Bharti Airtel Ltd

(BRTI.BO / BHARTI IN)

Rating	**OUTPERFORM***
Price (01 Mar 11, Rs)	338.30
Target price (Rs)	415.00[1]
Chg to TP (%)	22.7
Market cap. (Rs mn)	1,284,704 (US$ 28,641)
Enterprise value (Rs mn)	1,866,984
Number of shares (mn)	3,797.53
Free float (%)	32.60
52-week price range	373.15 - 255.00

**Stock ratings are relative to the relevant country benchmark.*
[1]Target price is for 12 months.

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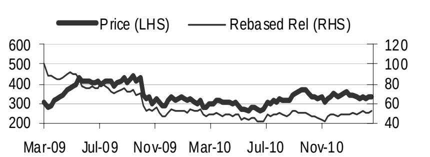
COMPANY UPDATE

Fortune favours the bold

- **Management targets not aggressive:** Based on our analysis of Bharti's Africa operations, management's targets for this business are not aggressive. We believe its strategy is to grow the business largely in line with the industry, while taking EBITDA margins to the levels of other African peers.
- **Not after market share gains:** Management's US$5 bn revenue target implies a CAGR of 11.3% (FY3/10-FY3/13) – broadly the midpoint of consensus expectation (5-16%) for large African peers (MTN, Millicom and Vodacom). However, any divergence in growth could be largely a reflection of the players' geographical diversity. Lack of significant revenue market share gain also implies capex could remain low. Further, margins of 40% could be achieved by FY3/13, if Bharti can bring its SG&A expenses (39% of revenue) to a level similar to its African peers (24-26%).
- **Current expectations low; risks to the upside:** While we believe that the targets are not aggressive, there is a risk of slippage either on timing or on investments required. In our model, we assume higher capex (36% higher than management estimate) and higher interest costs (US$1.1 bn over three years) than what management has indicated. We believe the market is more negative; so, any near-term improvement (either on margins or revenue growth) and more details about African performance could result in robust share price performance.
- **Valuation:** At 6.7x FY3/12E EV/EBITDA, Bharti is trading at the low end of its historical trading range. The regulatory environment could lead to volatility in share prices over the near term. However, with stable competition and strong growth in India over the near term, coupled with improving visibility in Africa, we stay positive on the stock with OUTPERFORM.

Share price performance



The price relative chart measures performance against the BOMBAY SE 30 SHARE SENSITIVE index which closed at 18446.5 on 01/03/11
On 01/03/11 the spot exchange rate was Rs44.86/US$1

Performance Over	1M	3M	12M
Absolute (%)	9.0	-3.5	21.1
Relative (%)	6.4	3.9	7.8

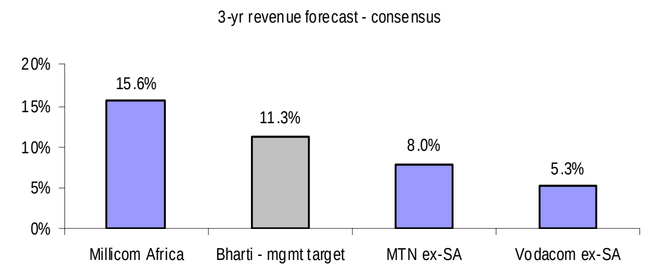
Financial and valuation metrics

Year	3/10A	3/11E	3/12E	3/13E
Revenue (Rs mn)	418,472.0	612,827.5	728,464.5	842,072.6
EBITDA (Rs mn)	167,633.0	216,094.9	284,999.7	348,843.4
EBIT (Rs mn)	104,801.0	111,302.6	171,022.9	224,051.6
Net income (Rs mn)	91,638.0	63,736.3	102,241.9	136,104.3
EPS (CS adj.) (Rs)	24.16	16.80	26.96	35.88
Change from previous EPS (%)	n.a.	0	0	0
Consensus EPS (Rs)	n.a.	17.9	22.7	29.1
EPS growth (%)	8.2	-30.4	60.4	33.1
P/E (x)	14.0	20.1	12.6	9.4
Dividend yield (%)	0.3	1.6	3.3	5.1
EV/EBITDA (x)	7.8	8.6	6.7	5.3
P/B (x)	3.0	2.8	2.4	2.2
ROE	25.2	14.4	20.7	24.3
Net debt/equity (%)	5.4	108.4	102.8	84.8

