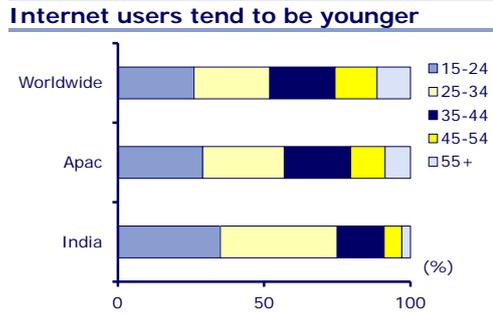
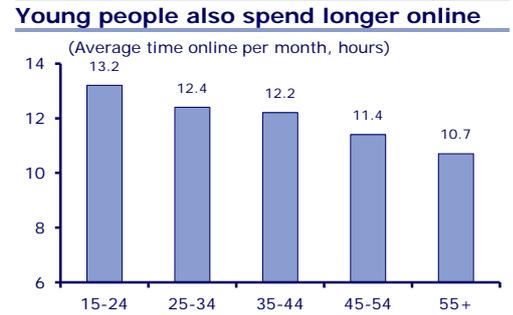


Figure 25



Source: CLSA Asia-Pacific Markets, ComScore

## FashionAndYou: Cashing in female internet users



FashionAndYou positions itself as an exclusive, invitation-only online fashion merchandise retailer, and sells through “Flash sales” offering up to 70% discount. Currently, selling around 15-20,000 items per day, FashionAndYou operates at gross margins of 30%. India typically sees a low order value across segments anyways, and therefore selecting a wide margin product segment becomes that much more critical.

However, aggressive discounting, free COD and so on are necessary to create and then lead in a category. FashionAndYou originated as a Delhi centric site, but now ships across the country. It is a part of Smile Interactive

Technologies group (SITG), which also owns sites such as DealsAndYou.com, FreeCultr.com and BeStylish.com. Therefore at a group level there was enough scale to justify launching their own logistics provider called Creons Infrastructure solutions. Cash on Delivery still account for a majority of their transactions, and here too having own delivery allows for quicker fund reconciliations.

The key driver for launching their own last mile delivery solution was to further enhance the user experience. It allows them to ship higher value items, and collect any returns on the spot as well. There has been a 40-50% improvement in return ratios, which are now much below 20%. Additionally, in-house delivery is also 20-30% cheaper than third party systems.

## iProf: Benefits from wave of young internet users



Founded in 2009, iProf offers test preparatory content for entrance exams to professional courses. It has also tied up with IGNOU (an open university) for distance learning. iProf content is available in multiple formats like lectures in 2D & 3D animations, E-Book and practice tests. iProf content can be accessed on any Android powered tablet. Around 20% of subscribers also buy “iProf” branded tablets along with the content. iProf’s target universe is tablet users and they have already successfully tested their content on Aakash.

iProf has set-up iStudyZones around the country, where students can walk-in to download the content in case they do not have access to broadband internet otherwise. Each iStudyZone has a team of counsellors and marketing professionals to help students understand

the iProf concept and manage their subscription and download more content. Setting up an iStudyZone requires investment of Rs0.5-0.6m and iProf owns nine of these centres while the remaining are franchised outlets.

iProf has a few thousand paid users and the majority of its user base comes from smaller cities and towns. iProf charges an average of Rs500/month as subscription charges. Paid users can download the content, which remains active for the period of subscription. After that it is wiped from the device.

iProf has been focusing on digital marketing of its products. Offline marketing has been restricted to educational seminars so far. iProf has also tied-up with five schools, setting up iStudyZones in these. It is negotiating with another 50-60 schools as well for similar deals.



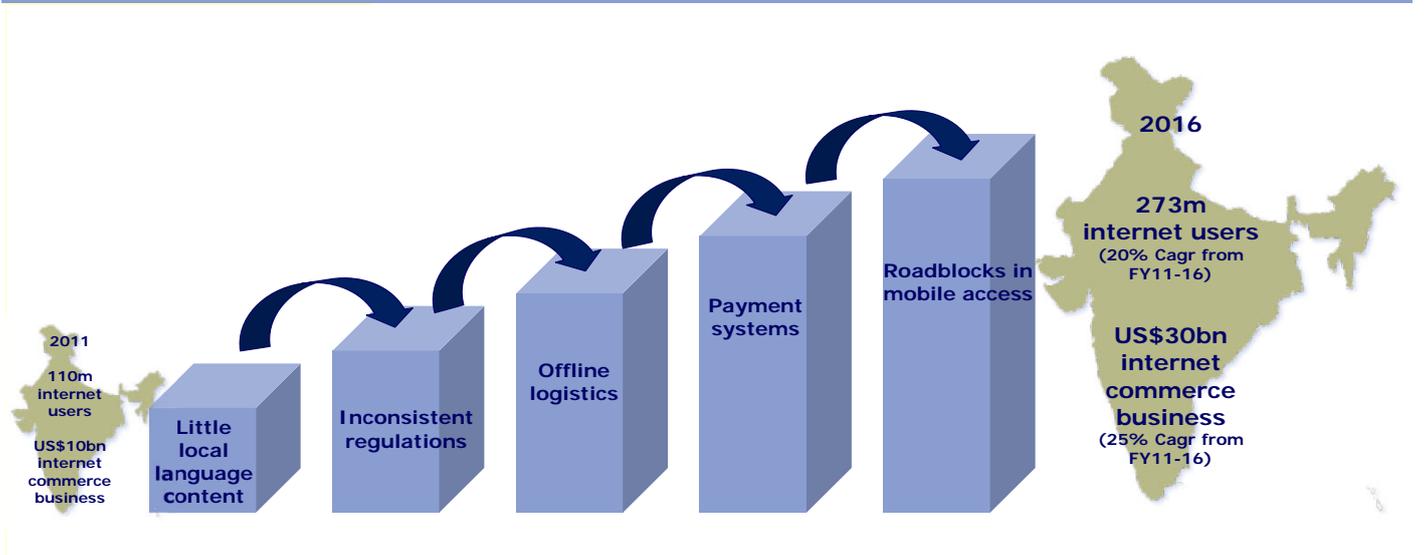
Addressing some teething issues could provide a big boost

## Hurdles to clear

Exponential growth in the internet sector over the next few years will demand that India clears some of the key hurdles in its path, while harvesting its advantages. The internet's structure and key success factors rely on satisfying some common parameters in the ecosystem. Among the obstacles, the headliners are logistical issues, payment challenges, government/regulatory action, lack of a local language ecosystem and operators' unfavourable attitude towards 3G services. Most of these hurdles can be tackled and should throw up new business opportunities.

Figure 26

### Roadblocks in growth of internet users and commerce also present business opportunities



Source: CLSA Asia-Pacific Markets

Telecom operators utilising 3G spectrum for voice services

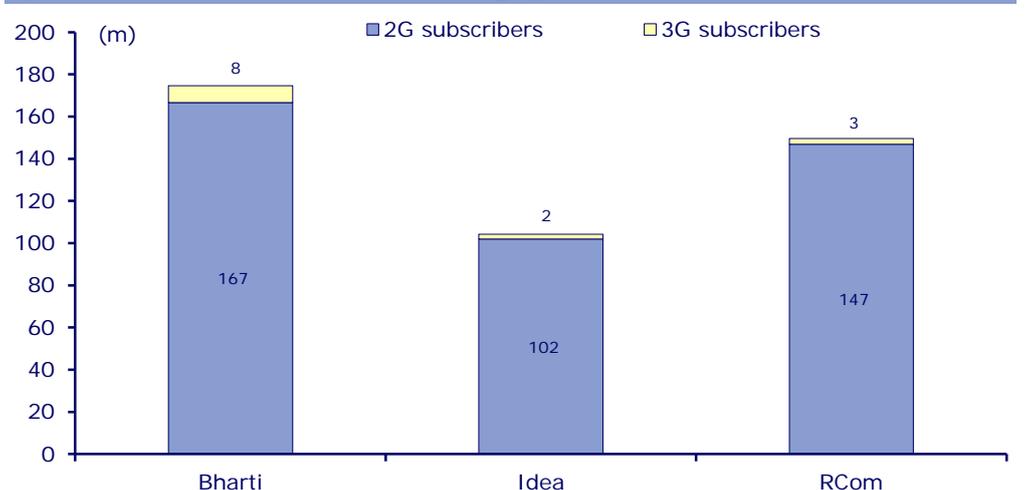
Over 14-15m 3G subscribers but tariffs remain prohibitive

## Telecom operators need to change mindset around 3G

Mobile internet has shown great promise for several years but only now are the pieces starting to come together. A big change in mindset is required from the telecom operators for the 3G revolution to drive mobile internet usage.

Figure 27

### Split of 2G and 3G subscribers for leading operators



Source: CLSA Asia-Pacific Markets, Companies

Operators have used 3G primarily for voice

Operators using 3G spectrum for voice services

Telecom operators' mindset remains voice centric

Operators have spent more than US\$15bn on licences alone, but they have not done a good job of implementation. Since the 5MHz 3G spectrum award (per circle per operator in winning circles) was so small, operators have ended up utilising this primarily for voice capacity and hence constrained 3G-data plans by offering little. This, in turn, is proving counterproductive because operators have larger user bases on 2.5G.

On the ground, with 3G constrained for spectrum, operators have launched 3G services but instead of using it as a data "pipe" they have shifted capacity to voice usage, and the mobile data revolution has been postponed for now.

Figure 28

India's limited 3G spectrum remains a constraint		
Country	3G licences	Total 3G spectrum (MHz)
Germany	6	145
UK	5	140
Italy	5	125
Netherlands	5	145
Denmark	4	140
Austria	6	165
Belgium	3	90
Greece	3	105
Portugal	4	100
France	2	105
India	4-5	20-251

Note: Implies 5MHz per operator per winning circle vs worldwide average of 15MHz. Source: Industry

Also for mobile operators, with everyone going the wireless internet way, the challenges are significant in terms of bandwidth and spectrum utilisation, besides the need for threshold pricing and an ecosystem for content. Threshold pricing has to be in the Rs200-500 range for faster speeds and larger capacity and at present you do not get those price points. Without that threshold price point, mass internet consumption will not happen. India needs to transition from intermittent narrowband to always-on broadband. That will unleash the mobile boom including a flourishing local content industry.

Also, the operators' 3G strategy has been confusing and disappointing for subscribers. They have not really pushed 3G hard enough. The networks are not delivering the speeds that they should. So, even as select subscribers have devices capable of doing so much more, the usage of data and the ecosystem of content and applications is not growing fast enough. In reality, the incumbent mobile operators' mindset still remains voice-centric as 90% of revenue comes from voice and 5% from SMS. So data is still a very small part. Also operators may be worried that, if people get access to some of the pipes, then it may start cannibalising voice revenue. For example if in future data access becomes cheap and widespread and VOIP legal, this may cannibalise their own voice revenue. So in effect, operator mindset needs to change for 3G services to get a push.

While 3G rates have been coming down, data plans are still expensive

Indian telecom operators have a high dependence on voice revenue

Cash on delivery likely to remain dominant for now

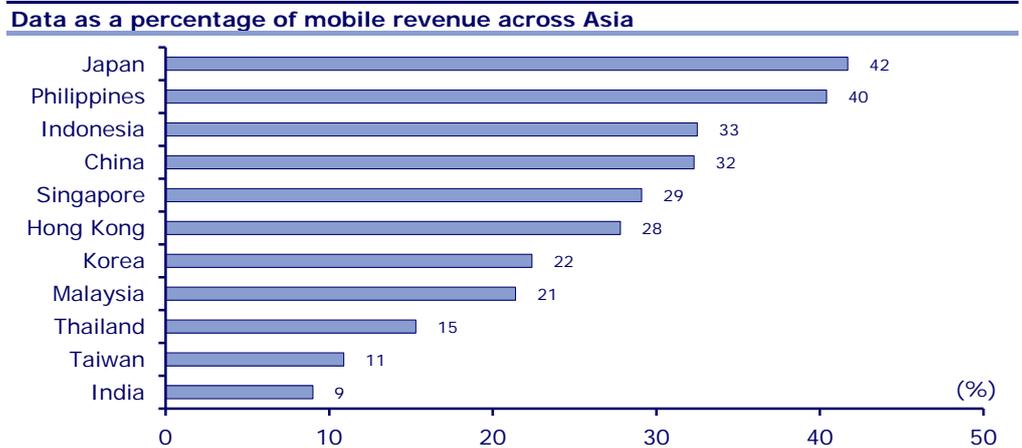
Flourishing black economy implies COD will remain the preferred mode of online payment

Figure 29

Current 3G plans offered by operators (Rs)				
Free 3G data usage (GB)	Bharti	RCom	TataDoCoMo	Idea
0.1		97	90	
0.2	101			103
0.25		198	201	
0.5	200	397	351	199
1.2	450			450
2		749	751	599
4	750			750
5		1,199		
10	1250	1,499		1250
21		2,100		

Source: CLSA Asia-Pacific Markets, Companies

Figure 30



Source: DoT, TRAI

**Payment challenges need to be addressed**

A cash-driven economy; low penetration of credit/debit cards; regulatory constraints to models like PayPal; mobile-payment nascence; high drop-off rates while paying online; and inherent discomfort with online payments are key constraints to an effective payment mechanism that will allow internet commerce in India to develop.

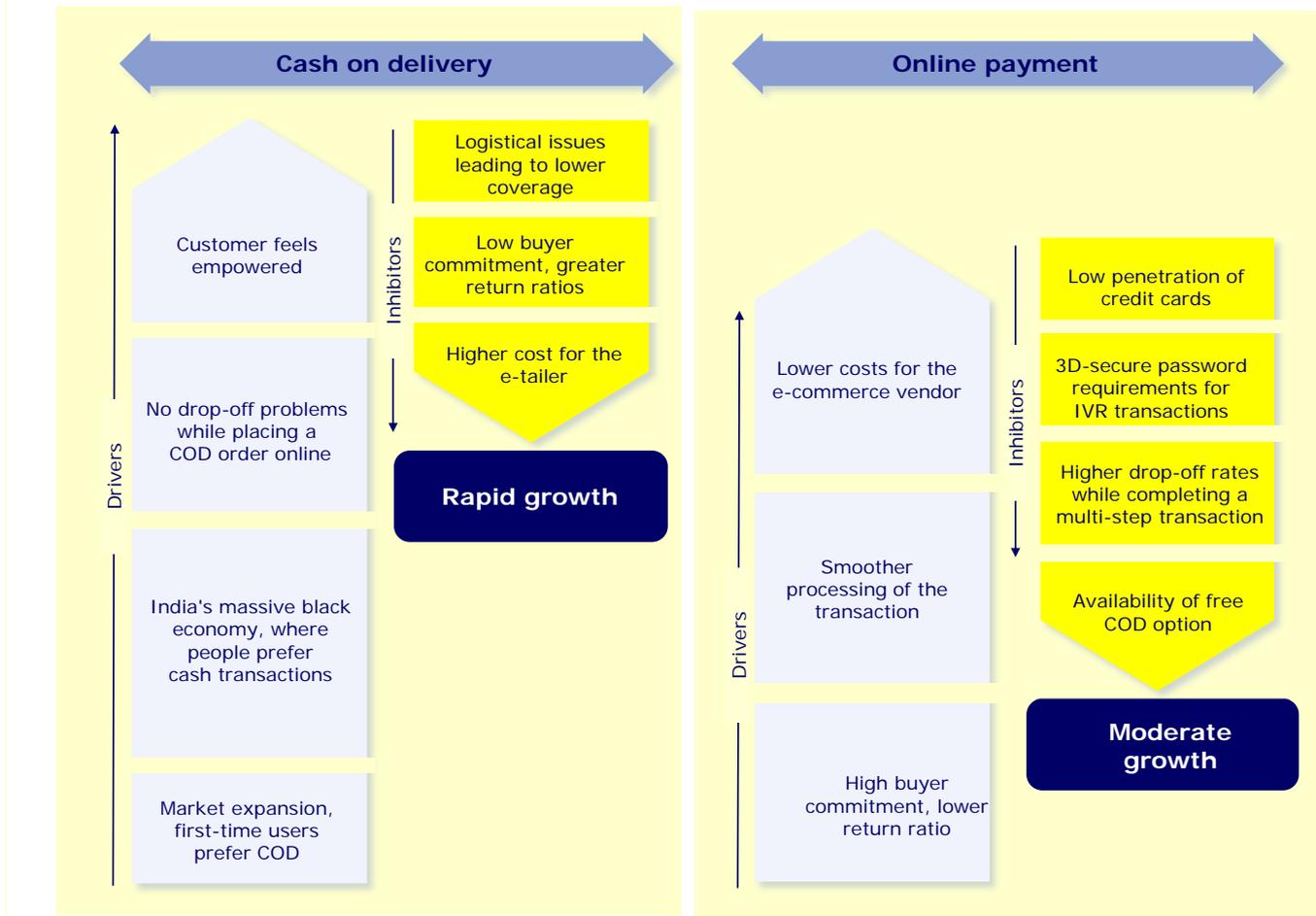
Even as Indian internet companies are grappling with these payment challenges, COD is fast emerging as the preferred choice of payment for e-commerce transactions. Over 50% are settled this way and new companies like Gharpay are trying to capitalise on this opportunity. Rising penetration of debit/cash cards has also encouraged a number of third-party payment gateways/aggregators to expand and CC Avenues, EBS and BillDesk are among the key players to watch.

**Cash on delivery will remain the preferred payment option**

A key factor which will continue to keep COD in flavour is the vibrant black economy in India. A Swiss Banking Association report stated that India has more black money than the rest of the world combined. The Reserve Bank of India (RBI) has mandated a photocopy of the permanent account number (PAN) card for cash transactions above Rs25,000. However, with the majority of e-commerce transactions below that amount, COD will remain the preferred choice of payment for customers.

Figure 31

Pros and cons of prevailing dominant payment options for online transactions



Source: CLSA Asia-Pacific Markets

**Higher return rates with cash-on-delivery**

**COD is key to development of internet commerce**

With over 50% of transactions, COD is the most popular online payment method even in Russia (another black economy). Another driver is that Indians remain inherently distrustful of goods sold online and would rather pay money after receiving them. COD facilitates this and is especially useful for customers who are transacting online for the first time.

However, COD does have inherent issues. Firstly, cash collection charges are higher than normal online payments. For e-commerce companies operating on thin margins, this is an important consideration. Another issue is absence of commitment from the buyer as he pays only after goods delivery. This has led to higher return rates (20-30%) than normal. COD also limits delivery ability and on an average, pincode coverage is much lower than that for other payment options. An online fashion-goods retailer Fashionandyou.com covers 2,170 pincodes on cash on delivery and almost double that number for credit-card/debit-card transactions.

Despite its limitations, COD is for now the payment pillar of e-commerce in India. It is allowing internet players to refine their logistics and expenses (as COD costs are higher) and giving banks and payment gateways time to upgrade their technology infrastructure, which should enable them to handle the high volume of future online transactions.

**Rising debit card penetration holds out hope**

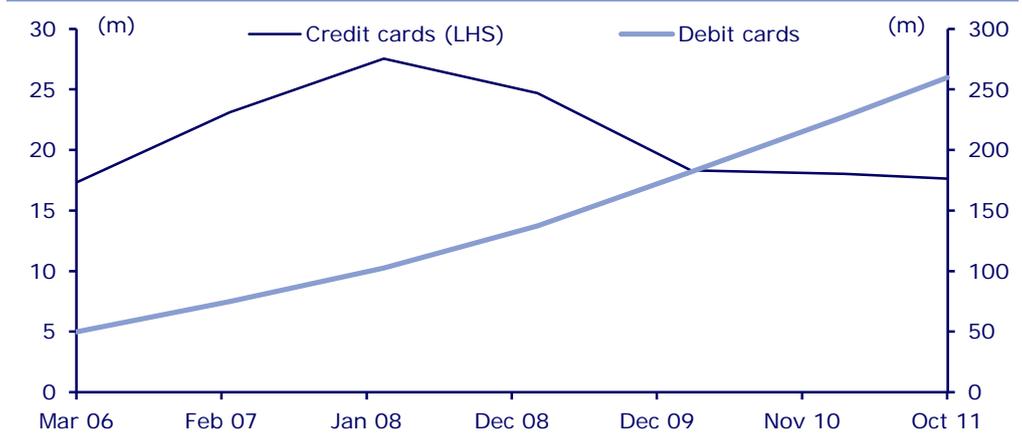
**Number of outstanding credit cards is going down while debit cards are on the up**

**Payment gateway and aggregators' scale-up facing some roadblocks**

Payment gateways and aggregators provide the infrastructure to enable a web merchant with an online e-commerce store to charge a customer from his credit, debit or cash card or bank account (net banking), resulting in the electronic transfer of funds from the customer's to the merchant's account.

Figure 32

**Debit cards could provide the impetus for online payment**



Source: CLSA Asia-Pacific Markets, Reserve Bank of India (RBI)

Most e-commerce companies prefer to work with an aggregator rather than dealing with individual banks. Smoother logistics, cheaper costs and lower return rates are key factors in favour of this mode of online payment. Indeed, e-tailers are even incentivising customers to resort to online payment. However, two key factors are constraining this: low credit-card penetration; and buyers inherent distrust paying before seeing.

**Gharpay.in: Facilitating COD growth**



Abhishek Nayak and Arpit Mohan co-founded Gharpay (Hindi for 'At home') in January 2011 to provide cash-collection facilities to

India's e-commerce websites. Cash transactions form 50-60% of all transactions on the majority of Indian e-commerce sites, and cash collection is often beyond the scope of traditional courier companies. This is where Gharpay steps in. When a user places an order on any e-commerce site, Gharpay is informed via the website. It in turn contacts the buyer (in less than 24 hours) and schedules the cash pick-up from the buyer. At the end of the day, all collections (cash and cheque) are deposited into Gharpay's bank account. The money is transferred to the client within two business days. The product or service purchased is delivered separately by either the e-commerce site or one of its other vendors.

