

3G Spectrum auction in India

1. What is 3G telephony?

3G indicates a new generation of telecom technology. While 1G networks used analog, 2G (second-generation wireless telephone technology) networks are digital. 3G (third-generation) technology will now enhance mobile phone standards.

2. Advantages of 3G

- 3G helps to simultaneously transfer both voice data (a telephone call) and non-voice data (such as downloading information, exchanging e-mail, and instant messaging). The highlight of 3G is video telephony. The amount of bandwidth needed for 3G services could be as much as 15-20 Mhz, whereas for 2G services a bandwidth of 30-200 KHz is used. Hence, for 3G huge bandwidth is required.
- 3G services will enable video broadcast and data-intensive services such as stock transactions, e-learning and telemedicine through wireless communications.
- The benefits of 3G spectrum will become even more pronounced once Mobile Number Portability (MNP) is implemented. The presence of 3G offerings will allow operators to retain their premium subscribers and attract subscribers from competing networks; FULL FORM (ARPU) for these subscribers are nearly four times the industry ARPUs, resulting in significantly higher profitability.

3. 3G Auction Process in India

The Government of India intends to allot spectrum blocks in the 2.1GHz, 2.3GHz and 2.5GHz bands through a fair and transparent auction process. For this they planned separate auctions for 2.1GHz (3G Auction) and 2.3GHz and 2.5GHz bands (BWA Auction). Afterwards, allotment had to be carried out on service-area wise basis (22 in total), though there would be a simultaneous auction for all service Areas. N M Rothschild and Dot Econ are the Auctioneers advising the Government on the process. Auction planned be conducted in four stages – Invitation (applications), Pre-Qualification (Evaluation), Auction (bidding), Grants (approval). 3G Upto 4 blocks of 2X5MHz in the 2.1GHz band to be auctioned 1 block reserved for BSNL/ MTNL (PSU). BWA 4 blocks of unpaired 20MHz in the 2.3 and 2.5GHz bands had to be allotted in each of the 22 service areas 1 block (in the 2.5GHz band) allotted for BSNL/ MTNL.

Government decided allocation of spectrum to the winning bidders within 15 days of deposit of the final bid amount and within 30 days of the close of auction. Foreign

operators allowed to bid as 100% foreign entities, however spectrum will be allotted only to an Indian subsidiary after it acquires a UAS license.

Stage II: Single-stage bidding (Assignment Stage) - to assign specific frequencies in each service area to winners from Clock Stage which involves price paid by successful bidder will be the sum of: winning price from the Clock Stage for that service area; and incremental bid placed by the Bidder in the Assignment stage. Winning price had to be determined by the maximum price which “clears” the demand for blocks in each service area at the same time. Incremental bid placed by winning Bidders will reflect the value placed on specific frequencies.

4. Final results of Auction

Service Area	Successful Bidders	Winning Price (in billions)
Delhi	Vodafone, Bharti, Reliance	33.16 billion
Mumbai	Reliance, Vodafone, Bharti	32.47 billion
Karnataka	Tata, Aircel, Bharti	15.79 billion
Tamil Nadu	Bharti, Vodafone, Aircel	14.64 billion
Andhra Pradesh	Bharti, Idea, Aircel	13.73 billion
Maharashtra	Tata, Idea, Vodafone	12.57 billion
Gujarat	Tata, Vodafone, Idea	10.76 billion
Kolkata	Vodafone, Aircel, Reliance	5.44 billion
UP (West)	Bharti, Idea, Tata	5.14 billion
UP (East)	Aircel, Idea, Vodafone	3.84 billion
Punjab	Idea, Reliance, Tata, Aircel	3.22 billion
Rajasthan	Reliance, Bharti, Tata	3.21 billion
Kerala	Idea, Tata, Aircel	3.12 billion
Madhya Pradesh	Idea, Reliance, Tata	2.58 billion

Haryana	Idea, Tata, Vodafone	2.22 billion
Bihar	S Tel, Bharti, Reliance, Aircel	2.03 billion
West Bengal	Bharti, Reliance, Vodafone, Aircel	1.23 billion
Orissa	S Tel, Aircel, Reliance	969.8 million
North east	Aircel, Bharti, Reliance	423 million
Assam	Reliance, Bharti, Aircel	414.8 million
Himachal Pradesh	Bharti, S Tel, Idea, Reliance	372.3 million
Jammu & Kashmir	Idea, Aircel, Reliance, Bharti	303 million

Auction of 3G spectrum closed in over Rs 670 billion for the Government, while wireless broadband spectrum is expected to fetch around Rs 200 billion.

The successful bidders will get the service available from September 1st, 2010.