Gharpay charges Rs40 plus 2% (amount above Rs1,000) for every transaction. Pricing is entirely variable, with the client not having to ensure any minimum monthly

transaction. It took Gharpay around three months to set up the technology backbone, which uses MIS systems that its many "Payment executives" update via an interactive voice response system (IVRS). Currently the on-boarding process is fairly long, and takes around two months to integrate clients' systems into Gharpay's software. On the technology front, the company is streamlining its backbone and also developing proprietary mobile software to help its payment executives become more productive and execute more collections per day.

Gharpay reaches 870 pincodes across 11 cities and its monthly collection is averaging more than Rs250m. Over the next five years, Gharpay plans to expand to 35-40 cities, and also service other verticals such as telecom companies and insurers. While most online retailing channels are developing in-house logistic systems, nonretailing models have been Gharpay's earliest adopters. Their clientele includes Cleartrip (online travel agent), redBus (online bus-ticketing site), Snapdeal (group buying site) and Fern'n'Petals (online gifting site) among others.

**Current differentiation is based on number of payment options offered; technology will be key**

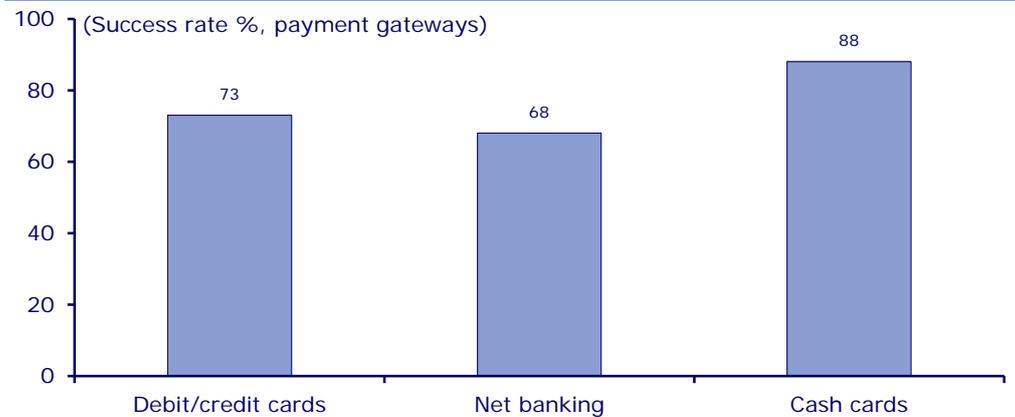
**High drop-off rates remain a problem for online payments**

Besides, with almost 30% drop-off rates for transactions (Figure 33) and e-commerce sites offering free cash on delivery, even people with credit cards are shifting to COD. Payment gateways and aggregators charge anywhere between 2% and 7% of the transaction value as a commission rate. Besides, gateways also charge set-up fees and annual maintenance charges.

Growing penetration of debit cards and regulatory restrictions around e-wallets/m-wallets implies card payment will remain the second most preferred online payment option in India. With growing scale, this does throw up more opportunities for payment gateways/aggregators. A number of these have sprung up over the last few years, which should lead to lower commission rates. We also see a phase of consolidation among gateways ahead.

Figure 33

**Banks and e-commerce companies need to upgrade their technology infrastructure**



Note: IRCTC for month of Jan 2012. Source: CLSA Asia-Pacific Markets.

**Payment expert explains the process**

E-commerce players evaluate payment aggregators on three key parameters: number of payment options offered; drop-off rates; and transaction charges. Payment aggregators are significantly underdeveloped and have much room for improvement in India.

**Credit cards are dominant now**

Of the online payment transactions, 50% involve credit cards, with debit cards (25%) and net banking (20%) being the other key avenues. Prepaid cards are commonly used by agents for railway bookings.

**Drop-off rates at 30%, remain an issue**

Drop off rates remain the biggest worry for online payments. Of all online payment options, credit card transactions see the highest success rate. Over 80% of Amex transactions are successful, while the number drops to 70-75% for Master and Visa cards. Two of the most commonly used debit cards are Citibank and SBI. Citi's debit cards when powered by Maestro see success rates drop to 50-55%. SBI is generally in the same range as Citi, but last year when their systems underwent an overhaul, success rates often dropped to 40%. Additional security layers imposed by banks

(either due to RBI regulations or internal mandate) cause a short-term spike in drop off rates. Users when for the first time confronted with even a slightly changed UI (requesting an additional password, more details) are more likely to stop the transaction. For instance, when RBI mandated the use of 3D secure passwords, success rates across credit cards dropped to the 60% range for a while. Higher ticket size transactions where banks do extra validations also see a higher drop off rate.

**Charges a function of bargaining power**

Most payment aggregators charge 1.5-2.0% of transactions as commission rates from the larger e-commerce sites. The merchants need to guarantee certain transaction levels to offset the lower rates. Commission rates can go as high as 6-7% for start-ups. Many large websites use multiple payment aggregators and often even establish their own pipelines directly with the larger banks. Payment aggregators help reach a long tail of smaller banks. Also, net banking and credit card platforms are not standard across banks, and it is more economical to tie up with a payment aggregator than to develop the platform yourself.

Regulatory hurdles have made e-wallets untenable

e-wallets dominate in China

Minor innovations around COD is the way ahead

**Online wallets made unsustainable by regulations**

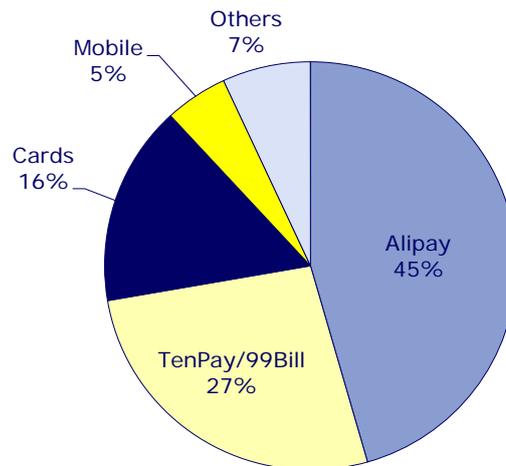
The Payment and Settlement Systems Act 2007 designated RBI as the authority for regulation and supervision of payment systems in India. RBI's discomfort with any nonbank holding money float has resulted in stricter regulations for online wallet-type services. In 2011, RBI imposed certain restrictions that have effectively reduced utility of online wallets.

- ❑ Money deposited in a customers' PayPal account should be withdrawn within seven days from the date of receipt of confirmation by buyers.
- ❑ Amount deposited in PayPal account cannot be used to buy goods and services and must necessarily be withdrawn.
- ❑ Export-related payments cannot exceed US\$3,000.
- ❑ Payments from India to another Indian user are prohibited.

The regulations have effectively ruled out the development of e-wallet services in the country. Significant considering e-wallets account for more than 70% of online payment transactions in China and have been a key driver of internet commerce.

Figure 34

**Market share of different payment options in China**



Source: CLSA Asia-Pacific Markets, Analysys 2011

**Way ahead: Innovations around COD will be increasingly seen**

While COD is no doubt a market-expansion strategy, economic viability remains a sticking point over the medium term. We expect the trend of free service to fade out and believe that most companies will start charging. Another COD strategy, which some companies have already started and are likely to ramp up, is charging a nominal fee upfront and the rest on delivery. This is should raise buyer commitment and help reduce return rates.

Market leaders like Flipkart have also started innovations on payments. Card on delivery is being offered as a pilot in Bangalore. We also expect e-commerce companies to provide greater incentive (higher discounts) for online payment. Technology-infrastructure upgrades across the chain (banks/e-commerce and companies/payment aggregators) and better internet connectivity should also help reduce failure rates for online payments, making the process smoother. Mobile wallets will take time to gain acceptability. Airtel launched Airtel Money recently (see Appendix 3 for details).

Typical growing-up pains seen in e-commerce logistics in India

Multiple roadblocks for logistics limit growth of e-commerce

e-commerce express-delivery market could hit US\$40m by 2014

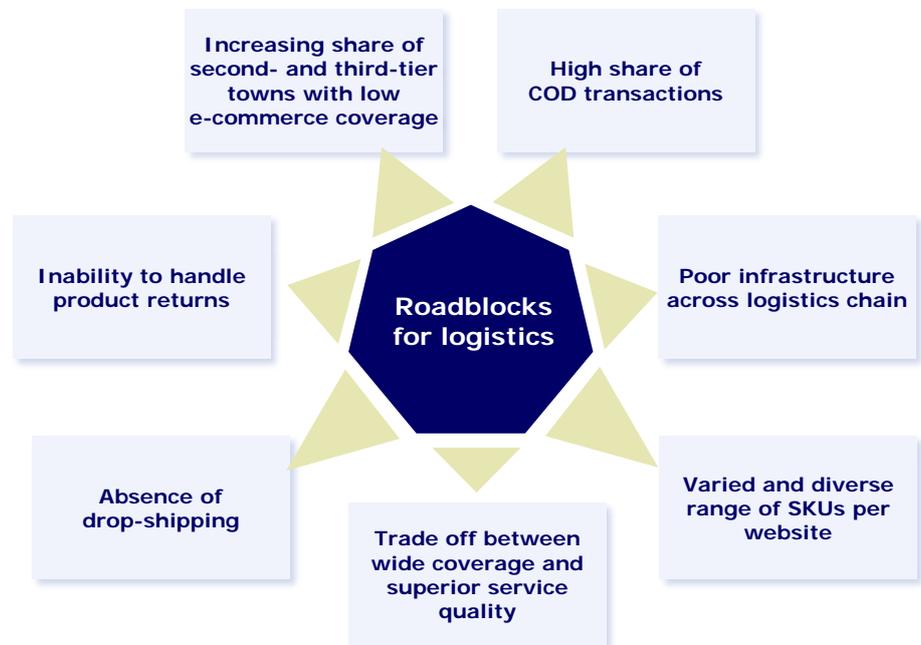
**Logistics is a constraint but an opportunity is lurking**

Absence of good logistics providers remains a major challenge as Indian e-commerce players attempt to increase their geographical reach, while improving the range and quality of offerings. While there has been increased activity in e-commerce websites, the growth of fulfilment mechanisms, especially express delivery has lagged. Hardly any domestic logistics supplier is equipped to handle large shipments at lower costs.

Lack of drop shipping processes and increased reliance on COD procedures add complexity to last-mile delivery in India. However, these challenges are throwing up business opportunities in the logistics space. Besides the usual express-delivery players like Blue Dart/FedEx, a few e-commerce focused names (Chhotu/Delhivery) are also trying to capitalise on this opportunity.

Figure 35

**Good logistics network is a source of competitive advantage**



Source: CLSA Asia-Pacific Markets

**Impending opportunity for express delivery providers**

Express delivery for e-commerce could be a US\$40m market by 2014, representing a 2.5x jump over current levels. In estimating market potential, we see three key variables, total e-commerce revenue, proportion requiring delivery and net shipping charges as a proportion of e-commerce revenue requiring delivery. The first two variables will be the key growth drivers in the logistics market even as yields remain similar. Conversations with industry experts indicate that on an average, daily e-commerce-related merchandise deliveries (ex-travel) are around 55,000-60,000, 95% of which weigh less than 2kg. Increased penetration should drive a big jump in delivery volumes.

The advent of e-commerce/TV shopping in the USA in the late 90s gave rise to a number of third-party logistics (3PL) and fulfilment service providers (FSPs). While many of those subsequently went bankrupt, those who survived are reaping the benefits. Today, UPS and FedEx get 10% of revenue from e-commerce delivery in the USA, while the likes of Blue Dart get less than 1%.

**Express delivery market can get a big boost from e-commerce**

**Even with conservative estimates the e-commerce delivery market can grow 2.5x**

**Only 10,000 of more than 150,000 pincodes covered by courier companies**

**Larger e-commerce chains are developing own fulfilment networks**

We expect a similar boom-bust cycle in the logistics space in India. The domestic express delivery market (air and ground) is worth around Rs35bn, having enjoyed an 8-10% Cagr over the last four to five years. The increasing penetration of e-commerce could accelerate this growth rate over the next four to five years. Besides the traditional logistics companies like Blue Dart and FedEx, who are increasing the focus on e-commerce in India, a few companies focusing only on e-commerce firms have surfaced. Chhotu and Delhivery are the most prominent among them. Increased competition should lead to system and process upgrades and better quality control, benefiting the ecommerce space.

Figure 36

**Potential US\$41m market for express delivery by 2014**

	2011	14F	Comments
e-commerce market requiring delivery (Rsbn)	27	6	
Net shipping charges (%)	3	3	
Express delivery market from e-commerce (Rsm)	810	2,065	
Express delivery market from e-commerce (US\$m)	16	41	Almost a 2.5x increase

Source: CLSA Asia-Pacific Markets, IAMAI

Figure 37

**Typical breakdown of logistics cost for e-commerce companies**



Source: CLSA Asia-Pacific Markets, A T Kearney

**In-house logistics will be limited to a select few**

While most e-commerce companies do not own back-end logistics some of the more mature Indian e-commerce companies like Flipkart and Infibeam have started bringing the logistics and delivery piece of the business in-house, at least as far as delivery to the metros is concerned.

**Innovative delivery models - UPS case study**



UPS acquired Kiala in February 2012. Kiala operates in Belgium, France, Luxembourg, the Netherlands and Spain. Through proprietary software, Kiala has integrated with more than 450 e-tailers through a network of over 7,000 collection point retail shops.

This allows e-tailers to offer their shoppers the option of having goods delivered to a convenient retail location. If online consumers want to make sure they are home or do not want to risk missing a delivery, they can nominate a local Kiala store when ordering the goods. The items are then dropped off there when it is convenient for their schedule. Kiala handles over 150,000 packages per day.

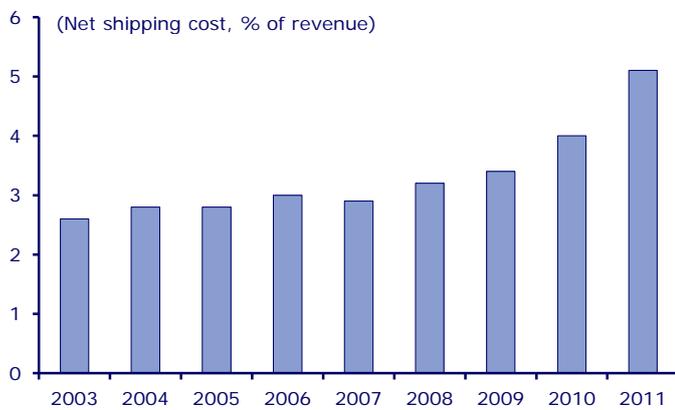
**Big investments required to build own logistics network**

There are a few parallels with China here. 360buy.com, a leading e-commerce player in China has built its own delivery network, while Taobao has acquired stakes in Star Express and HTO express delivery companies in China. Taobao plans to invest US\$3-4bn in logistics over the next few years and has already launched an online logistics platform (e56.taobao.com).

While the cost advantage of having end-to-end in-house logistics capabilities is very high, building or acquiring stakes in logistics networks, especially for last-mile delivery remains a preserve of the few large e-commerce players. However, given the wide geographic spread of the market, we expect even the larger players to employ a mix of in-house and outsourced delivery.

Figure 38

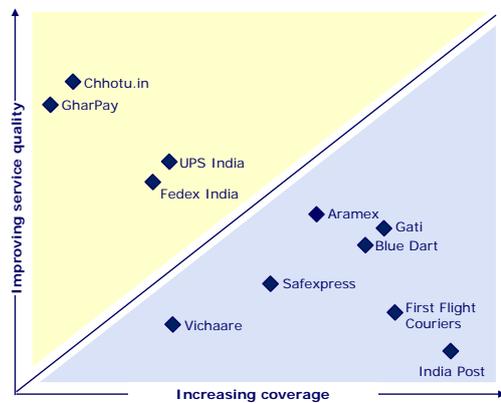
**Free shipping has increased the net costs at Amazon**



Source: CLSA Asia-Pacific Markets, Amazon 10-K filing

Figure 39

**Landscape of delivery service providers**



Source: CLSA Asia-Pacific Markets

**Government/regulatory action can be a roadblock in select cases**

**Regulatory/governmental action are a hindrance**

The IT sector has been insulated from government interference by and large and has always been at the forefront of regulatory clarity in India. That said, a few recent government actions and court orders have put a spoke in the wheel. These actions have ranged from potential censorship of social media content to adverse regulations for online aggregators of financial services products.

**Chhotu.in - Niche courier focused on e-commerce**



Chhotu.in is India's first niche forward logistics company focused only on e-commerce customers.

Since acquiring its first customer in the segment in June 2011, Chhotu has expanded to six cities and handles almost 800 shipments per day. Chhotu is following a market-penetration strategy and its delivery charges per parcel are at a discount to the more established players like Blue Dart/FedEx.

However, expansion plans are aggressive and Chhotu is targeting reaching 50 cities and handling over 20,000 shipments a day by end-2012. Chhotu believes that scale benefits will follow through. Also, unlike traditional courier companies, which operate franchisee models in the tier two and three cities (only 30-40% are self-owned), Chhotu intends to expand organically, thus ensuring service quality.

Chhotu's pricing is attractive for e-commerce websites especially for cash on delivery purchases. It charges 1.5-2.0% of transaction value as delivery costs, in-line with what most payment gateways charge e-commerce companies. This makes the websites somewhat agnostic to the payment mechanism and increases attraction for Chhotu's services.

Chhotu operates an asset-light model with salary costs constituting 90% of total costs. Given the sensitivity associated with handling cash, Chhotu hires delivery employees only through referrals. This limits scale-up potential but helps control pilferage. To solve the hiring and training challenge it has started building a full-fledged in house hiring and training team. Chhotu has already started offering the full range of back-end logistics (warehousing, packaging and stock transfer).

**Draconian guidelines by the insurance regulator**

**Proposals will kill web-aggregator business**

**No.1: Guidelines on insurance web-aggregators are anti-consumer**

In November 2011, the Insurance Regulatory and Development authority (IRDA) of India released stringent guidelines for websites vending information on insurance products of various companies and helping customers to compare products before buying.

The entire insurance-web-aggregator segment runs the risk of being wiped out with implementation of these guidelines. There are over 30 such web aggregators and a few players like PolicyBazaar.com, MyInsuranceClub.com, Save.com, ApnaPaisa.com and Bimaonline.com dominate more than 80% of the market. While we understand the rationale behind some of the proposed regulations (separating advisory and sales functions to prevent conflict of interest), such regulations prevent the free flow of information to the consumer.

Figure 40

**Key IRDA proposals**

- Web aggregators will not be allowed to provide any sponsored content on their websites.
- They will not be allowed to use any rating, ranking, endorsement or bestsellers of insurance products.
- There will be cap at Rs1 lakh on the fee paid by insurance company to the web aggregators.
- IRDA has also in order to plug the gap of paying fee by other means like infrastructure development, training, has disallowed reimbursement of such expenses by insurance companies.
- Web aggregators will get remuneration only if lead provided by them results in a sale and even that will be also capped at 25% of the total commission payable on the first-year premium.
- Limiting the realisation per lead to Rs10.

Source: IRDA

Implementation of these guidelines is likely to put most web aggregators out of business and the direction of regulation remains a concern. More than 85% of all policies bought due to data from such aggregators are online term plans and health insurance policies. Given that these have 0% commission, making the service of web aggregators' commission-linked and banning advertising makes those models unviable. Moreover, limiting the realisation per lead to just Rs10 (average is Rs100) defies logic and seems designed to stamp out insurance comparison on the web as an option.

**Online insurance aggregators' UK success: A case study**

The rise of the aggregator insurance-distribution model in the UK has been remarkable. Since, there has been a marked increase in consumers' online channel use to buy insurance. By 2009, web purchases accounted for more than half of total private automobile insurance sales in the UK, and for 36% of home-insurance sales. Indeed, the internet has now replaced the telephone as the key growth platform for personal general insurance distribution in the UK.

UK consumers are highly price sensitive and view the internet as a low-cost channel. Price is widely regarded as the single most important factor for the majority of UK consumers when choosing an insurance provider, regardless of product and channel. In addition, UK consumers are open to new insurance brands, and have relatively low levels of brand loyalty. Aggregators appeal to price-sensitive customers that are used to purchasing insurance without advice and benefit from openness to new types of UK insurance consumers.

UK aggregators have established strong, consumer-friendly brands that have won consumer trust - recent Datamonitor research has shown that UK consumers trust price comparison sites more than any other financial services provider, and they have invested heavily in online systems to optimise user experience, customer insight and search engine performance.

Some UK insurance market leaders have adopted different brand strategies in relation to aggregators, deciding which of their brands to preserve for direct business (and to target for heavy investment), and which to deploy via the aggregator channel. Insurers with strong price optimisation and customer segmentation capabilities have benefited from aggregator growth by acquiring their target customers while maintaining control of their loss and expense ratios.

Source: Accenture

**Indian government's role in recent social media cases is debatable**

**Government continues to act as big brother**

**No.2: Recent government actions are a concern**

Until recently, the government has had a fairly hands-off approach to internet content and usage with terrorist activities being the key driver of any regulation or rules. However, recent statements by the Minister of Information Technology and subsequent court orders on the removal of content from select sites suggest a trend towards greater government interference on this front. Plans to regulate content on social media sites is a concern, given that social networking sites are the first frontiers of internet access in India.

Another key issue where the government has had multiple flip-flops is privacy laws. While we acknowledge that this is a part of the wider global debate on internet privacy, Indian authorities have been unusually one-sided on this front. In October 2009, the central government notified rules under Section 69, which lay down procedures and safeguards for interception, monitoring and decryption of information. The government was also empowered under the newly inserted section 69B to monitor and collect traffic data or information generated, transmitted, received or stored in any computer resource. These changes constitute a serious threat to privacy of individuals without any accountability to the government.

Figure 41

**Direction of regulation has been adverse in the last 12 months**

Apr 00	IT act	Provided legal recognition for transactions carried out by means of electronic data interchange.	↑
May-Jun 2006	IT amendment bill is proposed	Enabled the government to intercept computer communication unconditionally.	↓
Jul 06	Dept of Telecom orders ISP to block major blogging sites	Days after the bomb blasts in Mumbai, the Department of Telecom ordered ISPs to block all major blogging sites like Geocities, Typepad and Blogspot to maintain religious harmony. Aimed at shutting 17 blogs which carried material from religious and political extremists.	↓
Sep 08	Orkut user arrested	Orkut user's negative comments against Sonia Gandhi (leader of the ruling party) came to light. Google provided the police with the user's IP address and he was arrested.	↓
Dec 08	IT amendment bill passed	Designed with the intention of fighting terrorists, this amendment, enabled the government to intercept computer communication for investigation of any offence. Introduced data protection laws to support IT industry. Limited the liability of internet companies for material posted on their web sites by users. In case any content is deemed "offensive" the government must notify the internet company, and content can be removed only if legally warranted.	↑
Oct 09	Insertion of Section 69 and 79	Section 69 empowered the government to issue directions for interception or monitoring or decryption of any information through any computer resource. Intermediaries were made liable if they were found to have 'conspired or abetted or aided or induced' the sharing of unlawful content.	↓
Apr 11	IT rule 2011	Make Internet intermediaries responsible for any objectionable content, which is defined as 'harassing, grossly harmful or ethnically objectionable.' This implies that Google, Facebook etc are responsible for comments of any individual blogger. Cyber café owners will have to register with a government agency and ensure their machines are not used for illegal or immoral' activities. Power to issue directions for interception or monitoring or decryption of any information through any computer resource. Cyber café owners will have to register with a government agency and ensure their machines are not used for illegal or 'immoral' activities.	↓
Feb 12	Department of IT petitions email providers	Yahoo, Gmail and others will be asked to route all emails from India through servers based in the country.	↓

Source: CLSA Asia-Pacific Markets, Various news articles

**Online brokers/mutual fund distributors can get a boost**

Political compulsions and intolerance and frivolous litigations by vested interests (Vinay Rai versus Facebook, and Ors and Mufti Aijaz Arshad Qasmi versus Facebook and Ors) are likely to keep the issue of social-media regulation at the forefront. Conservative voices will be loud and need to be countered in equal measure by protests from entrepreneurs and netizens.

**No.3: KYC norms need simplification for growth of online channel**

While ‘know-your-customer’ (KYC) norms are an effective way of limiting money laundering, we believe some of these are in a timewarp and are limiting the growth of online distributors of financial products. There are more than 250m savings-bank accounts in India for which KYC has already been done.

However, the Securities and Exchange Board of India (SEBI) insists that KYC needs to be done for opening every investment account. Such duplication is a constraint to the development of the online channel, which typically operates with lower cost heads. More recently (in October 2011), SEBI modified the KYC form to be used for investment accounts. Such modifications impact low-cost online distributors.

Last year, SEBI allowed qualified foreign investors (QFIs) to invest in India through mutual funds and more recently directly into equities. While on the surface this seems a good opportunity for online distributors and brokers, multiple constraints remain. It is extremely difficult for an Indian entity to do an in-person verification of a QFI as mandated by KYC norms. Lack of clarity in taxation-related issues is also a hindrance.

**Regulations give rise to online models like Moneysights**

Founded in February 2010, Moneysights is an online investment platform aiming to radically change the way a financial product is discovered, bought and managed by the internet. It has built a strong intelligence layer which helps it deliver a low-cost, low-touch and efficient solution for mid-income retail customers.

Its proprietary algorithms power the automated discovery, recommendation & portfolio analytics engines which aids an individual’s investment decision across the purchase cycle. Currently, Moneysights offers an option to invest only in mutual funds but plans to add Fixed Income Products, Stocks, NPS over the coming months. They also intend to enable seamless transactions and tracking on mobiles & tablets soon.

Moneysights’ online transaction platform was launched in October 2011 and user base has been growing at 200% month over month. Around 35% of business comes from outside the top-10 metros compared with 20-25% of the mutual fund industry assets in India. Also, 40-45% of users are new to investing. This shows that the online channel is facilitating the increasing participation of people in equity markets beyond the larger cities.

Moneysights does not levy any transaction charge on the customer; instead the mutual fund pays 0.5% of the invested amount as upfront commission to Moneysights. It also pays Moneysight 0.6% as trail commission on the fund value until the investor is invested in the fund.

Over a three-to-five year horizon, if there is asset growth, the effective trail commission is much higher at 1-1.2% of the assets. This commission rate is standard across mutual-fund distributors. The offline wealth management companies and banks that act as investment advisors, however, levy additional charges for investing in mutual funds to recoup their high costs. This makes models like Moneysights much more cost effective and attractive for retail customers.

Moneysights has not embarked on any major ad campaign and its customers are largely due to word of mouth and search engine optimisation (SEO). Moneysights’ acquisition costs per transacting customer are around Rs600. However, unlike most e-commerce models, Moneysights does not have a repeat cost of acquisition and the long investment duration among India’s retail investor (three to five years) ensures its revenue is locked in with high visibility.

Internet penetration needs to move beyond English speaking populace

Lack of adequate hardware and software remain constraints

Government actions remain key to revival of local language internet

Lack of demand has limited development of local language content

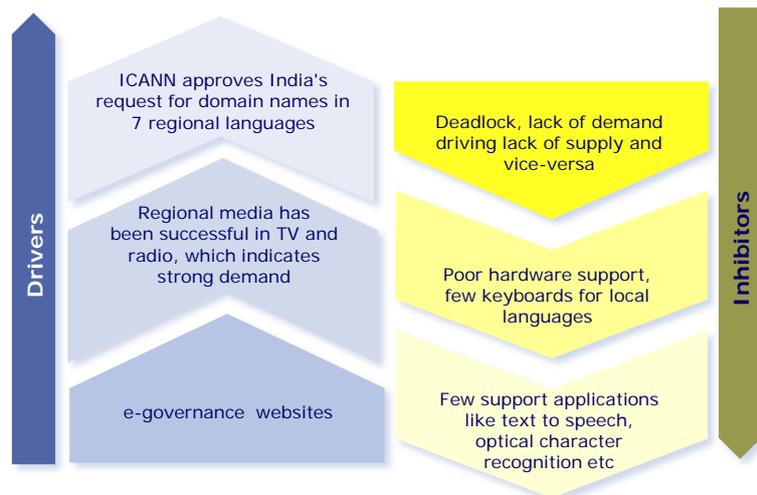
**Ecosystem for local language access needs to develop**

A key limit to internet penetration in India is the absence of an ecosystem that promotes access in local languages. As much as 90% of internet content is alien to over 90% of the population, as the English-literate demographic accounts for just 10-12% of all citizens and computer literacy/internet access has been largely restricted to this segment. Nonfamiliarity with English has alienated a significant chunk of potential computer users. Not one of the top-10-read newspapers and only one of the top-10 magazines is in English.

While there has been progress on supporting hardware (bilingual, virtual, gesture-based keyboards) and software (Indian-language operating systems) over the last few years multiple hurdles remain. India has 22 constitutional languages, over 1,650 dialects, 10 scripts and over 3,000 characters and linguistic combinations. This language diversity has created problems in standardising hardware. The software challenge is retaining the simplicity of software irrespective of the complexity of local languages while ensuring the accuracy and meaning of user interface strings in the language framework.

Figure 42

**More work required to drive local language internet access**



Source: CLSA Asia-Pacific Markets

The issue of lack of adequate local language content is essentially a deadlock. While most people say that there is not enough local language content available, content providers say that there is not any substantial demand for local language content. This vicious cycle has inhibited the development of local language websites.

Another aspect is the lack of awareness of content in local language. Surveys suggest over half of the internet users in nonmetros (potential consumers of local language content) are not even aware of the existence of Indian-language content. A recent IMRB report stated more than 70% of Indian language websites are personal sites, blogs or news/entertainment related. Clearly, local language content is not focused on providing utility applications, which inhibit higher internet usage. The net impact of all this is that local language advertising has also ceased to take-off on the net making most websites economically unviable. Only 5% of internet advertising revenue goes to regional languages, while the rest is with English websites.

**Government needs to push aggressively**

**Launch of IDNs is encouraging but domestic infrastructure is lagging**

**Success of traditional media holds out hope**

**Government action remain key to revival of local language content**

In our view, the road to local language access in India is through the government. Some of the recent steps hold out hope but it is likely to be a longhaul. The National e-Governance Plan's (NeGP) objective is to make all government services accessible to the common man in his locality. As such, the public sector is the key customer of bilingual software, as it caters to the demands and requirements of the people in smaller towns. Also, the primary education segment in rural India (dominated by government schools) is gearing up with local language education infrastructure.

The Ministry of Science and Technology's has created the Technology Development for Indian Languages (TDIL) department to support and coordinate research in Hindi and other constitutionally recognised languages in research centres at universities and the Centre for Development of Advanced Computing (CDAC). These steps could drive up computer literacy among nonEnglish literate populace and in-turn enhance internet penetration.

The launch of internationalised domain names (IDNs) in 2010, which are domain names in local languages, provide more hope for web localisation. Historically, domain names contained American Standard Code for Information Interchange (ASCII) characters. This restricted the use of language specific characters and the domains had to be created in English even when the content was available in a different language. IDNs allow users to type domain names in languages that they are familiar with.

India has IDNs in seven languages (Hindi, Bangla, Punjabi, Urdu, Tamil, Telugu and Gujarati). While IDNs are in many ways a natural evolution, most users are unaware that they are possible. Furthermore, companies have been slow to promote them. In some cases, they are concerned that promoting an IDN address may conflict with existing efforts to promote Latin-based addresses.

The success of traditional media (television, print and radio) in India has entirely been a function of localisation of delivery and absence of government interference. The number of television channels moved from just two in 1991 to more than 400 now. Similarly, the number of radio stations is over 250 from a handful 20 years back. Success of such traditional media, does hold out some hope for local language internet access.

**Raftaar.in: India's leading online Hindi search portal**



Raftaar.in (Hindi for speed) is a Hindi search portal owned by Indicus Netlabs. It was launched in

2006, but due to challenges for Hindi searches using the standard English keyboard, Raftaar changed into a portal format. This presents information categorised into verticals like news, business and entertainment, among others.

In 2005, there were about 10-20m pages of Hindi content, but these were not indexable, and hence not searchable. Most of these were in ASCII format and not in Unicode. Indicus has worked on two key fronts: 1) converting the pages to Unicode; and 2) developing a transliterator to overcome the lack of Hindi keyboards. A transliterator converts English words into Hindi.

There are now more than 100m Hindi pages, driven largely by India's e-governance initiatives and media. However,

user-generated content in Hindi remains low and is a constraint. Raftaar sees almost 50-60m page requests annually, of which 1m are through mobile browsers. Raftaar has tie-ups with Google ad-sense for generating ad revenue. However, Raftaar's experience suggests that ad-sense does not work as well in Hindi as it does in English.

A number of players Google, Guruji and Ibibo have tried to build an online Hindi presence. However, their websites are a mere translation of their English sites, and this impedes the user experience. Absence of Hindi keyboards remains the biggest roadblock, limiting the number of online Hindi users to 4m compared with around 300m users using the web for content in Chinese. Also, the rapid spread of telecom and cheap call rates across second- and third-tier cities, has made the mobile phone the preferred medium for cheap and quick exchange of information as opposed to the traditional PC-internet pair.



# India online

### How and when do you access the internet?

I am online every evening after office or whenever I am home. I work on a secure area project so we don't have any internet access in the office, not even Google.

### First time online

I have been doing online ticketing for my parents since school. In fact, even for our relatives, who don't have internet. We buy their tickets and SMS the ticket to them. For IRCTC you needed to print, although I think now even SMS is enough.

### Do you transact online?

Yes, I prefer shopping online. I just bought a bag on a website for Rs6,500. I started shopping online when I started work, but it has picked up in the last year. The journey from the office to home is hectic enough, and I can visit a mall only on weekends. Online shopping gives you more choice and more clarity. Like the bag, I wanted a brown leather one, which was out of stock. The website told me it will come back in stock in a week and it did and I ordered online. I don't think that is possible when you shop in a mall.

**Satveer Sharma**

Age: 23

Gender: Male

Software engineer

### How and when do you access the internet?

Since I am a salesman on the road for most of the day, I access the internet at home for an hour or so after work and a little more during the weekends. I use the Facebook app on my mobile.

### First time online

Around 1998, in a cybercafe in Indore. We didn't have internet access or a PC at home back then. I used it for emailing mostly.

### Do you transact online?

Yes. I have bought books online and of course, I have booked flights and train tickets. I haven't bought any clothes or electronics online. I prefer paying utility bills online, and of course I trade stocks online.

### Most frequent online transaction/activity

Checking my bank account or online stock trading around once or twice a week.

**Abhishek Gupta**

Age: 31

Gender: Male

Salesman, FMCG

### How and when do you access the internet?

I have unlimited internet access in my office, although the time I spend just browsing would be an hour or two. Even at home, the laptop with internet is on even when I am watching television.

### First time online

Since my school days. We got internet through VSNL's dial-up modem. But at that time the quality was very poor, and I went online only for reading or academics.

### Do you transact online?

Yes. Quite frequently, I buy clothes and home décor items online from international as well as Indian sites. The largest transactions are for ticket bookings for international flights. My first online transaction must have been for airline tickets, in 2005 or 2006.

### Most frequent online transaction/activity

My bank account, I check it at least once a day. And online trading around twice or three times a week.

**Shipra Chadda**

Age: 26

Gender: Female

Senior manager, Corporate treasury

### How and when do you access the internet?

I have unlimited internet access in office, but I avoid going online at home. In office, I browse for maybe an hour or two.

### First time online

We got internet installed at home by 1998 or so, using the VSNL dial up modem. So understandably, due to very low speed, internet usage was limited.

### Do you transact online?

Yes. Quite frequently, I prefer paying all my utility bills online, and even banking transactions, I prefer doing them online to the extent possible. My family do shop online, and often from international sites too. My most expensive online transaction would have been for flight tickets.

### Most frequent online transaction/activity

Banking services, for transferring money or checking my account.

**Charu Venkateswaran**

Age: 45

Gender: Female

Executive, Financial services firm

### How and when do you access the internet?

I now access the internet almost daily. I have a DOMOSlate, and a Tata Photon plan. So I am online for maybe an hour or so every day.

### First time online

My first internet access was in a cyber cafe in Sirsaganj, Uttar Pradesh, two or three years ago. When I came to Mumbai I didn't access the internet for a year. I bought the slate and Tata Photon three months ago.

### Most frequent online transaction/activity

I share my flat with four to five other people and we have a television, but it is always on a local or regional channel. So I prefer the tablet to watch videos or play games. I have downloaded some videos and games on my tablet.

**Kamal Kumar Singh**

Age: 27rs

Gender: Male

Security guard

### How and when do you access the internet?

I spend one to two hours on weekends, generally to video-chat with my children in Delhi and Mumbai. I am online only on weekends, through BSNL's broadband. Although I know it is unlimited, turning on the laptop and going online is cumbersome.

### First time online

We got BSNL's internet two years ago, primarily for matrimonial search for our daughter. Before that I did use the cellphone for some small internet access, like to check PNR status of train tickets.

### Do you transact online?

Yes. Maybe two to three times a year, when I travel by air. I did use IRCTC for train tickets, but for printing the ticket we had to go to the market place anyway, so we figured we might as well use the travel agent in the market for ticketing. He somehow always knows more options.

### Most frequent online transaction/activity

For email and Skype, to stay in touch with family.

**Ashok Kumar Jha**

Age: 62

Gender: Male

Retired government official

### How and when do you access the internet?

Almost daily, after college when I am home. I have a Facebook and Twitter app on my cellphone that I use frequently to stay in touch.

### First time online

We got the VSNL dial up modem when I was still in school, although I was too young to use it. By the time I was in high school, we had broadband and I began using email, chat and Facebook.

### Do you transact online?

Yes. I do shop for t-shirts and clothes online, its much cheaper than going to a mall. My most expensive online purchase would be flight tickets for my parents. I even pay my parents' cellphone and electricity bills online.

### Most frequent online transaction/activity

I started online shopping only two months ago and have already placed two orders, I check these sites more frequently for good deals. Otherwise, I use Facebook, email and chat the most.

**Koel Mazumdar**

Age: 21

Gender: Female

Student

### How and when do you access the internet?

I go online for maybe an hour every afternoon. I have just created a Facebook account and I have had an email ID for two to three years. I often browse for information on health or diet for my husband. I use the internet for chatting and browsing.

### First time online

Well, when the kids were at home, then the internet was almost always on. My husband would use the internet for office work. But, I have been going online on my own for the past year or so. I use the webcam to chat with my son who is in the USA. I recently shopped online too.

### Do you transact online?

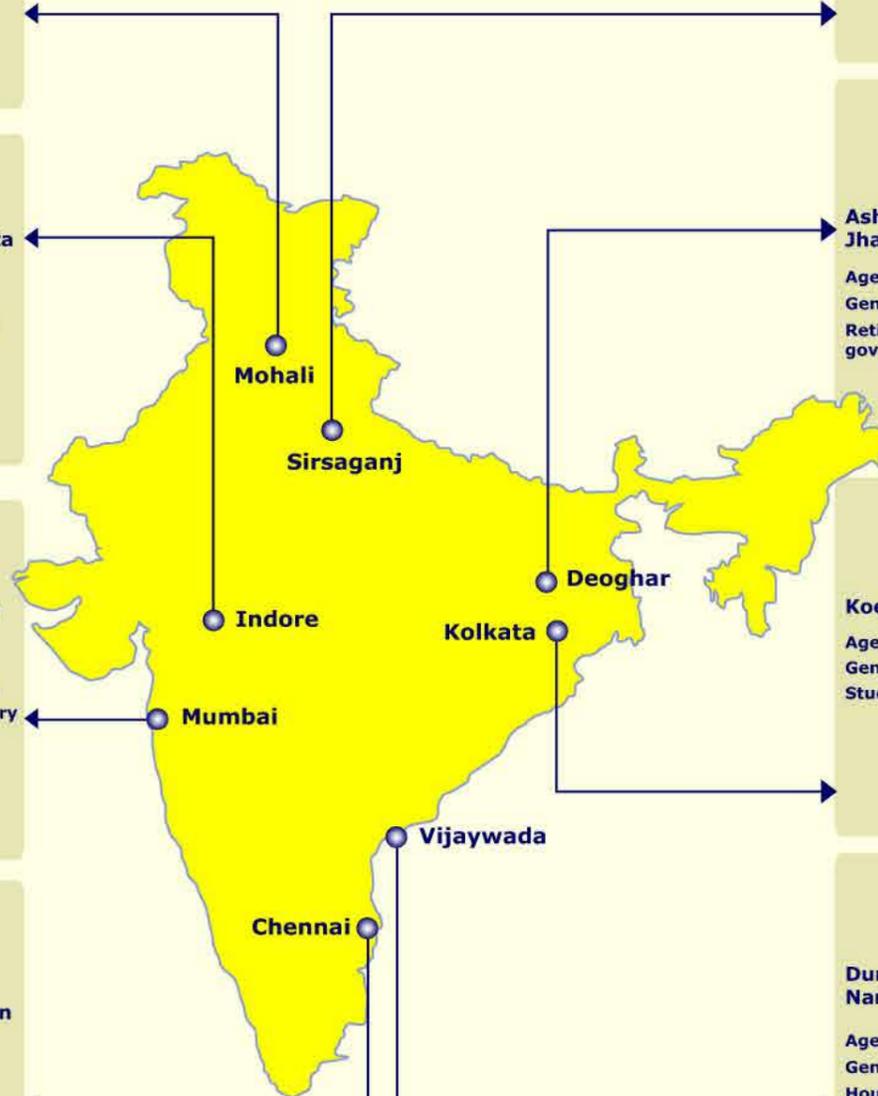
I have just made my first online purchase, and I was pleasantly surprised. The prices of electronics you see on a website are so much cheaper than what you see in shops that I wasn't sure if the goods were genuine. I just ordered a Bajaj Mixie online, and even though its Rs700 cheaper than in stores, it was still genuine. I have just ordered a cellphone as a gift for my mother-in-law, so it will get directly delivered to her house. Let's see if the quality is reliable too.

**Durga Narayanan**

Age: 47

Gender: Female

Housewife/retired school teacher





**Detail is more important than pattern**

**E-tailing will remain a domain of a few; massive churn ahead**

**Business models reliant on just ad revenue will find it tough to scale-up**

**Business owners showing more willingness to pay transaction/subscription fees than consumers**

**Expect global companies to dominate completely digital models**

## Select business models have potential

Multiple business models are beginning to emerge as India's web usage and online spending grow. However, success in monetising the internet opportunity will depend on presence in the right niches and good execution. We see a bright future for well-funded, category-agnostic e-tailers. We are also positive on ad networks with a global presence. Businesses reliant only on online adspend will take a long time to scale-up, though some horizontal classifieds portals look promising. Brokerage/listings models that collect fees from corporations rather than consumers appeal to us as well.

On the other hand, search, social networking and online entertainment will remain the preserve of global internet companies. Commoditised businesses such as payment-gateways and internet-services providers also seem unlikely to boost market-cap creation.

### Internet retailers

Capital availability has helped incubate a number of virtual merchants over the past 12-18 months. This is dichotomous compared to sector growth. We believe most categories in which these businesses have popped up are not big or specialised enough to accommodate multiple players. Most of these companies are in customer-acquisition mode, and intensified competition are eroding margins and delaying cash breakeven.

We see crowding-out of players in most e-tailing categories as investors run out of money and patience. While most are likely to close down, some could be sold to rivals. Flipkart is a promising e-tailer that has already gained scale, while wide gross margins (25-35%) will allow some online apparel/fashion retailers to thrive.

### Online advertising

At about US\$300m, online channels account for less than 7% of India's total adspend, of which 50-60% goes to Google (search advertising and ad network) and Facebook (display advertising). While online ad spending will grow much faster than the overall ad market, we remain sceptical of business models reliant just on advertising. A few advertising networks (eg, InMobi and Komli) have emerged out of India but they focus on the global market rather than just domestic sales.