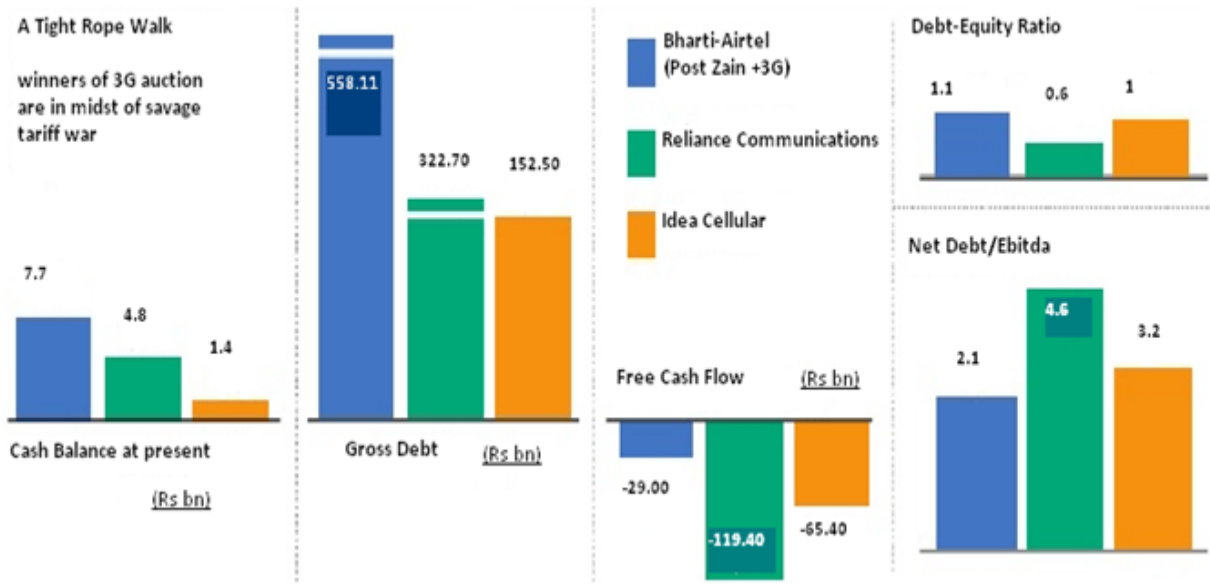
Net margins of operators that have acquired 3G spectrum will be strained over a longer period of three to four years. This will be because of increased capital charges (the interest outgo on account of debt raised for 3G network rollout, and the amortization of 3G spectrum charges). This would place additional pressure on operators' bottom lines, especially for relatively small players.

As no single telecom layer acquire the rights for 3G spectrum, there always remains a healthy competition with different range of services. With this, number of players in the mobile services sector could well reduce to around eight to a circle, from the current level of 10-12.

5. Raising & Managing Funds for 3G

- Banks may redeem mutual funds close to Rs 200 to Rs 250 billion to meet their 3G borrowing requirement alone. Banks had investments worth Rs 1119.56 billion in mutual funds, Rs 247.66 billion in instruments issued by public financial institutions and investments worth Rs 335.33 billion in corporate bonds. Banks had made these investments when they had surplus funds. Now that the 3G borrowing requirements have cropped up, they have started redeeming their investments.
- As per estimates about Rs 1000 billion will move out of the banking industry by mid-June to fund the 3G spectrum buy and first installment of corporate advance tax.

- Idea Cellular raised about 35 billion rupees (\$740 million) from domestic banks and financial institutions.
- Tata Teleservices, 26% owned by Japan's NTT DoCoMo, had raised about 46 billion rupees (\$973 million) from domestic market sources.
- Bharti Airtel, had raised 85 billion rupees through an onshore six-year syndicated loan facility to fund 3G spectrum, complained that the high cost of bidding had thwarted its ambitions of securing a pan-Indian 3G footprint.
- Telecommunications companies have raised around \$4 billion rupees via short-term debt and syndicated loans, a large chunk of it this week, to help fund their 3G spectrum purchases.



6. THE FUTURE

4G in India

Long term evolution (LTE) technology, or 4G, allows more data to be transferred over the same bandwidth used by 3G but at higher speeds. The Telecom Regulatory Authority of India (TRAI) will come out with a consultation paper on fourth-generation (4G) technology in due course. Compared with a speed of 3 megabits per second (Mbps) offered by third-generation services, LTE can offer speeds up to 10Mbps. As a result, service providers should be able to get more data transfer out of their network and possibly lower the cost to run their networks. LTE also allows operators to introduce new exciting services such as HD (high definition) video blogging, HD video on demand, media mobility, online gaming, and brings a significantly improved business proposition with 2.5 times higher capacity, lower cost per bit and media mobility. Globally, LTE is under development with a number of international players, including KDDI in Japan and Verizon in the US announcing trials on their network. Around 59 operators have committed to LTE launches in 28 countries with up to 22 LTE networks in service by 2010 and 37 LTE networks in service by 2011.