### Services that charge fees

Indians by their nature are loath to paying for anything consumed online. It is likely to be a while before this mindset changes and in the interim, we see tough times for any business focused on generating revenue by charging listing/subscription/licence/transaction fees. However, online models servicing the corporate sector see a bright future as Indian companies become more willing to pay for online access to customers, which is cheaper than through traditional channels.

### Search, social networking and online videos

Unlike most other emerging countries, English is the primary language for internet communication in India. As a result, we do not expect any of the Indian companies to make a mark in completely digital models, such as search, social networking and online videos. These will remain a preserve of global players. Indian companies stand a better chance in formats that require some offline connect.

**Michael Rappa's  
broad framework**

**Managing the Digital Enterprise®**

We use North Carolina State University professor Michael Rappa's framework as described on his Managing the Digital Enterprise® educational site (digitalenterprise.org) to categorise Indian internet companies.

Figure 43

**Internet business models**

Models	Description	Examples in India	India Opportunity	Comment	
<b>Brokerage</b>	Buy/Sell fulfilment	Users can collect information, compare, select and make the purchase on the website.	IRCTC, MakeMyTrip, Cleartrip, redBus, Online brokers, BookMyShow		The segment is dominated by OTA, where already 28% of travel transactions are online. Expect segment to be dominated by few large players.
	Demand collection	Prospective buyer makes a final (binding) bid for a specified good or service, and the broker arranges fulfilment.	Atyourprice, Bid2travel		OTA's have branched into package offers as well, and the segment is likely to be dominated by them
	Buyer Aggregator	Collects buyer interest for an item and relays to the merchant. Actual transaction may or may not happen via the site.	Mydala, Snapdeal, Dealsandyou		As the novelty factor wears down, we expect to see some churn and consolidation
	Auction broker	Broker will charge the seller a listing fee and a commission linked to the transaction size	eBay India		For eBay India, 95% of all sales are fixed price, and even for C2C listers, offline price discovery is preferred
	Transaction broker	A third-party payment mechanism for buyers and sellers to settle a transaction	BillDesk, CCAvenue		Regulatory interventions limits the scope of offerings that a payment gateway in India can provide
<b>Merchant</b>	Virtual merchant				
	- Niche	Caters to a specific product line	FashionAndYou, 99labels, Sportsnest, Babyoye, Hoopos, Myntra		Selecting the right segment is key, one which provides enough scale as well as profitability. Lifestyle and garments segment appears to be at the sweet spot currently
	- Mass	Retails products ranging from books to garments	Flipkart, Homeshop18		While retailing across product lines promises faster topline growth, low margin segments such as electronics can drag profitability. Scale is key to be profitable
	Click and mortar	Online presence of offline retailer's, often use the existing inventory of the group. Many are launched more as a catalogue service (especially for electronics) and then evolve into e-commerce sites as well.	Shopperstoponline, FutureBazaar		While ~70% of the top 100 e-tailers in US are click and mortars, Indian offline retailers are yet to taste similar success. As they often use a common inventory as their offline stores, aggressive discounting is not an option for them, and this sees them losing market share to pure online models for now
<b>Bit Vendor</b>	Sellers of digital content	Flyte		With rampant piracy of digital content, it appears unlikely to see scale anytime soon	
<b>Manufacturer</b>	Purchase	An online-only brand, available through merchants own or other websites.	Yepme, Wespro, Zovi		The brand is available only through online channels. Avoiding offline retail stores drives high gross margins (30-40%) but a lot of money needs to be poured in building the brand.
	Portals	Offer services ranging from search, email and content to registered and visiting users	Rediff, Yahoo, Indiatimes		Indian portals rarely offer services any different from international portals, and find it difficult to draw advertising revenues
<b>Advertising</b>	Classifieds				
	- General purpose	Collect listing fees for a range of products or services for B2C or C2C transactions	Olx, Quikr, Sulekha, ClickIndia, Justdial		Greater internet penetration in smaller cities/towns and small and medium businesses (SMBs) getting online will drive topline growth
	- Specific classifieds with C2C listings	Creates a common platform for a specific purpose and collects membership fees	Shaadi, JeevanSathi, Bharatmatrimony		Listing fees cannot drive profitability, and attracting ad revenues is possible only for top one or two names
<b>Informediary</b>	- Specific classifieds with B2C listings	Platform for institutional listings, and revenues are from institutional fees	Naukri, Monster, 99acres, MagicBricks, Indiaproperty		Institutional clients drive revenues, and the success in recruitment can be replicated elsewhere as well
	Ad networks	Feed ads to a network of member sites (publishers), thereby enabling websites to monetise their inventory	Komli, AdMagnet, InMobi		Profitability needs global scale. India only ad networks will see challenging times
	Audience measurement	Online audience market research agencies	Nielsen, Vizisense, ComScore, Alexa		We expect global companies to continue dominating the space
<b>Subscription</b>	Incentive marketing	Customer loyalty program that provides redeemable points, cash-back or coupons to incentivise consumers.	CashITBack, CouponCodesIndia		Revenue depends on participating merchants, and these sites will compete with higher engagement offline equivalents
	Content services	Sellers of purchased or self-created content	Zapak, Indiagames, Raaga, Gaana, Bigflix, Lamsglow, iProf		We see potential for education linked content. However, entertainment content is already freely available through cellphones and radio.
<b>Community</b>	Internet service provider	Provide internet subscription services	Tikona, Telecom operators, Sify		Dominated by telecom operators
	Social networks	Common platform for socializing for general or specific purposes (such as education, career etc)	ibibo, BigAdda, Minglebox		Global players will dominate the space. As Facebook enables formation of local specific user pages, the need for a new social network is reduced.

Source: CLSA Asia-Pacific Markets

Such models are adopted early in the lifecycle of an internet user

Digital goods benefit early from an online uptick

Expect continued momentum; 28% bookings done online

Top-3 players should dominate the space

**Brokerage models are early-cycle plays and doing well**

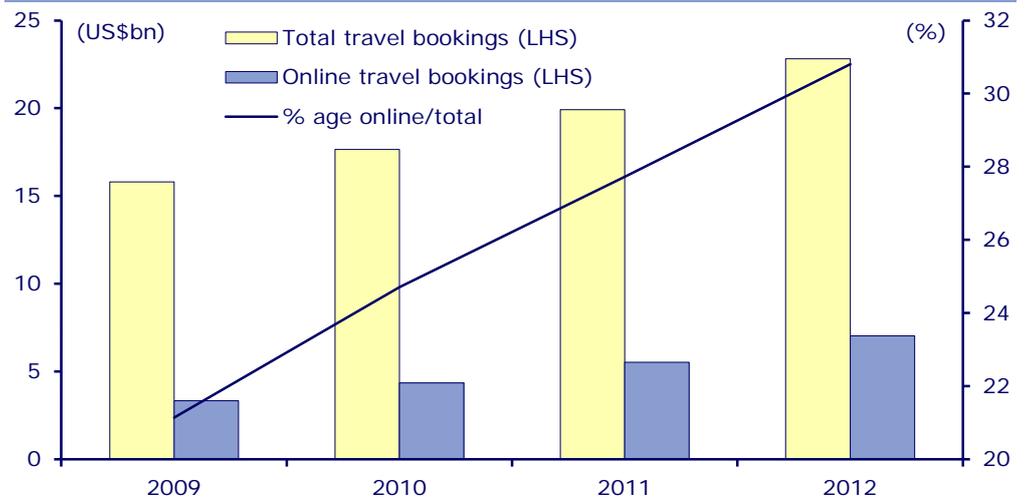
Brokers are market-makers. They bring buyers and sellers together and facilitate transactions. Online brokers charge a fee or commission for each transaction they enable. Such models are adopted early in the lifecycle of an internet user (after email and social networking) and that is the stage a typical Indian user is at. The simplicity of this business model and faster user adoption has meant that a number of online players have emerged and account for a significant chunk of the market today. We see good prospects for companies that offer a service rather than a product and charge the transaction fee to businesses rather than consumers.

**Buy/sell fulfilment**

These models take customer orders to buy or sell a product or service, with pricing and delivery terms. Digital goods (travel, hospitality, movie tickets) are sold under this model and are early beneficiaries of online upticks. India's travel market has witnessed a similar trend: the online segment is among the most penetrated (28%) internet subsectors and is already worth more than US\$5bn. Penetration is in the mid-30s in most developed countries and India is likely to hit that mark in the next couple of years, driving growth for online-travel agents (OTAs).

Figure 44

**India travel bookings**



Source: Phocuswright 2010, CLSA Asia-Pacific Markets

MakeMyTrip (MMYT) is the leader in this space according to Phocuswright estimates, slightly ahead of Yatra and Cleartrip with a 45-50% share. Global players like Travelocity and Expedia have recently entered India but have not made any material dent in the market despite significant marketing spending. Competition also comes from websites of airlines/railways. However, barring Indian Railway Catering and Tourism Corp (IRCTC), the online channel of Indian railways, competition remains mild. With very few to choose from in terms of pricing, we expect the top-three players to consolidate the online-travel segment. We believe Cleartrip/Yatra are loss-making. Operating leverage should aid profitability gradually.

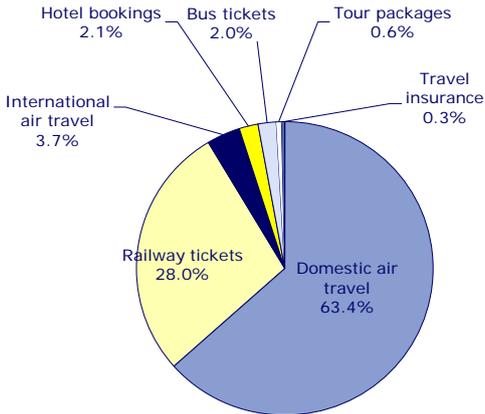
IRCTC has a monopoly in the online rail-travel space. More than 10-11m transactions are successfully conducted through the website every month. This translates into monthly bookings of US\$190-200m at an average ticket size of about Rs900-950.

**Redbus has created a niche**

Meanwhile, redBus has established a niche by focusing only on bus ticketing. Many bus operators use redBus's ticketing software, providing support to the development of its online ticketing business. Traditional OTAs have struggled in the bus-ticketing market. MMYT acquired Ticketvala in 2010 but hasn't had much success in the space.

Figure 45

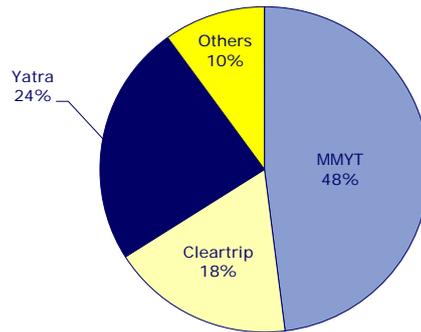
**Online air ticketing - an early success**



Source: IATA, CLSA Asia-Pacific Markets

Figure 46

**MMYT has an early-mover advantage**

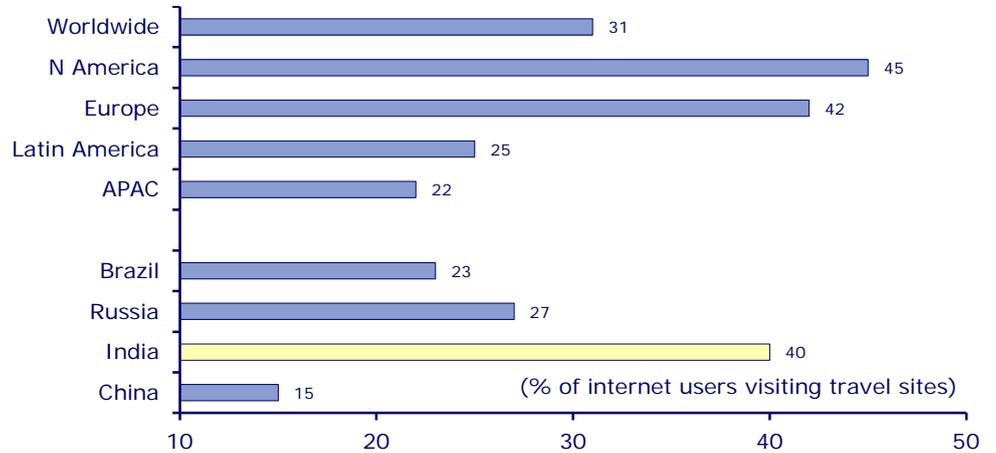


Source: MMYT, CLSA Asia-Pacific Markets

**Online travel has taken off in India**

Figure 47

**Greater comfort with online travel booking**



Source: ComScore, CLSA Asia-Pacific Markets

In the hotel-booking market, Hotelogix is an interesting software-as-a-service (SAAS) solution. It helps small and medium hotels distribute their available room nights to all possible channels of sales and enables all stakeholders to have access to real-time information on a live system.

**Online financial brokers face pricing pressure**

Unlike most developing markets, penetration of business/financial websites is high in India. However, much of that is to access online channels of banks. Equity brokers such as Icidirect, Sharekhan and Indiabulls have also seen increased online adoption, from 10% in 2003 to 30-35% in 2011. A few online discount broking models (eg, Zerodha) have also emerged. Online buying of mutual funds primarily happens through websites of banks but new financial platforms like Moneysights and Zerodha have also popped up.

## redBus dominates online bus ticketing



In a highly fragmented market, redBus has created great value by putting in place a standard platform accessible to end-users, bus operators and travel agents. Launched in 2006, redBus's system already had more than 300 bus operator-users within the first year of operation. Today, it connects more than 40,000 travel agents and 700 route operators, putting Rs30-40bn of ticket inventory online in real time. This seamless flow of information has also driven up the demand for bus tickets, and route operators have seen volumes grow, which only boosts their enthusiasm for tying up with redBus.

redBus' business operation is split across three lines: the Redbus.in website for end users, BOSS (bus operating system) for route operators; and SeatSeller for travel agents. It collects 10% of ticket prices as commission from agents or bus operators. Last year it sold about Rs1bn of tickets, trebling sales to Rs3bn in FY12 and claiming a 65% market share. About 60-65% of all tickets sold were through the website, while the remaining is split between travel agents and bus

operators. Mobile users contribute less than 10% of sales. Additionally, small revenue is also realised from operators using the BOSS software. However, redBus' own systems are agnostic - it can connect with a bus operator to track their inventory as easily using any other enterprise-resource-planning system.

redBus remains very optimistic about growth. On one hand, the bus-travel market as a whole is expanding as India rolls out plans for more national highways. Global players have also shown interest. On the other hand, redBus sees many new underpenetrated segments. For instance, it has not yet reached the state government-owned bus operators. redBus's presence is ubiquitous in the western and southern parts of India, and there is still some growth to realise in the north and northeastern areas. Including government-operated bus lines, redBus estimates the market to be a US\$2bn opportunity and sees enough headroom for growth. However, the company also plans to innovate by bundling bus routes with cab services and enabling users to book multicity routes in one go.

## Hotelogix services small and medium hotels

Incorporated in March 2008, HMS Infotech provides a web-based property-management system, Hotelogix, to small and mid-sized players in the hospitality sector. Using the cloud to deliver via a software-as-a-service route allows small and medium businesses (SMBs) to turn technology capex into variable operating expenses. Hotels using Hotelogix are able to distribute their available room nights to all possible channels of sales and allow all stakeholders to have access to real-time information on a live system.

Pricing is as low as US\$2,000 per property as a one-time payment, and for small hotels deals are priced at US\$3/room/month. A hotel needs only a simple PC with

broadband connection to use this software. Hotelogix serves more than 150 properties spread across 41 countries, of which 25 are in India. North and South Americas are the fastest-growing markets for the company.

For SMBs in the hospitality sector, only 15-17% of their bookings are done online, compared to 55-58% for the larger chain operators. The 40% gap is where Hotelogix sees its opportunity. The whole online-booking ecosystem requires inventory allocation. While allocating five rooms to OTAs has little impact for a large hotel with 100 rooms, it is a challenging task for a 35-room standalone property. Therefore, providing real-time information to OTAs can be very beneficial to small hotels.

## Online discount broker Zerodha disrupts the retail market

Zerodha is replicating the online-discount-broking model that is very popular in developed markets. The concept has helped it clock an average daily turnover of Rs10bn within a year of its launch, when most stock brokers were struggling to stay afloat, because of declining volumes in both cash and derivatives markets.

Lower broking costs compared with traditional stock brokers is the key differentiation. Zerodha charges a flat fee of Rs20 for every trade done through its platform. For example, if a trader buys one lot or even 10 lots of Nifty futures in a single trade, he pays Rs20. In comparison, a stock broker would charge anywhere between Rs50 and Rs100 per lot, depending on the client's ability to negotiate, which is again based on his trading volumes. This striking cost advantage has caught the eye of some high-

volume traders, who operate on wafer-thin profit margins. In choppy market conditions, when trading opportunities are hard to come by, the cost makes the difference.

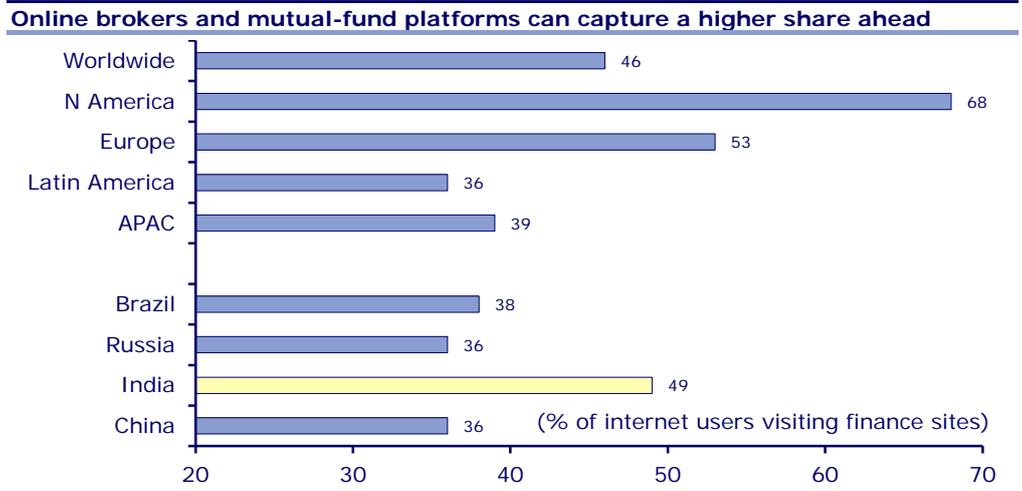
Zerodha is able to keep costs minimal because of lower employee costs and marketing expenses. The firm does not advertise, but tries to get more clients through the referral system, where the person who gives the reference gets a commission for every trade made by the person referred. To avoid the risk of client default, the platform lets a trader punch in trades only if he has money in his trading account. In the past, some leading retail brokers had launched versions of online discount broking, but had to wind up as the business was not viable because of higher overhead costs, including real estate, research and staff.

High penetration of financial-services sites; but primary traffic is to banks

Have doubts about sustenance of this model

Groupon model attracts price-sensitive users

Figure 48



Source: ComScore, CLSA Asia-Pacific Markets

**Demand collection, primarily in online travel/leisure space**

One example is the “name-your-price” model Priceline pioneered. Prospective buyer makes a final (binding) bid for a specified good or service, and the broker arranges fulfilment. This model has been primarily limited to the travel and hospitality sector. Key players are Atyourprice, Bid2travel and Travelsurf.

**Buyer aggregator - churn ahead as novelty factor wears down**

This brings together individual purchasers to transact as a group so they can receive the same values traditionally afforded to organisations which purchase in volume. Sellers pay a small percentage of each sale on a per-transaction basis. SnapDeal, Crazeal (owned by Groupon), Mydala and Dealsandyou are some of the major players. A few specialised sites like Groffr, focusing only on real-estate buying, have also popped up.

The biggest argument against wider penetration of this model is perhaps the limited lifetime value of deal-seeking customers. In India, where ticket sizes are much smaller and sales require expensive offline sales folks, economics is a major issue. While easy capital flow has seen a number of companies offering daily deals, we expect the euphoria to moderate as novelty wears off and inherent bad economics of the business gives way to a sobering reality. We expect a big shake-out in this segment as losses take their toll. Leaders like Snapdeal could survive as the number of coupons sold increase, even as sales effort per merchant goes down.

Wharton School marketing professor David Reibstein succinctly stated the flaw of the Groupon (group buying) model, and we agree:

‘Unfortunately, the people Groupon is attracting are those who are referred to as “deal-prone customers” - who are, to put it differently, price-sensitive customers. These customers tend not to be the most loyal of customers. And because you have attracted them with a low price, you are more likely to lose them because somebody else offers a lower price. The merchant might say, “Well I am not making money on these customers, but hopefully I am building some future business.” But there is the challenge of whether they are really building future business, because what they are really getting is a fickle customer. Merchants are going to discover that the Groupon customer is not where you build your future business. Therefore, the savvy merchants are going to learn that this is not a good way for them to do business.’

## eBay India manager B Muralikrishnan on e-commerce



**B Muralikrishnan**

### Where do you see India's e-commerce space headed?

A few things augur well for India's e-commerce industry. One is the significantly increased supply-side dynamism, especially over the past two to three years when we saw interests from large brands, manufacturers and offline retail chains and so on. Once brands with offline recognition participate in e-commerce, comfort levels for end-users increase. The opportunity has also sparked the imagination of many entrepreneurs, and brought venture capitalists and private-equity firms into this space.

A lot of the funds coming into this space have moved into marketing, be it television, outdoors or online, and this has increased consumer awareness about e-commerce. The proposition is fundamentally driven by three factors: greater variety of products; cheaper products due to low operating costs; and convenience, especially for users in tier-2 and -3 locations.

However, the way a few companies have been viewing this opportunity is a bit unfortunate. Some players out there looking for sustainable growth, but others probably have less certain motivation for entering e-commerce. Some companies have used the first round of funds raised for marketing aggressively, which boosts their registered-user base, which in turn gives them better valuations for Series B and C fundraising.

We have witnessed three economic cycles for e-commerce in India. First phase was in FY05-06, when the likes of Indiatimes and Rediff entered the market. In FY08-09, we saw offline firms such as FutureBazaar making an attempt. Now we are in the third phase, with companies such as FlipKart and Myntra.

It appears that the market has become over-niched and over-verticalised ahead of its time. There are specialised baby-product retailers, men's fashion sellers, sports retailers, etc. Compared to any other mature markets, initially the horizontal, wide-range retailers set the bar, and then the verticalisation (specialising in special segments) begins. With Indian e-commerce still in a nascent stage, I am a little sceptical about the viability of these over-niched offerings over the next few years.

A few successful players have emerged, including FlipKart, which has succeeded in cloning Amazon in India. The company provides a great user experience to buyers, but what it needs to answer is how long can it survive at negative per-unit economics. Someone called this phenomenon 'selling a rupee at 99 paise'.

Pricing is a worry as it remains deeply discounted. For instance, LetsBuy.com focused on electronics, and scaled fast, but soon ran out of funds owing to a negative gross margin. However, this was an extreme case.

But gross margin is not the only thing that suffers. Companies also incur high delivery costs, with free shipping becoming the norm. For instance, for every cash-on-delivery transaction, the e-merchant incurs a cost of Rs100. Even on an average selling price of Rs600-700, this erodes margins deeply.

### So, which company is most likely to survive after 12-18 months?

Of the current lot, I see three to four companies surviving and emerging. And this is promising for India's e-commerce market in 2013 and beyond, when these firms focus on building sustainable business models. Any business model is built on three pillars: scale, gross margins and quality of user experience. Today's e-tailers focus on user experience, at the cost of gross margins. So, they struggle to scale beyond a point. Some consolidation is already happening. If it accelerates, it will be better for the industry. The approach that many companies are taking to build their business is unsustainable. Such businesses carrying on for too long does not augur well for the future of the industry.

### How has eBay's experience in India panned out?

India's e-commerce market is very different from what eBay has witnessed in other geographies. More than 75% of the business in India comes from fixed-price sales (rather than auctions, which are just a minority for eBay India). There is limited scale for C2C sales in the country. A majority of the people listing with eBay are small businessmen (retailers, traders, importers, wholesalers, etc) who are looking to expand their reach nationwide on a platform as cost-effective as eBay. This allows them to focus their time and money on building logistics and other backend facilities.

This contrasts with Taobao in China that sees considerable C2C traction. Thus, the next growth leap for eBay in India comes from focus on larger merchants and retailers. So, now we have the likes of FabIndia and Reebok, selling on eBay.

We charge a small listing fee with the intention of preventing clutter. Then depending on the category of the listing, we charge a transaction fee, ranging from 1% for cellphones, cameras, etc, to about 6% for apparel, jewellery and watches. There is also a payment fee of about 4.5% for using our payment service called PaisaPay, which is a trusted, safe and secure payment method. More than 95% of the transactions are done via PaisaPay. We currently clock six transactions per minute.

**What has the trend been among tier-2 and 3 cities?**

Over the past few years, we have seen an acceleration in sales from tier-2 and 3 locations, which can be attributed to increasing consumer awareness. There are few brick-and-mortar retail formats in tier-2 and 3 towns, but people there are aware of the latest products, such as a new tablet or cellphone. In such cases, e-commerce becomes an attractive value proposition. Electronics and long-tail lifestyle goods have seen a lot of demand in these areas. I won't be surprised at all if total purchases of iPad 3 (whenever it is launched) in tier-2/3 cities exceed that in the metros.

**As you are operating in the B2C space, are traditional classified players a threat?**

A lot of the supply in the horizontal classifieds space is agents-led, eg, real estate, used-car dealers. The consumer traction here has only taken off in the recent past. But given that our focus lies in B2C sellers, horizontal classifieds can only be complementary to our services.

**Has internet infrastructure kept pace with the e-commerce front-end in India?**

There are two important components of the infrastructure needed for a thriving e-commerce market, ie, payment gateways and courier & delivery services. I see logistics (delivery) companies maturing far faster than payment gateways. Most courier companies, such as Blue Dart, Fedex, Aramex, have invested in technology and processes. The challenge that we face is deliveries to remote corners of the country - we get orders from more than 2,000 cities/towns. Hopefully, these couriers will expand their networks and that could solve some of the problems. In many places, they operate with franchisee model and that impacts reliability. However, wherever they operate with their own offices, their services are keeping pace with the growth of e-commerce. A number of e-commerce companies are setting up their own warehouses and fulfilment channels. We are not sure whether it is a great idea to invest in a new fulfilment setup. We would rather partner with a courier company than set up our own.

**The logistics/delivery infrastructure even for offline retail is messed up in India. In that backdrop doesn't it make sense for the larger e-commerce companies to set up their own network to deliver a better customer experience?**

If you can commit large volumes to the courier companies, then they are also open to making investments in further developing their infrastructure. We have been working with a few courier companies and they have been very receptive and are ready to

commit to service-level agreements (SLAs) that we demand of them and also provide very attractive pricing. Also, as a market place we have buyers/sellers from more than 600 cities in India. As long as our courier partners have delivery infrastructure in these cities, it does not make sense for us to reinvest.

**What are the issues around payment gateways?**

Reliability, up-time and proportion of failed transactions. Fraud rates are lower because of the 3D secure password which the Reserve Bank of India (RBI) mandated. It has nothing to do with payment gateways. Our drop-off rates are significantly lower than the average of 25-30%.

**There has been a lot of discussion about the rise of mobile internet in India. What is your view on that?**

Globally, eBay has been at the forefront of mobile commerce. Last year eBay globally did almost US\$5bn of business on mobile devices. We have offerings across all mobile platforms, Android, iOS, Windows, etc, and we launched that in India last year. It is very likely that a majority of the next 100m internet users in India will have their

first and predominant experience of the internet on mobile devices, either smartphones or tablets. Today, less than 5% of traffic comes from mobile devices (transactions are even lesser). Our key focus around mobile in 2012 is to get greater penetration of our apps (iOS and Android) and encourage people to use this as a channel to check prices before shopping offline. Our marketing pitch is 'reach for your phone before you reach for your wallet'. I am quite confident that there is a high probability that one can find a better deal on eBay versus those available offline. So, the idea is to create an entire generation of smarter shoppers. I am cognizant of the fact that mobile payment systems are just non-existent. There is the issue with one-time password (OTP), regulations etc. However, I am quite confident that solutions will come up in the next 18-24 months. You have the likes of Airtel launching a mobile wallet already.

**Will mobile phone be a happy complement for you or will it be a key focus area?**

The mobile access part will happen in stages. First, we want people to use mobile handsets to check prices and we will wait and build the right mobile payment solution either ourselves or in partnership with someone. The payment part is more a 2013 goal. I am fairly confident that by 2013 robust mobile payment solution will be available in India (with or without a wallet). People are going to spend more time surfing the web on their phone rather than their computer. That will be the key driver.



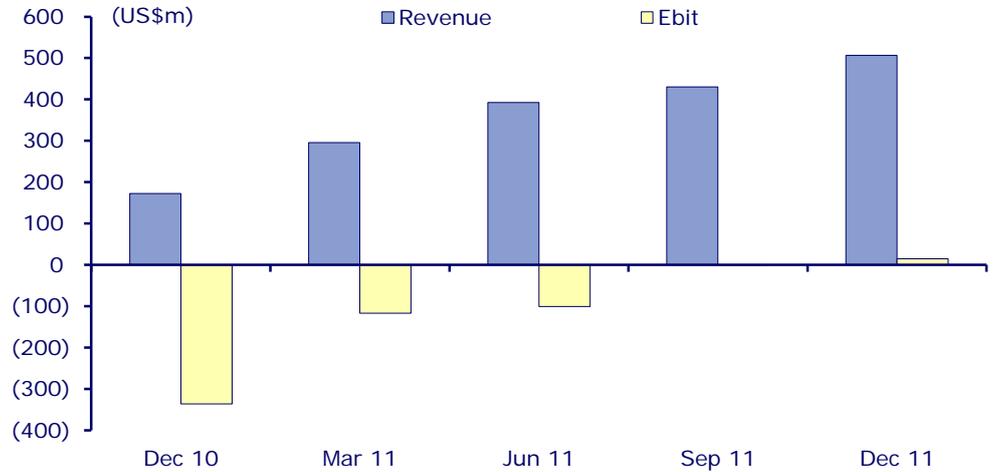
Profitability has followed scale

Volumes should go up but competition could put pressure on pricing

A massive churn over the next 12-18 months

Figure 49

**Groupon's financials**



Source: Company, CLSA Asia-Pacific Markets

**Auction broker**

Auction brokers conduct auctions for sellers (individuals or merchants). They charge sellers a listing fee and commission scaled with the value of transactions. Auctions might vary widely in terms of offering and bidding rules. eBay India is an example

**Transaction broker - Strong growth ahead but pricing may suffer**

These companies provide a third-party payment mechanism for buyers and sellers to settle a transaction. Absence of Paypal-type payment options has meant that a number of local payment aggregators have captured the market. CCAvenues, Billdesk and EBS are among the major players here but a few upcoming companies like Citruspay are attempting to address market inefficiencies. Rising competition should put downward pressure on pricing.

**Capital inflow drives merchant models but few will last**

Online merchants are wholesalers and retailers of goods and services. Sales may be made based on listed prices or through an auction. Merchant models have the largest addressable market, which has resulted in substantial capital inflow. The past 12-18 months have seen significant money flow into this segment incubating a number of new companies. However, we are less sanguine on the prospects of most of them: as the capital flow dries up, the initial euphoria is likely to die down.

**Flipkart - Undisputed e-tailing leader**



Established in 2007, Flipkart is India's leading virtual merchant. It started out by selling books (it reportedly controls over 80% of the online-books market) and has since branched out into 12 product categories, including electronics, home appliances, kitchen appliances, healthcare products. It employs more than 4,500 people and ships close to 30,000 items per day. Flipkart is clocking sales of US\$0.5m per day and is likely to close FY12 with more than US\$100m revenue. To address India's last-mile

distribution issues, Flipkart has already set up delivery operations in over 15 cities with plans to expand it to over 25 cities. It has its own warehouses to minimise shipping time. The company also provides free delivery for all items if order amount exceeds Rs200. Over 60% of Flipkart's sales are conducted on a cash-on-delivery basis. In the past two years, it made four acquisitions: WeRead - a social book-discovery tool; Mime360 - a digital content platform; Chakpak.com - a Bollywood news site that offers updates, news, photos and videos; and LetsBuy - India's second-largest e-retailer in electronics.

**E-tailing sees substantial room to grow**

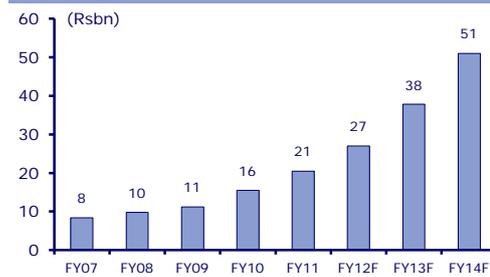
**Top-down opportunity in e-commerce is exciting but challenges abound**

**Penetration of e-tailing sites still low in India**

Experience from other countries also suggests that eventually one or two mass merchants, a few wide-margin niche players and some click-and-mortar operators will crowd out most other players. We see an encore in India with Flipkart the likely winner among mass e-tailers. Wide gross margins will allow a few apparel/lifestyle-focused companies to flourish. Niche opportunities are also present in categories that are under-served by offline players, such as baby care and sports goods, among others.

Figure 50

**E-tailing revenue**



Source: IAMAI, CLSA Asia-Pacific Markets

Figure 51

**Online as a share of organised retail**

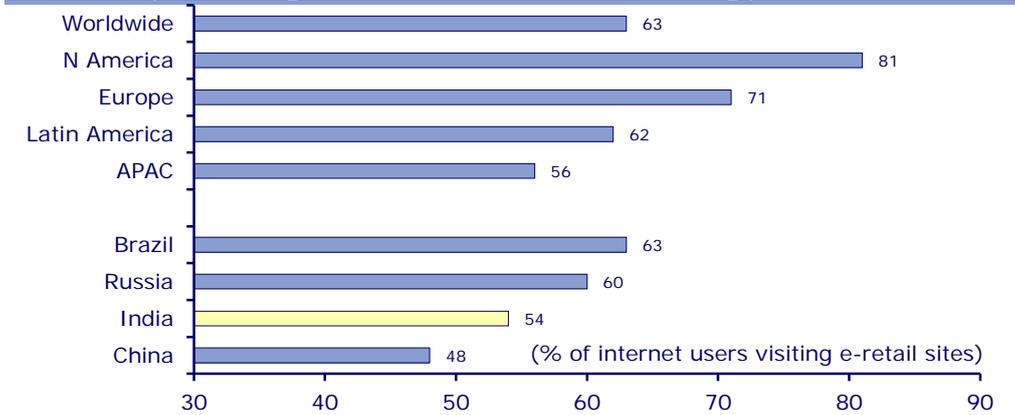


Source: CLSA Asia-Pacific Markets, India Retail report

IAMAI estimates, India's online retail market sales stand at about Rs27bn having almost tripled over the past four years. However, it constitutes just 1.4% of the organised sector, which stands at about 7% of the total retail market. Clearly, on a top down basis, this opportunity is exciting and has lured some players to the e-commerce space. We expect the current momentum to continue and e-tailing sales should surpass US\$1bn by FY14. Even then, it will constitute only 2% of the country's organised retail market.

Figure 52

**Increased options and greater comfort should drive e-tailing penetration**



Source: ComScore, CLSA Asia-Pacific Markets

**Snapdeal leads in buyer aggregator model**



Snapdeal is India's largest daily-deals site with presence in more than 50 cities across the country. It started in February 2010 as an offline discount-coupons business and today claims over 70% share of the daily-deals market. Its website attracts 1.5m visitors every day. Snapdeal has more than 12-13m members and is adding more than one

million new users every month. The company said it usually takes 25-30 days for a member to his/her first transaction, after which comfort with Snapdeal goes up. There are members who do as many as 20 transactions every month. Restaurants and personal care remain the most sought-after services. Snapdeal is likely to close FY12 with revenue of Rs1.5bn and targets Rs10bn by FY15. Gross margin stands at 30-40%.

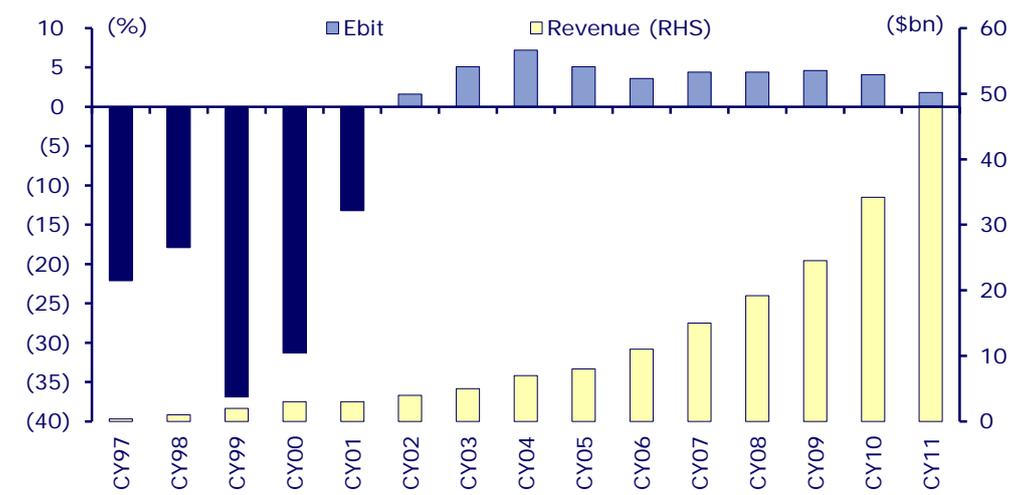
**Even a company of Amazon's scale makes just 4% Ebit margin**

**Virtual merchant - Flipkart and a few apparel players to win**

Most internet companies adopt this model, which involves a retail merchant operating solely on the web. Mass e-tailing is a function of scale. A few global players dominate this space, with Amazon being the largest by some margin. Mass e-tailers control more than 50% of India's online shopping market, with niche e-tailers and click-and-mortar operators comprising the other half.

Figure 53

**Amazon's revenue and margin**



Source: Amazon, CLSA Asia-Pacific Markets

**BillDesk payment systems**



BillDesk, founded in 2000, dominates the domain most critical to e-commerce's success, ie, payment systems. An e-commerce site's marketing campaigns, customer-acquisition costs, inventory management, etc, bear little fruit if a transaction with an end-user does not complete. Payment gateway aggregators provide the interface connecting an e-commerce site with the technology infrastructure of bank, credit card, prepaid card, etc.

BillDesk offers over more than 60 payment options to its clients and conducts about Rs1,000bn of transactions every year. Its first leap of growth came with the launch of its utility-bills payment facility. Then the additions of IRCTC, Cleartrip to its client base demonstrated further traction. Also, due to its focus on utilities and travel, BillDesk sees higher ticket size per transaction than peers that service e-tailers.

Owing to stringent RBI regulations (from the Payments and Settlements Act), a payment gateway in India plays an aggregator's role and routes payments via a nodal bank. When an e-commerce site initiates a transaction, BillDesk intimates the card-issuing bank to discharge funds to its nodal bank account. Then it notifies the acquirer bank (the

merchant's payment-receiving bank account) to accept the funds from the nodal account. The issuing bank collects 1-2.5% of transaction size as nominal interchange fees. The acquiring institution charges 0.1-0.5% of transaction size, depending on the category of the merchant and the product.

Every bank has a different way of integrating with merchants, so a merchant looking to bypass payment gateways would have to tie up with each bank individually, manage these separate pipelines and reconcile the funds separately. Also, some sites may look for special customisations and additional support during holiday and peak traffic seasons, and this is where BillDesk adds more value. However, brokers such as ShareKhan.com have tied up with banks individually. There are few barriers to entry, and this space already has eight to 10 players of varying size.

They see little threat from Cash-on-Delivery, as there remains enough headroom for growth of online transactions. Debit cards, that once were 5-10% of all transaction, now make 60% of all card based transactions. Adding newer verticals such as telecom, mutual funds etc provide additional room for growth. BillDesk also sees m-Commerce as an avenue of growth, as the WAP browser in most cellphones can't enable net-banking transactions, and there is ample remove for improvement in this space.

**Flipkart has a good lead and should continue its dominance**

**Wave of consolidation/shake-outs in the apparel and lifestyle segment**

**Apparel is a huge untapped opportunity in India**

**Bleak prospects for standalone electronics goods e-tailers**

**Baby/sports goods market is small; mass e-tailers to give niche players hard times**

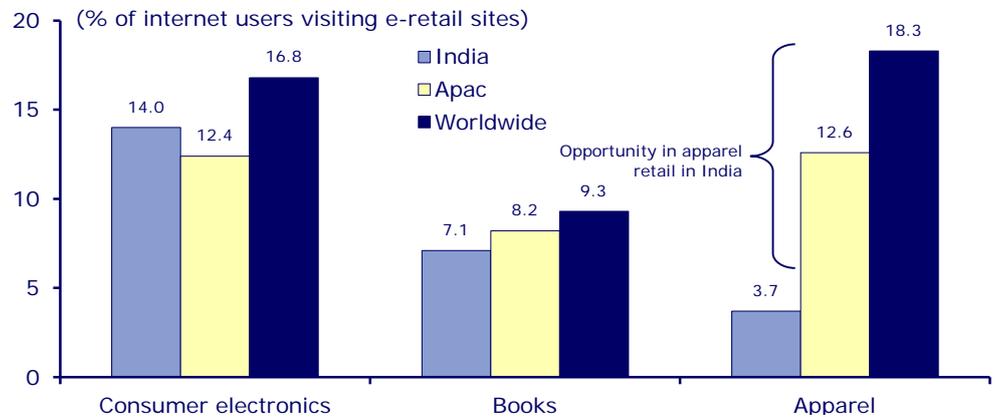
Heavy discounting and a high fulfilment cost suggest that scale is necessary to be profitable. Flipkart has established an early but dominant lead in the mass e-tailing segment, with the twin factors of good execution and significant capital investment driving its success. There are other players as well, such as Infibeam, Baggittoday, but none of them are able to match Flipkart's deep pockets, product breadth and execution. Mass e-tailers have lower customer-acquisition costs and higher user-lifetime value. However, these advantages are somewhat neutralised by thinner average gross margins: despite its scale and dominance, Amazon has operating margins of just 4%. We expect similar profitability (maybe even lower) for the likes of Flipkart in their steady state.

**Niche versus mass e-tailers**

The current capital-fuelled wave has seen a number of niche e-tailers spring up. In our view, medium to long-term success for niche online categories rests on two counts: total size of the target market and gross margins. We are relatively more sanguine on the apparel/fashion/lifestyle-goods segment, which has a vast target market and wide gross margins (25-35%). We estimate the online apparel/personal-items market at Rs6bn in sales but expect material growth ahead. However, the race to tap customers through heavy discounting is likely to keep customer-acquisition costs high with little customer loyalty. As investors run out of money and patience, we expect a wave of consolidation/shutdowns in this space over the next 12-18 months.

Figure 54

**Sites internet users visit by product type**



Source: ComScore, CLSA Asia-Pacific Markets

We remain sceptical on the prospects of any standalone electronics goods e-tailer. While the target market is big, gross margins are much thinner (8-12%) than the apparel/lifestyle-goods sellers, and eventually we expect online electronics setup to be dominated by mass e-tailers and online channels of brick-and-mortar retailers. Initial moves are already visible with Flipkart acquiring LetsBuy. Also, the penetration of online electronics-goods purchases is already much higher than other items.

Given India's underdeveloped offline retail sector, a few niche segments are amenable to online retailing. We count kid products and sports goods among those. This opportunity has naturally attracted a number of players. While gross margins are wide (above 25%), the absolute market size is small, potentially limiting the segments' growth prospects. We expect a couple of specialised players to do well. Still, they might face stiff competition from mass e-tailers.

Traditional retailers moving online to expand reach

Indians remain reluctant to pay for online content

**Click and mortar - Shoppers Stop seems promising**

These are traditional brick-and-mortar retail establishments with a web storefront. Hybrid models (internet backed by brick-and-mortar businesses) can capture a larger share of the e-tailing pie in line with those in developed countries. Almost 70% of the top-100 e-tailers in the US are click-and-mortars operators. A number of Indian players in the offline segment have started online channels focusing on expanding their reach, especially beyond tier-1 cities. While the initial response has been less than encouraging, experience of western countries suggests that hybrid (online + offline) retailers tend to get a higher share of online retail sales over time.

Click-and-mortars businesses have online presence in multiple segments such as electronics (Croma), books (Landmark), apparel/lifestyle (Shoppers Stop, Westside, Bombay Store) and mass (Futurebazaar). However, none of these have gained much traction so far, a key reason being the excessive discounting offered by pure online merchants. Operators need to be cognizant of offline prices and should avoid significant disparity in pricing.

**Bit vendor unlikely to be a big market anytime soon**

A merchant that deals strictly in digital products and services and, conducts both sales and distribution over the web is a bit vendor. In general, Indians are loath to paying for any digital content or service. As such, we believe this model will take time to scale up. Flipkart has made its entry into digital content by launching an online music store, Flyte. Its aspirations for digital distribution were clear when it acquired MIME360, a company that brings digital media-content owners and content publishers to a common platform, and the digital catalogue of movie-content provider Chakpak.com last year.

**Shoppers Stop's foray into e-tailing**

**SHOPPERS STOP**

Shoppers Stop launched its e-commerce website last year with the intention to engage with its buyers across multiple channels. Although sales through the internet platform make up less than 1% of its total top line, the company finds the long-term opportunity compelling. The website sells the existing inventory within the business. Therefore, there are few concerns on the logistics front. The company has partnered with BlueDart, Aramex and FirstFlight to provide delivery services. Cash-on-delivery route was offered only a month ago and has seen immense traction. Given that the average order size on the site is in the Rs2000 range (in line with the offline format), the cash-on-delivery feature doesn't impact per-unit profitability.

The website marks Shoppers Stop's attempt to keep its non-resident Indians (NRI) and tier-2 and -3 customers engaged with the brand, even where its offline retail format isn't easily accessible. NRIs use the site for gifting within India. Some 75% of the site's sales come from cities where Shoppers stop already has a presence. While Shoppers Stop's menswear inventory is much larger than that of women's apparel, online sales of the latter double the former in volume. Tier-2 and 3 cities have shown a preference for the company's Mother Care product line.

The website is manned by 20 people, and as it uses Shoppers Stop's existing inventory systems, a team of 25 is adequate for order management and fulfilment. Although almost all product categories are featured on the website, the company is focusing on making more of their brands available online.

**What does Flyte offer to Indian consumers?**

Flyte offers one of the largest and most comprehensive online music collections of over a million tracks from 150,000 albums. It also claims to have music in 55 languages and 700 genres to appeal to regional music fans. These are MP3-format music downloads that can be played back on any digital media device.

music means that users can transfer music across devices easily without any legal copyright aspect. Flyte allows users to download the same file four times at no extra cost, to make it more convenient for users to sync entire Flyte music library across their multiple devices.

Music is offered on various bit-rate quality music including 64kbps, 128kbps and CD quality at 320kbps. "DRM-free"

Single songs prices start at Rs6 with albums for as little as Rs25. However, most popular songs individually cost around Rs15.

Heavy marketing spend is necessary to gain scale

Difficult to challenge Google/Facebook for share of ad dollars

### Manufacturer model is an idea slightly ahead of its time

The classic Dell model where manufacturers/brand owners reach consumers directly, compresses the distributor channel. This is a step ahead of the merchant model as even the brands/products are completely online and not available in offline retail stores. Low-cost tablet maker Wespro and online fashion brands Yepme and Zovi are among those adopting this approach. Vancl (see Appendix 1) and Asos are seen as benchmarks in this space.

Wide gross margins (30-40%) make this model look attractive but a lot of money is needed to build a brand. Monetisation of the online-only brand opportunity remains a battle for longevity and investor patience will determine whether the likes of Yepme are successful. Commoditised products sold only online (cheap mobile phones/tablets, etc) will still have appeal given the low costs. However, given a typical Indian's insistence on touch and feel before buying a product and the fact that India is much behind on the internet-maturity curve, we believe this concept of online-only brands is slightly ahead of its time.

### Domination of global players hinders advertising model

The web-advertising model is an extension of the traditional media-broadcast model. The broadcaster, in this case a website, provides content (usually, but not necessarily, for free) and services (like email, instant messengers, blogs) mixed with advertising messages in the form of banner ads. Banner ads may be the major or sole source of revenue for the broadcaster. The broadcaster may be a content creator or a distributor of content created elsewhere. KPMG estimates India's online advertising market is worth about US\$300m.

## Yepme - An online apparel brand



Yepme is an online retailer of men's clothing, footwear & accessories, and aims to differentiate itself through its unique Yepme brand. The company aims to be India's biggest fashion brand, bigger than any of its offline/online fashion peers. Its site was launched in April 2010 by three alumni of Indian Institutes of Technology and Indian Institutes of Management: founder Sandeep Sharma, a specialist in e-commerce, technology development and operations; Vivek Gaur, who has extensive experience in e-commerce startups; and president Anand Jadhav, a merchandising and supply-chain expert.

E-commerce mainly suffers from problems in the supply chain as it is difficult to get it in order. To address this issue, Yepme decided to launch its own brand. The company retails only its own brand, and does not plan to stock other brands on its website anytime soon. However, its products are available on Junglee.com and Tradus.in. Of the 15,000-25,000 orders that it ships in a month, about 70% are from tier-2 and 3 cities, where a few brick-and-mortar outlets for men's fashion struggle to keep pace with rising aspirations. Yepme's products are priced at 20-40% discounts to known mainstream brands but at a premium to small-time brands available in smaller cities/towns. Average order size is about Rs1,500.

Yepme's return rate is below industry norms and delivery is managed by integrated e-commerce solution developed in-house. Additionally, operating in the apparel & accessories segment with its own brand allows Yepme to operate at 35% gross margins. This allows it to break-even at a per-customer level by the user's second order. Unlike other online multibrand retailers, Yepme doesn't plan to develop its own backend logistics and delivery network and will continue to use best-of-class logistics partners. Almost 30% of the orders from non-metros come from cities without even basic courier coverage, and there Yepme uses India Post's services. Dependence on third-party logistics does pose reconciliation challenges, but pilferage levels are below 1%. Delivering to far flung corners stretches receivable days to 35 days, albeit buffered by the fact that courier companies often pay Yepme at the point they pick up the parcel. The company maintains two months of inventory, and a majority of its line is manufactured in India.

Yepme has kept marketing (and hence customer acquisition) costs low, and has primarily advertised online and on social networks such as Facebook with 800,000-plus fans. In a few months it plans to launch a television campaign for brand building and will also announce an expansion into women's clothing range.

Online ad market at about 4% of total ad spend

Yahoo is a clear leader

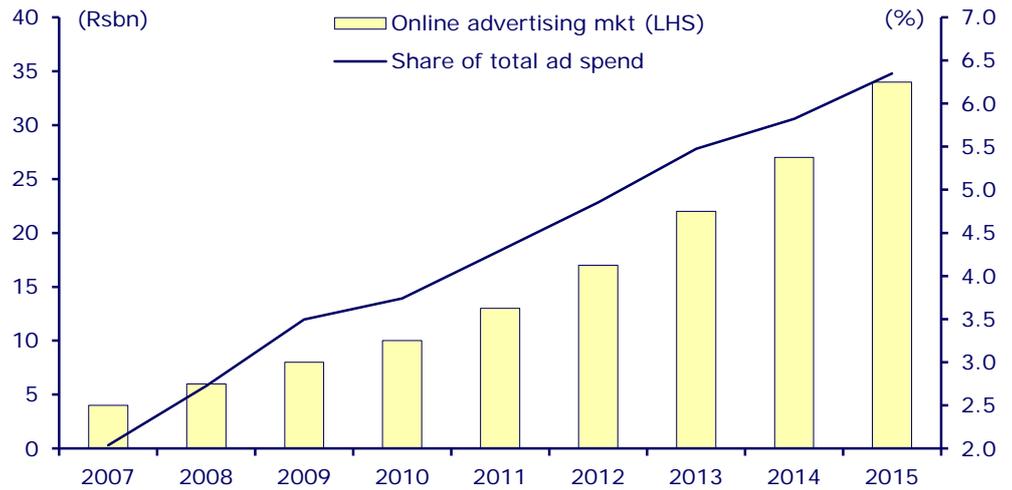
Negative view on Indian portals

Rediff, an example of failure of Indian portals

However, over 50-60% of that is captured by Google (search advertising) and Facebook, leaving little for Indian players. We do not see this dominance being challenged anytime soon. While there is some market for online classifieds, we remain sceptical of the scale-up potential of any business model relying solely on advertising revenue for now.

Figure 55

**Online ads gradually gain share, but will it be good enough?**



Source: KPMG-FICCI Report 2011, CLSA Asia-Pacific Markets

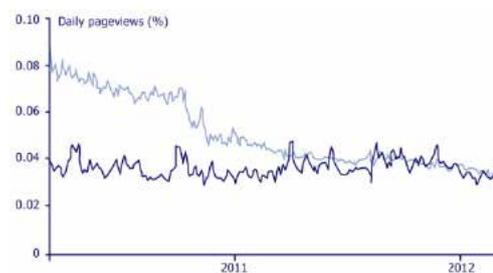
**Portals - Bleak future**

Portals usually offer services ranging from search, email and content. A high volume of user traffic makes advertising profitable and permits further diversification of site services. However, this space has been dominated by global players like Yahoo and Google, and we do not foresee a bright future for Indian portals. Moreover, social networks are now competing with portals for time spent online and social networks hold the advantage.

Rediff/Indiatimes were early leaders but failed to innovate except for some minor redesign of their websites. As a result, Indian portals have lost traffic share and find it tough to attract advertising dollars. Even some of Rediff's new initiatives are clones of other successful models. For example, its daily-deals site is a poor cousin of similar Indian sites. Rediff's latest venture is ZaraBol, a microblogging site that is inspired by Twitter but offers nothing new to its users. Rediff saw a 30% reduction in revenue over the past four years even as operating losses continued.

Figure 56

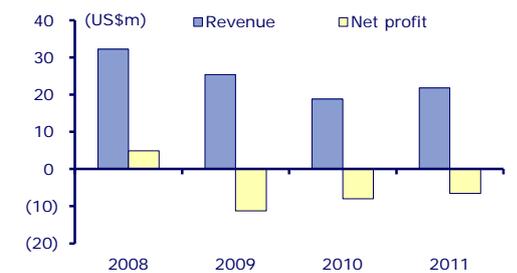
**Steady decline in pageviews for Rediff**



Source: Alexa, CLSA Asia-Pacific Markets

Figure 57

**Rediff - Deteriorating financials**



Source: Company, CLSA Asia-Pacific Markets

Category-specific sites have legacy advantages

Category-specific players dominate but we expect this to change

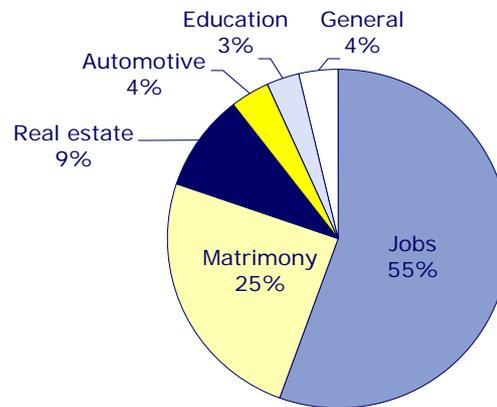
Global companies' websites have higher staying power

**Higher growth in horizontal classifieds ahead**

Items/services for sale or wanted for purchase are listed on online classifieds. Listing fees are common, but there also may be a membership fee. The online classifieds market constitutes about 50% of the total classifieds market, up from 40% three years ago. KPMG estimates the market is worth about Rs12bn, with potential to double over the next four years. Category-specific classifieds remain dominant given their legacy presence as well as dedicated and need-based followers. Jobs was one of the first categories to move online and even today retains over 55% of market share, followed by matrimony with a 25% share. Per ComScore, penetration of online career-services and personal sites is already much higher in India than elsewhere in the world. As Indians become more internet-savvy, we see market share shifting in favour of general-purpose classifieds.

Figure 58

**Indian classifieds market**



Source: KPMG FICCI Report 2011, CLSA Asia-Pacific Markets

Greater internet penetration in smaller cities/towns and SMBs getting online will drive growth of horizontal classified websites. Also, the cost of listing is much lower on general-purpose classifieds than specialised sites. At present, there is little differentiation among various horizontal classifieds sites (barring JustDial, which gives a greater local flavour). Some globally backed companies such as Quikr (Indian arm of eBay classifieds) and OLX have greater staying power compared to some of their local peers. We see consolidation ahead.

**JustDial leads the charge on local classifieds**



Founded in 1996, JustDial is a leading local search engine in India. The service is available to users through multiple platforms, like the internet, mobile internet, telephone (voice) and text (SMS). It provides users with information and user reviews from its database of local businesses, products and services across India. It has a database of over 6m listings. In FY11, JustDial addressed over 180 million search queries across different platforms. Some 77.2m of these came through

PC internet (99% Cagr over the past three years), while 9.6m were mobile-internet searches (215% Cagr). JustDial has conducted over 140,000 campaigns for its paid advertisers. In FY11, it had revenue of about Rs1.9bn with profit of Rs286m. JustDial's target market remains small and medium enterprises (SMEs). As of 30 June 2011, it had over 2,414 marketing executives, including 1,879 telesales persons who market its products and services via telephone and the internet, and 535 "feet on street" staff who generally conducts sales via in-person meetings.

**Vertical classifieds have good penetration in India**

Figure 59

**Reach of career-services websites**

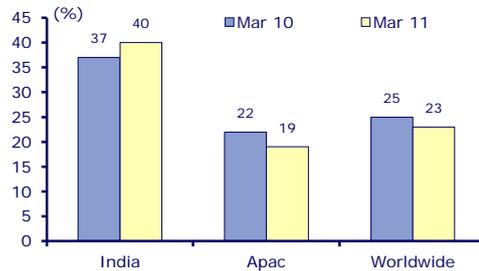
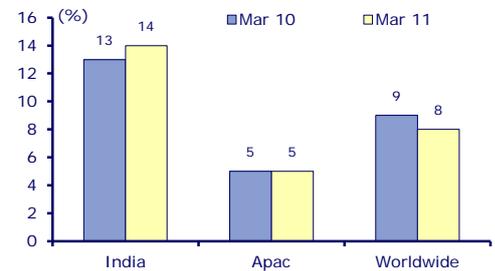


Figure 60

**Reach of matrimony/dating websites**



Source: ComScore, CLSA Asia-Pacific Markets

Figure 61

**Existing online classified models in India**

Online classifieds	Primary source of revenue	Secondary source of revenue	Key players
General classifieds	Paid listings	Text ads	Quikr, OLX, Clickindia, Justdial, Sulekha
	Featured listings	Banner ads	
		Google AdSense	
Recruitment	Job listings & employer branding	Job seeker services	Naukri, Timesjobs, Monsterindia, Shine
		Google AdSense and banner ads	
	Resume database access	Mobile revenue	
Real Estate	Fees from developers, builders and brokers	Property listings	99acres, Indiaproperty, Magicbricks
		Microsites, homepage links	
		Banner ads	
Matrimony	Paid memberships	Walk in services at offices for matching services	Shaadi, Bharatmatrimony, Jeevansathi
Auto	Lead generation for new cars, auto insurance and financing	Text ads	Carwaale, Indimoto
	Subscription fees from used car dealers	Banner ads	
	Paid listings	Google AdSense	
Food and entertainment	Paid listings	Banner ads	Burpp.com, Zomato.com

Source: KPMG FICCI 2011 Report

**Global backing gives Quikr an edge**

Quikr is the largest horizontal classifieds site in India, attracting over 24-25m users every month, 8-10x its user base a little less than two years ago. The company tries to keep a healthy balance between pure C2C and B2C postings (backed by agents). B2C listings (which make up around 60-70% of its current listings) are often easier to monetise, but C2C ones are the big pull factor needed for steady growth of the customer base. Quikr's recent TV ad campaign has also been focused on attracting C2C listings. The company derives revenue through three streams: premium listings, lead generation and advertising (currently more text-oriented but should ramp up display ads soon).

Traction in non-metros is promising. Users from these areas make up 50% of the user base, and are growing

at a faster clip than customers from the top-eight cities. Quikr provides small businessmen a cost-competitive platform to advertise their goods or services. It is present in about 40 cities with specialised microsites such as surat.quikr.com, Jaipur.quikr.com, etc. Quikr looks at the "network effect" as a natural barrier to entry for other players. As more listings drive a larger user base, which in turn attract even more postings, Quikr sees a multiplier effect in its growth.

Quikr remains very optimistic about its mobile platform. It reaches an equal number of people through mobile internet as through more traditional channels. Nokia is an investor, and Quikr is looking at options of burning the handset company's apps on packaged mobile hardware.

**InMobi and Komli have managed to compete with the likes of Google**

**Geographical diversity is key to success of an ad network**

**India not big enough to sustain infomediary models**

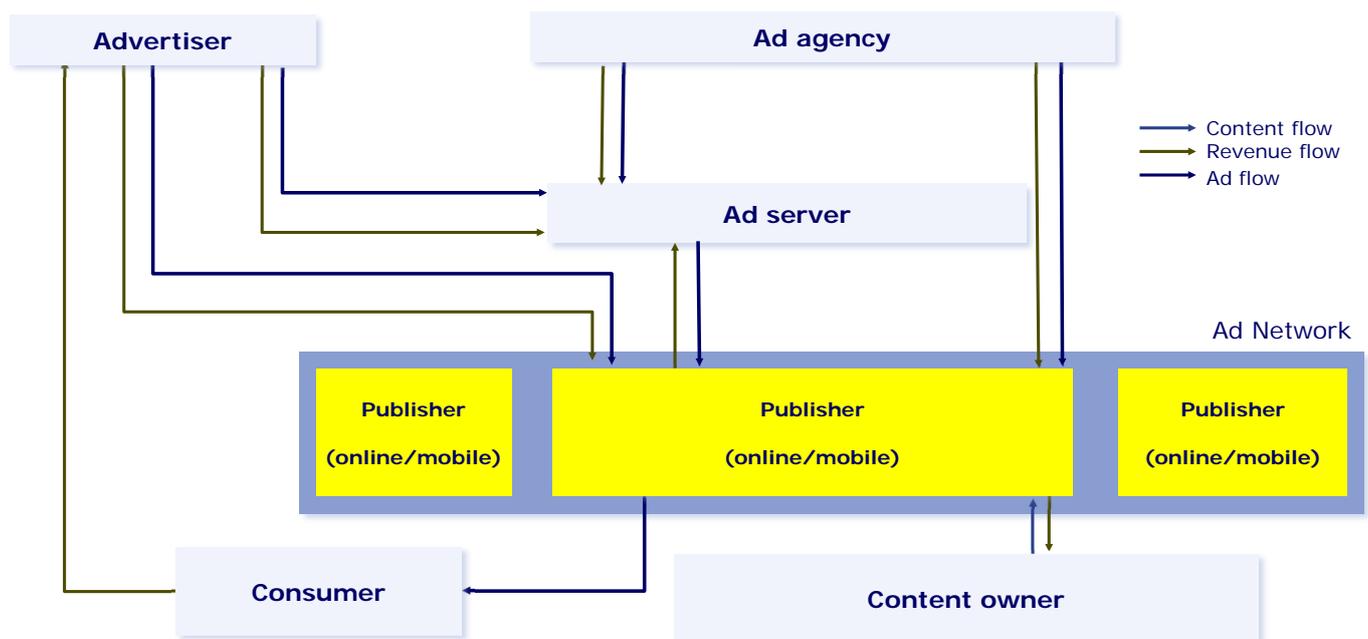
Many companies function as online infomediaries (information intermediaries), assisting buyers and/or sellers to understand a given market. Given these are digital-only models, global players remain dominant in this space. A number of infomediaries have emerged from India but we remain sanguine only on the prospects of those that have managed to expand and make a mark beyond India. The domestic market is not big enough to sustain multiple companies given its small size and also the inherent advantage of global firms like Google in this domain. We are more optimistic on InMobi (mobile advertising network) and Komli (online advertising network and audience-measurement services).

**Advertising networks need to expand beyond India to succeed**

These networks feed ads to member sites (publishers), thereby enabling them to monetise their inventory. They collect data about web users that helps advertisers to strategically place their advertisements across publishers. Ad networks usually work with publishers on a revenue-sharing basis. Given that India's online ad market is very small with US\$300m in annual revenue and display advertising (focus of ad networks) probably constitutes a third of that, we remain sceptical about any ad network focusing solely on the local market. Expansion beyond India is inevitable and even then success is not guaranteed. Ad Magnet is focused only on India and annualises about US\$6m in revenue. Komli has acquired a number of companies - Indoor Media in the UK, Aktiv Digital in Singapore and PostClick in Australia - to expand its reach. InMobi is already the world's second-largest mobile ad network and the key to its success has been its diverse geographical presence.

Figure 62

**Advertising networks sit at the centre of online/mobile advertising**



Source: KPMG FICCI 2011 Report, CLSA Asia-Pacific Markets

## InMobi CEO Naveen Tewari on mobile internet



**Naveen Tewari**

InMobi is world's second-largest mobile ad network with an 18-20% market share.

### What differentiates InMobi from other mobile ad networks?

We have three differentiators: mobile focus, technology and customer service.

**Mobile focus** - We are completely mobile-focused, which means our solutions have been built for the mobile ecosystem from the ground up. This is important because PC solutions don't adapt to the mobile world.

**Technology at scale** - We are the largest independent ad network in the world with a global footprint spread across more than 165 countries. We served 93.4bn ad impressions and reach out to more than 485m consumers. InMobi has some of the leading technologies in the mobile ad world today. Our rich-media technology, for instance, is ahead of the curve and advertisers and publishers are both benefitting from it. Our scale allows us to continue to make the investments needed to innovate and stay ahead of the market.

**Customer service** - The world of mobile advertising is fundamentally different from that of the online world. We have operators, multitude of devices, multiple operating systems and different screen sizes - just to name a few differences. Given the nature of the platform, customer service is extremely critical for advertisers, and we have had customers tell us that InMobi's customer service stands out in the industry.

### How is a mobile-based ad network different from a traditional PC-based internet network? What has hindered players from replicating their success on internet advertising on the mobile platform?

As a medium, mobile is fundamentally different and superior to other media on all counts that matter to advertisers - availability, targeting, engagement and measurement.

**Availability** - The mobile phone is an extremely personal device that most of us tend to use every moment we are awake. This gives advertisers access to their target audience nearly 24x7. The same doesn't hold in the case of the PC world.

**Targeting** - Mobile offers targeting like no medium can. Advertisers can target their audience by mobile device, operator and operating system in addition to the usual targeting and segmentation variables that exist for other media. Most of these variables are non-existent in the PC world, and even if they are there, they are not meaningful.

**Engagement** - Today's mobile devices have immense computing power, bigger and clearer screens than before,

touchscreen capability and sensors such as accelerometers, gyros in addition to technologies such as GPS. All these elements allow for creative ad formats and immersive engagement. For instance, a daily-deals company can run a campaign where a shake of a handset can refresh the deal on offer in certain city. And unlike other media, friction between engagement and call to action is nearly non-existent for mobile, given that it is a communication device at the core. One might argue that PC also allows a high level of engagement, but there is one key difference - the interaction is non-tactile, it is through a device such as a mouse.

**Measurement** - Mobile enables tracking and measurement at a far granular level compared to traditional media. For example, advertisers can track the number of seconds a consumer spent viewing a video, or the percentage of consumers that choose a particularly product variant.

At a platform level, mobile has multiple levels of complexity - multiple hardware platforms, multiple screen sizes, multiple operating systems, telecom operators and an application-developer ecosystem. Solutions designed for PC-based ad networks do not adapt to the mobile world because these variables do not exist in that world. Also, mobile is a truly global phenomenon, unlike the PC world, which means that players need to have both the mindset and the ability to address the needs of diverse and dispersed markets.

### Are tablets similar to mobile phones in that respect?

Fundamentally, tablets are very similar to mobile phones in terms of the operating system. It is just the display screen size that differs. The content owners, too, are similar, and after developing an ad for a cellphone, it is easy to create a tablet version. This makes it very easy to expand from mobile phones to tablets, while moving from a PC to tablet is more difficult.

### What scale has InMobi achieved? How do you measure your growth?

Ad impressions served and number of consumers reached are good measures of scale and growth for ad networks. In January 2012, we served 93.4 billion ad impressions and reached 485 consumers in 165 countries.

### How do you track the success rate of your ads?

Measures of the success rate of ads depend on the nature of the advertisers and the specific campaign. We have two kinds of advertisers - performance advertisers and brand advertisers. Performance advertisers look for metric such as number of app downloads, while brand advertisers look for metric such as end user engagement. For performance advertisers, click-through rates and cost per click are key measures of success. For brand advertisers, metric such as time spent on the ad unit, number of interactions with an ad unit, number of shares, if the ad campaign has a social media component to it, are key measures.

**Do you guarantee a publisher a number of ads? How does that relationship work?**

In general, we have a revenue-sharing model with publishers. We don't guarantee publishers any revenue, but they have expectations. Publishers give us their requests and we look at our ad network to see if there are enough and more targeted ads that can go to the publisher's inventory. We typically share 40-60% of the revenue from that ad with the publisher.

**What are your plans with InMobi Smartpay?**

InMobi is a mobile ecosystem player which means that we want to offer solutions that meet an app developer's needs. We help developers monetise their inventory on our network. We also help them drive app downloads. SmartPay helps provide the third leg of our offerings for mobile app developers - the mobile payment solution.

**You have just acquired Sprout. Is that the way ahead for growth for you?**

In terms of the nature of business that Sprout is in, we see three kinds of advertisers on the mobile platform:

Mobile First or businesses that are entirely mobile-centric - primarily mobile app and gaming companies such as Rovio, the maker of Angry Birds.

Online First or businesses that are largely online and are looking at ways to acquire consumers through the mobile medium. E-commerce firms are a good example of this category.

Offline First or traditional businesses that are looking at ways to engage consumers in the mobile medium. These would include brands that traditionally advertise on TV and in print such as automobile, telcos, handset makers, consumer products groups, finance and retail companies.

Mobile First businesses were the early adopters of mobile advertising, but Offline First has taken on to the medium in a big way. We see user engagement and actionable analytics as key for brands. Sprout's product portfolio, expertise and experience in the area of rich media and brand advertising gives us the edge in this regard.

**What are the big innovations happening in the ad market that make you optimistic?**

There are three key areas of innovation in the mobile ad market - user engagement & ad formats; analytics; and developer tools & platforms.

User engagement & ad formats - The mobile handset is a fantastic device, largely representative of our own senses - it has voice (mic and speakers), vision (camera), touch (touchscreen), brains (processor), sense of direction (GPS, gyro) besides sensors such as accelerometers. These capabilities suggest that a brand can create a user experience that is close to the real thing. And that is driving a lot of innovation in terms of ad formats and rich media ad design.

Analytics - Mobile as an advertising medium stands out from others in terms of the capabilities it offers on targeting and measurement. It is possible, for instance, to measure how many seconds a user spent viewing a video inserted in an ad, the percentage of people who chose a particular variant of a car, or the number of times an ad was shared by users. These data not only deliver insights to the brand advertiser in terms of how the user is interacting with the brand, but also provide inputs into product planning (which colour of a car are users more likely to purchase) and even modifying the ad in real time.

Developer tools & platforms - Developers are a crucial element of the mobile ecosystem purely in terms of the inventory they contribute for monetisation. Providing powerful tools including analytics and payment solutions such as SmartPay is the third area of innovation. The analytics part of the puzzle is important for app developers who need to monitor how their inventory is being monetised and what they can do to improve their returns.

**As internet penetration increases, driven by mobile wireless internet, do you see India becoming a larger market in terms of online adspend?**

According to a survey by On Device Research, 59% of internet users in India use primarily mobile to access the internet. For a large number of Indians, mobile is the first and only device for internet connectivity. With 3G rollout gaining momentum and data plans becoming affordable, mobile advertising will be even bigger in the months to come. A survey conducted by Decision First on InMobi's mobile ad network suggests that mobile internet users in India are spending more time on their mobile devices than they are on TV. This is a huge shift in terms of media-consumption habits, and it is natural to expect that ad dollars are going to follow where the users are.

**What is the general thought process of Indian advertisers around mobile advertising?**

Mobile advertising has evolved significantly in terms of creativity. Today, rich-media ads allow consumers to interact with the ad in a non-intrusive manner. For example, users could tap to watch a video, get a 360-degree view of a product, locate a store, call a dealer and return gracefully to the content. Higher internet speeds make the user experience better, but rich-media technology has evolved to an extent where immersive user experience is possible with lower data speeds. Brands in India are using the capabilities of the mobile phone to deliver engaging experience to consumers, and are quite excited about exploring this medium.

**Where do you see InMobi three to four years down the line?**

InMobi is already the largest independent mobile ad network today. We have a vision to be the dominant mobile internet player in the world, spanning the entire mobile ecosystem, in the next three to four years.

ViziSense is the only serious Indian player

This model has worked well globally but scalability still an issue

Tough to sustain standalone subscription models in most domains

High share of internet users going to educational sites in India; expect monetisation

Educational-content business can be scaled-up

**Audience-measurement services still a domain of a few**

These are online audience-market research agencies. ViziSense (owned by Komli) is India's leading online audience-measurement and adspend-benchmarking platform. Nielsen's SiteCensus is another such tool that provides tracking and analysis of website users and site performance. ComScore and Alexa are the other players in this field. We do not expect entry of any new significant player in this space. Global companies will remain dominant and Indian players like Komli need to expand their presence outside India to make their mark.

**Incentive marketing - Scalability issues persist**

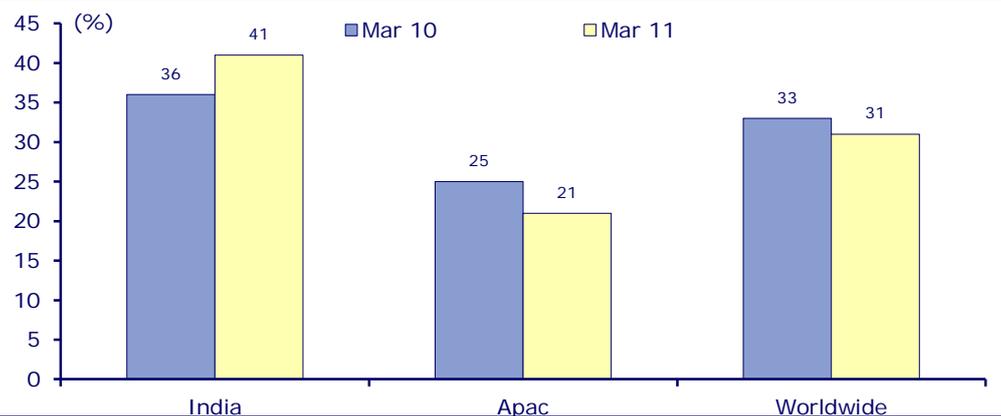
This involves a customer-loyalty programme that provides incentives to customers such as redeemable points, cash-back or coupons for making purchases from associated retailers. Data collected about users are then sold for targeted advertising. The key company in this space in India is CashItBack. Members get access to incentives, product offers, special pricing, consolidated deals and online discounts provided by its partner retailers. Vpaycash and Open2save are other companies in this segment.

**Subscription models could see success in education domain**

Under these models, users are charged a periodic fee to subscribe to a service. It is common for sites to combine free content with premium content (ie, subscriber or member only). Subscription fees are incurred irrespective of actual usage rates. This model is primarily used for consuming online digital content. Barring the education domain, the Indian consumer is extremely averse to pay for any online content. This mindset is likely to limit the growth of businesses dependent on subscription revenue. Subscription and advertising models would need to be combined for sustenance.

Figure 63

**Younger internet users increasingly drive reach of educational sites**



Source: ComScore, CLSA Asia-Pacific Markets

**Content services - Indians would only pay for educational content**

A number of companies provide text, audio or video content to users charging a subscription fee. Key areas where these models are prevalent in India are music (Raaga, Gaana, Bigflix), gaming (Zapak, Indiagames) and education (Lampsglow, iProf, Ace Creative Learning), among others. Most of them offer a basic service which is free with a subscription fee for a premium service. The free service is financed through advertising revenue. However, we do not believe the advertising pool is big enough to sustain multiple players. Indians by nature are wary of paying for online content and we do not see that changing anytime soon. Education is the only area where we are seeing a

**Telecom operators to remain dominant**

**Little scope for Indian companies in this space**

change of attitude. A few B2B models are also emerging in the online education and assessment space. Businesses are more willing to pay for such services. We are positive on companies like Mettl, which has an online assessment and testing platform to measure and improve people skills. Such companies have the option of gradually adding a B2C angle as well.

**Internet service providers is a commoditised business**

Internet service providers offer network connectivity and related services on a monthly subscription basis. Most telecom operators are active in this space and we expect them to remain dominant. However, there is very little to choose among these operators in terms of service and pricing. Wireless internet through 3G is very expensive and uncompetitive. We expect those rates to come down post launch of 4G services by the likes of Reliance.

**Global social networks dominate the community model**

The viability of this model depends on user loyalty. Revenue can be based on voluntary contributions (eg, Wikipedia) or tied to contextual advertising (Facebook) and subscriptions for premium services (Linkedin). Social-networking sites reach almost 85% of the web audience in India and takes up 21% of all time spent online. The rise of global social/professional networks has, however, limited the opportunity for any Indian challenger. Facebook, Orkut, Twitter and Linkedin are dominant in this space. Erstwhile Indian competitors have gradually moved away from this space. Minglebox is now focusing on education, while Bigadda is into e-commerce. The likes of Bharatstudent and Ibibo have also been losing users to global networks. InfoEdge's attempt at professional networking through Brijj has been a failure. We do not expect an Indian player to make any dent on the dominance of global social networks.

**Zomato - Dining and entertainment guide**



Zomato started off as an online restaurant guide and has recently expanded into events ticketing. Over 2m people access its site every month with almost a third using its mobile application. Over 26,000 restaurants are listed on Zomato. Application downloads are doubling every quarter and almost all traffic to Zomato is organic and it does not do any form of advertising. Zomato is present across 10 cities with plans of expanding into the likes of Indore and Lucknow. The company intends to launch a printed food guide as well.

Advertising by restaurants is Zomato's primary revenue source, which aims to get at least 20% of listed restaurants to advertise on the site. Currently that number stands at c.5% in major cities. Advertisements can be placed based on location, cuisine and delivery channel. Zomato charges premium pricing given the targeted nature of its advertising. It is not in favour of paid listings for now. The events business accounts for a very small proportion of revenue but is seeing good traction. Zomato has about 30 people in sales but its expansion plans remain aggressive.

**Mettl - Online skill assessment**

Mettl is an online assessment platform to measure, analyse and improve people skills. Its primary offering is a B2B platform that is used by companies to create customised assessments. While Mettl claims that it is very strong in measuring IT skills, its product is used for recruitment (new graduates/experienced), training effectiveness and engagement across various industries including IT, education, banking and retail. Some of its clients include Capgemini, Cognizant, Ericsson, EXL, Educomp, InMobi, Indiamart, Cleartrip and Playdom.

increasingly digitises its content, and on the other, big and small job portals and training companies are finding innovative ways to use its skill-measurement engine. This is in addition to the individual companies that utilise the platform for their internal use.

To date, Mettl has conducted more than 100,000 assessments. Its business model is SAAS-based wherein its customers pay either on a periodic subscription basis or per assessment instance (candidate) basis. The price points for assessments depend on the business-use case and can vary between Rs200 for a recruitment test to Rs50 for training assessments. The business is very sticky since the data generated by the assessments are very useful for companies for future measurements.

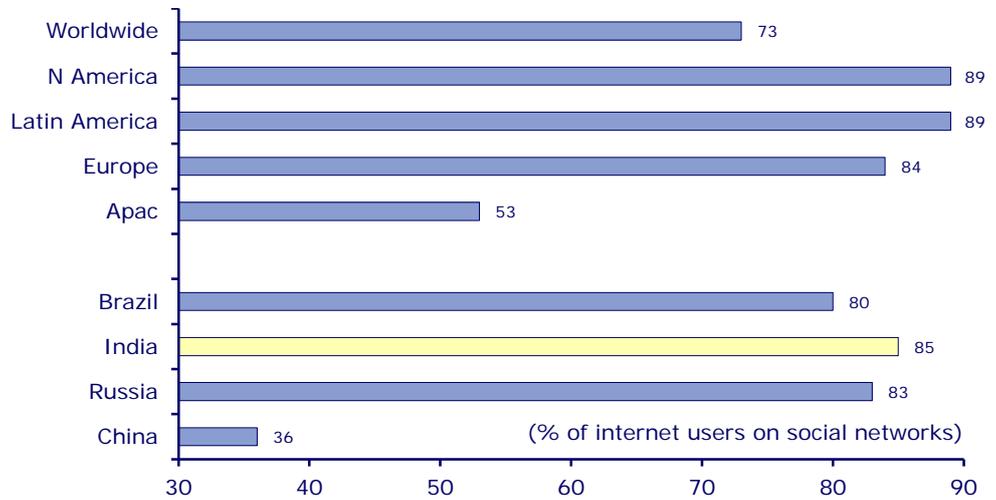
Mettl says the spread of opportunities enables it to work across a variety of different markets. On one hand, large publishing companies want to utilise its platform as it

**High penetration (85%) of social networks among internet users in India**

**Facebook and Orkut dominate the social network space**

Figure 64

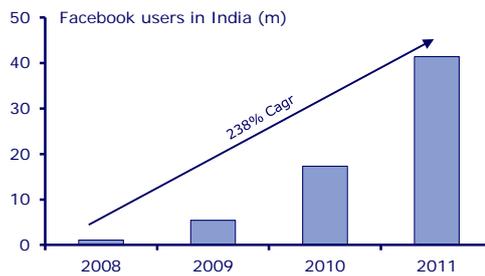
**Indian internet users on social networks**



Source: ComScore, CLSA Asia-Pacific Markets

Figure 65

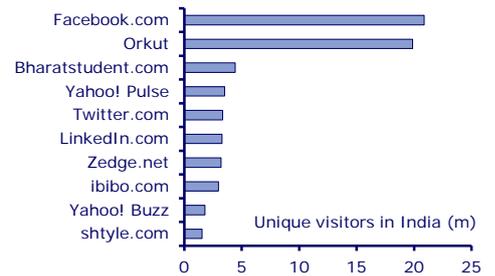
**No. of Facebook users in India**



Source: Facebook, CLSA Asia-Pacific Markets

Figure 66

**Social-network visitors in India**



Source: KPMG FICCI 2011 Report, CLSA Asia-Pacific Markets



**A few companies to dominate market-cap creation**

**Flipkart and InMobi seem to have the biggest potential**

## Winners take all

The key question in generating returns on investments in the Indian internet sector is whether a 20% Cagr for internet users and those making transactions over a five-year timeframe makes sense. If yes - and we believe the answer is yes - the market value of the industry at the end of the period could climb to as high as US\$15bn with category dominators becoming clear winners.

As a sector gains scale, patterns repeat themselves with astonishing regularity. A few players grab share and emerge as better-managed and more predictable operators. The market tends to assign higher values to these “winners”.

We see a similar pattern in the Indian internet sector. We expect it to create US\$12-15bn of market cap (from US\$2bn currently) over the next five years. To take advantage of this potential, it is important to identify the winners at an early stage of evolution.

As Figure 67 indicates, a few top players dominate each category with disproportionately higher market cap than their peers. Abundant opportunities and compelling long-term growth prospects have attracted and continue to lure more players. However, only certain segments show potential to create more market cap, with each having only a few big winners. The global internet theme of “the large get larger” is likely to repeat in India, with current trends showing Flipkart and InMobi as strong candidates.

Figure 67

### Market cap of internet players globally

Search, portals, networks		Mass e-tailers		Auction/ marketplace		Online travel		Online gaming		Online classifieds		Niche e-tailers	
Google	201,176	Amazon	83,928	eBay Inc.	47,397	Priceline	32,730	Zynga	9,491	Seek	2,465	ASOS	2,036
Facebook	75,000	DangDang	622	Rakuten	13,637	Expedia	4,446	Netease	7,058	Rightmove Plc	2,330	Delticom	1,192
Tencent	61,756	CDON Group	573	Groupon	11,472	Tripadvisor	4,330	Ncsoft	5,834	REA Group	1,835	Ocado	1,046
Baidu Inc.	47,602			Alibaba (Taobao)	8,510	Ctrip	3,362	Shanda Interactive	2,333	51Job	1,653	Yoox	812
Yahoo!	18,067			Mercadolibre	4,309	Wotif	1,031	ChangYou	1,352	Soufun	1,429	BlueNile	471
LinkedIn	9,135			B2W	844	MakemyTrip	855	Giant Interactive	1,168	Carsales.com	1,366	Zooplus	334
Yandex	7,762					Orbitz	374	Neowiz	734	Monster Worldwide	1,162	PetMed Express	243
Sina Corp.	4,885					Travelzoo	371	Wemade Entertainment	641	Info Edge	778	1-800-Flowers	195
Sohu	1,944					Hotel.de	117	Netdragon	345	CRIC	760	Buch.de	162
RenRen	1,385					eLong	82	KongZhong	218	Dice Holdings	615	Overstock	126

Note: Market cap in US\$m as at 16 March 2012. Source: Bloomberg, CLSA Asia-Pacific Markets

**China is closed to global operators**

### Comparison with China needs adjustments

A comparison with China is inevitable given the near-US\$200bn market cap of its internet sector. However, we should appreciate some key differences between the two markets. Unlike China, India is not closed to global players like Google, Facebook and Twitter. Moreover, the primary language online is English (while Chinese is commonly used in China). This has precluded the existence of any local Indian players in segments like search and social networking, which are the most penetrated among internet users. Note that a chunk of market-cap creation in China internet can be attributed to local clones of successful global models. India’s internet industry does not enjoy the same benefits because global players are dominant and while the pattern of market-cap creation in China is essential for extrapolations to India, detail is even more important.

**Number of internet users in India is equal to that of China at start of 2006**

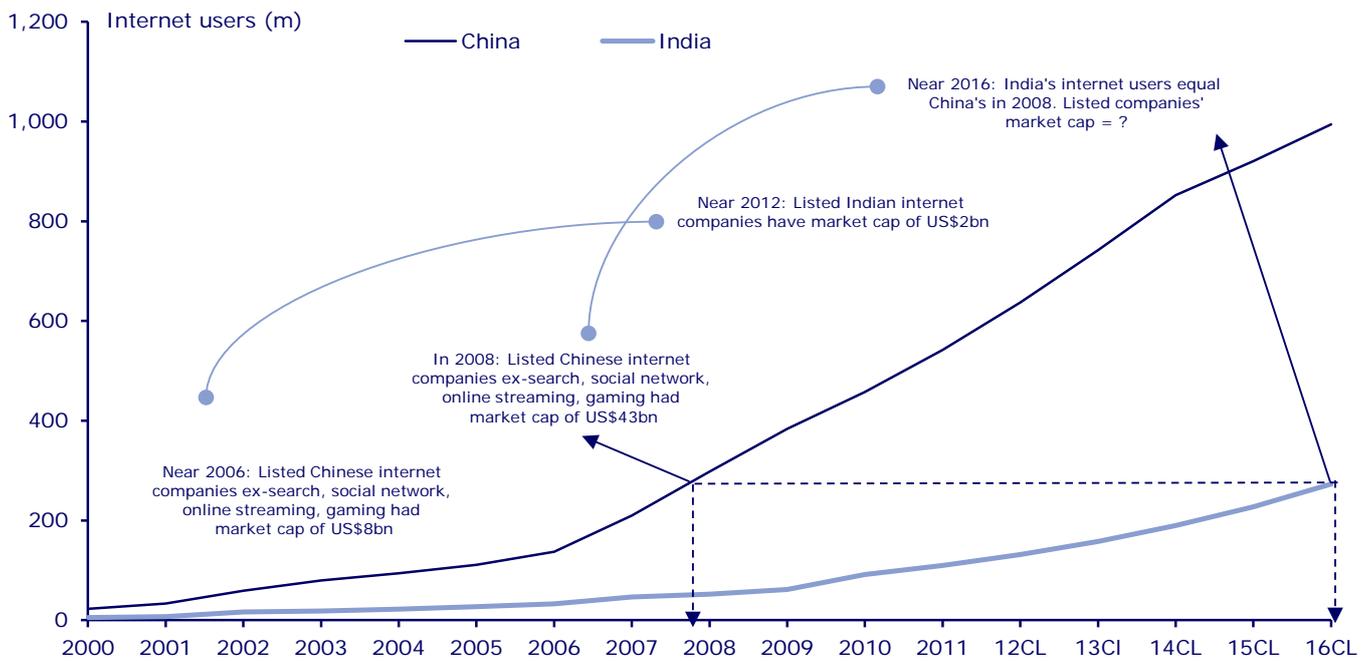
**Market cap per internet user rises with time as transactions increase and more companies go public**

At the start of 2006, China had about 110m internet users. Market cap of listed Chinese internet companies (excluding those in search, social networking, online streaming and gaming as they are inaccessible for Indian internet companies) was about US\$8bn. IAMA estimates India had 110m users at the start of 2012. Market cap of listed players is, however, just US\$2bn. Simply put, the Indian internet sector is generating market cap of US\$18 per user compared to US\$72 in China at a similar stage of evolution.

A conservative assumption of 20% growth over the next five years results in about 273m internet users in India by 2016. At that scale, market cap of listed Chinese internet companies (excluding those in search, social networking, online streaming and gaming) was US\$43bn, or US\$150 per user. Users' increased propensity to transact translated into almost twice the market cap per user. We expect a similar hockey-stick growth pattern in India and even by conservative estimates, market cap of listed operators should easily cross US\$12-15bn over the next five years, a six to seven-fold jump.

Figure 68

**Parallels and differences between with India and China's internet growth**



Source: CLSA Asia-Pacific Markets

**Do not expect cutting-edge innovation from Indian companies**

**Disproportionate gains**

Select global internet stocks have generated significant returns over the years, while most have performed ordinarily. One aspect where Indian companies are likely to mirror China is disproportionate market-cap gains for a few players, while a majority of them should lag. We should not expect cutting-edge innovation from Indian internet players given that Indians are not mature internet consumers.

Successful operators are likely to be replicas of global business models and have one or more of these value drivers: efficiency; niche or novelty; and network effect. These factors do have linkages among themselves. Note that some of these value drivers wear out over time as online ideas become mainstream. The key to greater investment returns is sustenance of these supportive elements. Figure 69 details their presence across different business models.

Figure 69

**Value drivers across different business models**

Models	Efficiency				Niche/ novelty offering	Network effect	Examples in India
	Remove info asymmetry/range	Cheaper	Faster	Better			
<b>Brokerage</b>	Buy/sell fulfilment	✓		✓		✓	IRCTC, MakeMyTrip, Cleartrip, redBus, Online brokers, BookMyShow
	Demand collection		✓			✓	Atyourprice
	Buyer aggregator		✓			✓	Mydala, Snapdeal, Dealsandyou
	Auction broker				✓	✓	eBay India
	Transaction broker			✓		✓	BillDesk, CCAvenue
<b>Merchant</b>	Virtual merchant						
	- Niche	✓	✓			✓	Fashionandyou, 99labels, Sportsnest, Babyoye, Hoopos, Myntra
	- Mass	✓	✓	✓		✓	Flipkart, Homeshop18
	Click and mortar			✓			Shopperstoponline, FutureBazaar
Bit vendor		✓			✓	Flyte	
<b>Manufacturer</b>	Purchase		✓			✓	Yepme, Wespro, Zovi
<b>Advertising</b>	Portals					✓	Rediff, Yahoo, Indiatimes
	Classifieds					✓	
	- General purpose	✓	✓	✓		✓	Olx, Quikr, Sulekha, ClickIndia, Justdial
	- Recruitment	✓	✓	✓		✓	Naukri, Monster, Timesjobs
	- Real estate	✓	✓	✓		✓	99acres, MagicBricks, Indiaproperty
	- Matrimony	✓	✓	✓		✓	Shaadi, JeevanSathi, Bharatmatrimony
	- Auto	✓	✓	✓		✓	Carwaale, Indimoto
	- Food	✓		✓		✓	Zomato, Burpp
<b>Infomediary</b>	Ad networks	✓		✓	✓	✓	Komli, AdMagnet, InMobi
	Audience measurement				✓	✓	Nielsen, Vizisense, ComScore, Alexa
	Incentive marketing		✓			✓	CashItBack, CouponCodesIndia
<b>Subscription</b>	Content services					✓	Zapak, Indiagames, Raaga, Gaana, Bigflix, Lampsglow, iProf
	Internet service provider						Tikona, Telecom operators, Sify

Source: CLSA Asia-Pacific Markets

**Decreases transaction cost and reduces information asymmetry**

**Efficiency forms the core of any online offering**

Better efficiency translates into cheaper, faster and better services and reduction of information asymmetry. The transaction-costs theory states that transaction efficiency increases when costs per deal decrease. Online platforms like Mettl (assessment), Hotelogix (small and mid-tier hotel booking), Moneysights (online mutual-fund buying) and Suvidhaa (online payments) are classic examples of increased transaction efficiency through internet usage.

Certain online business models reduce information asymmetries between buyers and sellers through the supply of up-to-date and comprehensive information. Improved information can reduce customers' search and bargaining costs. Classifieds businesses such as Naukri and JustDial or ad networks like InMobi and Komli represent this form of efficiency. E-tailers like Flipkart also use scale benefits to supply goods cheaper and faster.

**New deal structures/content/participants facilitate novelty**

**Novelty (niche) helps sustain differentiation**

Novelty in online businesses has different forms: connecting previously unconnected parties (eg, mobile ad networks); eliminating inefficiencies in the buying and selling processes through innovative transaction methods (eg, eBay, Snapdeal); capturing latent consumer needs (eg, online-only brands like Zovi, Yepme); and creating entirely new markets (eg, Atyourprice). There is also an important relationship between novelty and efficiency. Certain efficiency features of e-businesses may be due to novel assets that can be created and exploited in the context of virtual markets.

**Sector could move out of its growth trajectory**

**Next 12-18 months will separate winners from the losers**

**Mix of incumbents and emerging players among likely winners**

**Network effect increases switching costs, aiding lock-in**

The utility that a user derives from consumption of a good/service increases with the number of other agents consuming that good/service. In effect, value created for customers increases with the size of the user base. This motivates customers to engage in repeat transactions, boosting volume and in turn feeding the network effect. Most C2C sites demonstrate the network effect, so do classifieds websites.

**Potential winners**

Our research indicates that 2011 was the tipping point for growth and scale in multiple subsegments. Excluding travel, most internet businesses in India are small, but a likely convergence of increased user base, better and likely cheaper connectivity, capital availability and increased online content and shopping options suggest that the sector is likely to move out of its linear-growth phase to start enjoying exponential expansion.

While the opportunity is proven, monetisation and consequent market-cap creation will remain a battle. Business longevity and presence in the right spaces are key. Competition has intensified in almost every segment that has achieved meaningful business volume. Over the next 12-18 months, we see risks of continued price wars, consolidation, entry of foreign majors (Amazon has recently entered India) and economic pressures.

Some incumbents have clear and sustainable leads: Naukri in jobs; Makemytrip in travel; Flipkart in mass e-tailing; and InMobi in mobile ads. League tables are more diffused in some other categories. Nevertheless, a few leaders are emerging: Quikr, OLX and JustDial in classifieds; FashionAndYou and Myntra in apparel/lifestyle e-tailing; and hybrid models like Shoppers Stop. Meanwhile, SAAS models like Mettl and Hotelogix are differentiated but scalability potential needs to be ascertained.

**Dominates the online apparel market in China**

**Extremely flexible to customer needs**

**Reports of massive accumulated losses**

**About US\$390m raised over past four years**

## Appendix 1: Vancl case study

Vancl is a dominant online apparel retailer in China with a 28-30% share. Established in 2007 by former Amazon China executive Chen Nian, the company started off by selling own-branded men's shirts. A fairly standard product portfolio allowed it to focus on optimising business processes. Vancl's direct selling model depends on seamless connection between its raw-material suppliers, garment processors, website administrators and logistics services providers. The company has always aimed to outsource as much of its value chain as possible. In 2009, it launched its women's wear line.

Vancl has been able to grow its top line by expanding its footprint in the branded retail market with aggressive pricing. Attractive price points are driving consumers away from the unorganised segment and towards Vancl. The company accepts orders through three channels: its website, phone and catalogue mail. Its customer-service focus is a key differentiator in China per industry insiders. A courier waits while patrons try on what they've ordered and takes back unwanted items. All returns within 30 days are accepted. To provide this level of customer experience, Vancl has formed a home-delivery subsidiary called Rufengda Express.

However, these service levels come with prohibitive customer-acquisition costs. For example, a US\$95.3m operating loss accompanied its more-than-200% sales growth in FY11. Many industry insiders claim that Vancl has about US\$314m of accumulated losses from its four years of operations. In FY11, inventory rose to US\$157m, and to offload this, the company ramped up its marketing spending and gave aggressive discounts - which impacted profitability.

Over the years, Vancl has raised more than US\$390m of venture capital, while its listing plans have been pushed to 2HFY12 or FY13.

### Funds raised by Vancl

Round	Month	Amount (US\$m)	Investors
A	Oct 07	2	Chuanyuan Capital, IDG
B	Jan 08	10	Softbank
C	Aug 08	10	Qiming Ventures, Chuangyuan Capital, Softbank
D	May 10	40-50	Tiger Fund
E	Dec 10	100	Chuangyuan Capital, IDG, Tiger Fund
F	Jul 11	230	Undisclosed

Source: Technode

## Appendix 2: Paypal and regulations

### Paypal-type model unlikely to take off in India

<b>Feb 2010</b>	RBI seeks clarity from PayPal on its Person2Person payment feature, as it qualifies as a "Inward remittance", and PayPal does not have specific licenses to execute those orders	Paypal abruptly stops Person2Person payments for their Indian users  In the website's international "send money" portal, Rs isn't featured in the list of currencies that can be used.
<b>Mar 2010</b>	Paypal is unwilling to seek the necessary licenses that can authorise it to transfer funds to Indian banks	Paypal asks its India based users to withdraw their money from their online paypal wallets and transfer into any Indian bank account.  Paypal informs its India users, that they will no longer be allowed to make personal payments, and PayPal can now only be used to pay for Sale or purchase of any goods or services
<b>Jul 2010</b>	In compliance with the Payment & Settlements Act, PayPal can not make a direct electronic transfer into any Indian Bank using its current systems	Paypal asks its India based users to withdraw money from their online paypal wallets using only cheques, and the electronic transfer feature is withdrawn.
<b>Jul 2010</b>	In compliance with the Payment & Settlements Act, PayPal can not make a direct electronic transfer into any Indian Bank using its current systems	Paypal asks its India based users to withdraw money from their online paypal wallets using only cheques, and the electronic transfer feature is withdrawn.
<b>Mar 2011</b>	In compliance with the Payment & Settlements Act, PayPal can not make a direct electronic transfer into any Indian Bank using its current systems	Paypal asks its India based users to withdraw money from their online paypal wallets using only cheques, and the electronic transfer feature is withdrawn.
<b>Oct 2011</b>	US\$500 limit lifted	Paypal allows its users to receive US\$3,000 per transaction

Source: CLSA Asia-Pacific Markets

Infosys powers India's first mobile wallet

Convenience is the key benefit

Regulations limit balance and transfer amount

## Appendix 3: Airtel Money

Leading telecom operator Bharti Airtel recently launched Airtel Money, the country's first mobile wallet (an account on the mobile phone). Customers can use the tool to pay for products/service bills, tickets, shopping and conduct instant money transfer. Regulations around mobile payments are being eased, which should the development of online payments. Infosys has been selected as the technology partner for Airtel Money. Under the partnership, the tech company will deploy its mobile-commerce platform, Infosys Walleledge, to support the cashless payment and settlement needs of customers.

### What is Airtel Money?

In simple words, Airtel Money is an account on the mobile phone. One can deposit money (loading cash) onto the account and use the balance to pay for various products and services through a simple menu on the mobile phone.

### What can one do with it?

One can send money to family and friends, recharge prepaid mobile and digital TV, pay mobile/utility bills, book movie tickets, shop (both in the shop and online) and much more.

### What are the benefits?

Convenience - Various payments can be made anywhere, anytime. No more waiting in queues or searching for exact change.

Easy to use - Using Airtel Money is as easy as making a call. All you have to do is dial \*400# and use the simple interactive menu.

Safety - Every payment has to be confirmed with your secret 4-digit mPIN. So even if you lose your phone, your money is still safe.

Great offers - Airtel Money gives you exclusive value on Airtel payments. There are also a lot of other discounts with Airtel's merchant partners.

### Does one need a GPRS-enabled handset or a smartphone to use Airtel Money?

No. Airtel Money works on any mobile model/handset. You do not need GPRS or a data plan. You just have to dial \*400# and you will be able to use the menu.

### Can anybody apply for Airtel Money? Can I have multiple accounts?

Any Indian resident who is 18 years old or above can apply for Airtel Money. Every person can have only 1 Airtel Money account under his/her name.

### What is the maximum amount that can be held as balance?

Maximum balance at any time is Rs50,000.

### What is maximum amount of cash that can be loaded in the account?

You can load a maximum of Rs50,000 per day in the account (subject to your account balance limit). However, in case you are loading cash at an Airtel Money outlet, then the maximum amount per day is Rs5,000.

### What is the maximum amount that one can spend?

You can spend a maximum of Rs50,000 per day from your account. However, the maximum that you can spend in a single transaction is Rs5,000.

Nominal charges

**What is the maximum amount that one can send?**

You can send a maximum of Rs10,000 to another Airtel Money customer and Rs10,000 to any bank account per calendar month. The maximum per transaction is Rs5,000. However, the sum total of money spent and sent in a particular day cannot exceed Rs50,000.

**What are the charges for using Airtel Money?**

The following table provides an overview of charges for using Airtel Money.

**Charges for using Airtel’s mobile wallet**

Transaction	Charge
Airtel payments	Free
Non-Airtel utility payments	Rs10
Travel ticket booking	Travel ticket booking (online): 1% of transaction amount, subject to a maximum of Rs50
Movie ticket booking	Free (introductory offer)
Shops, restaurants, etc	Free
Send money to Airtel Money customer	Rs5 for transactions up to Rs500, Rs10 for transactions above
Send money to bank account	2% of transaction amount, subject to minimum of Rs10

Source: Airtel

## Appendix 4: eBay India key statistics

The table below shows the average ticket size of transaction across various product categories.

Expectedly, electronics have larger transaction size

### Overview of transaction size across categories

Category	(Rs)
Mobile	3,576
Laptops	3,082
Rest of tech	1,767
Clothes, shoes & accessories, home & bath and watches	567
Jewellery	1,289
Coins, stamps, collectibles	457
Rest of lifestyle	642

Source: Company

Mobile and electronics are fast-moving categories

### Average transaction velocity across categories

- A mobile accessory sells every **2** minutes
- A coin or note sells every **3** minutes
- A piece of jewellery sells every **3** minutes
- A mobile handset sells every **4** minutes
- A portable storage device or pen drive sells every **4** minutes
- A health or beauty product sells every **5** minutes
- A piece of apparel sells every **5** minutes
- A stamp sells every **5** minutes
- A piece of home décor sells every **7** minutes
- A car or bike accessory sells every **7** minutes
- A watch sells every **8** minutes
- A toy sells every **15** minutes
- A fitness & sports item sells every **14** minutes
- A laptop sells every **17** minutes
- A book or magazine sells every **18** minutes
- A home appliance sells every **21** minutes
- A digital camera sells every **23** minutes
- A MP3 player sells every **35** minutes

Smaller cities/towns are very active

### Share of smaller cities/towns

Over the years, eBay India has penetrated deep in the country and now reaches 3,311 metros and non-metro areas. Over 2008-09, online shopping was active in 747 rural towns in India, which were featured in eBay census for the first time, with towns like Bundi (Rajasthan), Thevaram (Tamil Nadu) and Tezpur (Assam) witnessing active buying and selling trends. In fact, 181 rural towns were active entrepreneurship hubs - selling to buyers in India and worldwide with one out of every 10 purchases, as well as one out of every 20 sales. As eBay India census 2011 highlighted, metros contributes 51% of e-commerce transactions, tier 2/3 cities (Bharat) 40% and rural India 9%.

## Appendix 5: Major investments

### Major investments in Indian internet (in descending order of investment amount)

Company	Month	Amount (US\$m)	Investors
Inmobi	Sep 11	200.0	Softbank
Ybrant Digital	Jan 11	48.0	Asia Pacific Capital, Oak Investment Partners,
Yatra Online Pvt	Apr 11	44.5	Norwest Venture Partners, Intel Capital, Valiant Capital Partners
Fashionandyou	Nov 11	40.0	Norwest Venture partners, Intel Capital, Sequoia Capital, Nokia Growth
Snapdeal	Jul 11	40.0	Bessemer Venture Partners, Nexus Venture Partners, Indo-US Venture Partners
Cleartrip	Apr 11	40.0	Concur Partners
Mapmyindia	Jul 11	30.0	Zenrin
Naaptol	Aug 11	25.0	NEA, Canaan Partners, Silicon Valley Bank
TV18 Home Shopping	Jul 11	22.5	SAIF Partners, Network18 and GS Shopping
Consim Info	Oct 11	20.2	Canaan Partners, Mayfield Fund, Bessemer Venture Partners
Flipkart	Jun 11	20.0	Tiger Global
Kaltura	Feb 11	20.0	Nexus Venture partners, Intel Capital
Ixigo.com	Aug 11	18.2	SAIF Partners, Makemytrip.com
Dealsandyou	Nov 11	17.0	Mayfield, Norwest Venture Partners, Intel Capital, Nokia Growth Partners
Exclusively.in	May 11	16.0	Tiger Global, Accel India
Komli	Jan 11	15.0	Norwest Venture Partners, Nexus Venture partners, Helion Ventures
Myntra	Mar 11	14.0	Indo-US Venture Partners, Tiger Global, Accel India, IDG Ventures
MotorExchange	Aug 11	13.0	Tiger Global, Canaan Partners
Yatra Online	Mar 11	12.5	na
Network 18 Media & Investments	Jul 11	12.2	Indo-US Ventures Partners, Nexus Ventures, Bessemer Venture Partners
Snapdeal.com	Jan 11	12.0	Nexus Venture Partners, Indo-US Venture Partners
Suvidhaa Infoserve	Nov 11	12.0	Mitsui & co
JustDial	Jun 11	10.0	SAP Ventures, Sequoia Capital
Bigshoebazaar (Yebhi)	Jul 11	9.0	Catamaran and Nexus
PolicyBazaar	Apr 11	9.0	InfoEdge, Intel Capital
Jivox	Nov 11	8.2	Fortisure Ventures, Opus Capital, Helion Advisors
Quikr	May 11	8.0	Matrix partners, Norwest Venture partners, Nokia Growth partners, Omidyar Network
Zansaar	Feb 12	6.0	Tiger Global, Accel India
Caratlane	Jun 11	6.0	Tiger Global
redBus	May 11	6.0	Helion Ventures, Seedfund, Investus Capital Partners
iProf Learning Solutions	Apr 11	6.0	Kaplan Ventures, Norwest Venture partners, IDG Ventures
Bankbazaar.com	Mar 11	6.0	Walden International
Games2Win	Mar 11	6.0	Clearstone, SVB
Letsbuy	Jan 11	6.0	Helion Ventures, Tiger Global, Accel India
Eko	Jul 11	5.5	Creation Investments Social Ventures
Zovi	Jul 11	5.5	SAIF Partners
Sulekha	Jan 11	5.2	Norwest Venture Partners
Indiaplaza.in	Jul 11	5.0	NEA, Indo-US Venture Partners
Theprivatesales	May 11	5.0	Undisclosed
MotorExchange	Jan 11	5.0	Canaan partners, Epiphany Ventures
Fetise	Dec 11	5.0	Seedfund
Healthkart	Jan 12	5.0	Sequoia Capital, Omidyar
Pepperfry	Dec 11	5.0	Norwest Venture Partners
iStream	Nov 11	5.0	SAIF Partners

Source: Various news articles

Notes



Notes



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CLSA/Credit Agricole Securities changed the methodology by which it derives its investment rankings on 1 January 2012. The stocks covered in this report are subject to the revised methodology. We have made no changes to the methodologies through which analysts derive price targets - our views on intrinsic values and appropriate price targets are unchanged by this revised methodology. For further details of our new investment ranking methodology, please refer to our website.

12/01/2012