Source: Company data, Thomson Reuters, Credit Suisse estimates

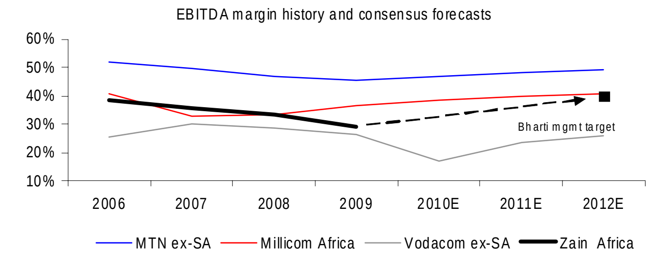
Focus charts and table

Figure 1: Bharti management's growth target not different from consensus estimates for competitors



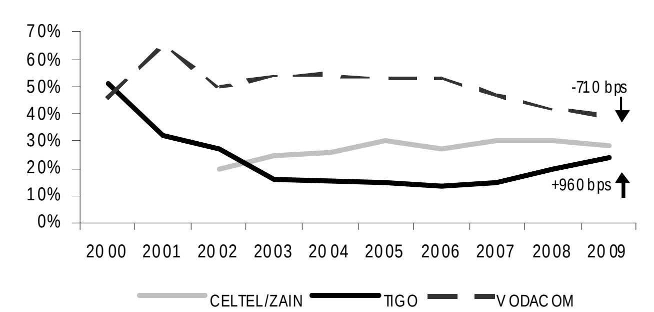
Source: Company data, Thomson Reuters, Credit Suisse estimates

Figure 2: Management targets margins to recover to historical levels



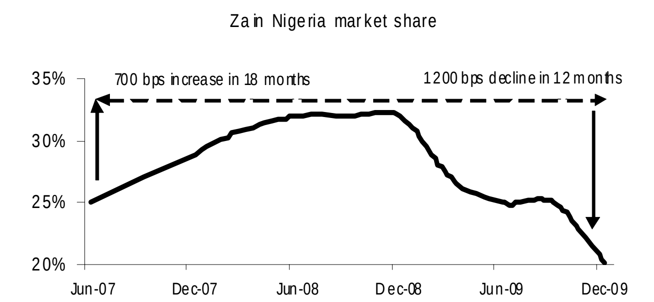
Source: Company data, Thomson Reuters, Credit Suisse estimates

Figure 3: Market share movements could be swift, as seen in the case of Tigo in Tanzania …



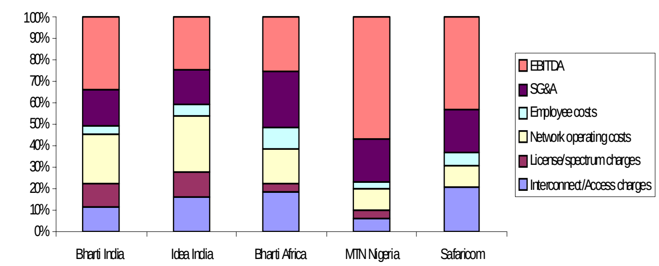
Source: Company data, Credit Suisse estimates

Figure 4: … and Zain in Nigeria



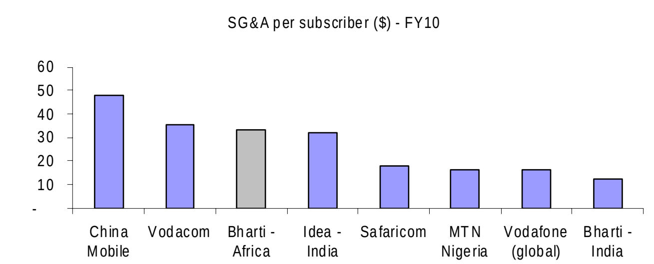
Source: Company data, Credit Suisse estimates

Figure 5: SG&A, employee costs and network opex are key opportunities to improve margins



Source: Company data, Credit Suisse estimates

Figure 6: SG&A cost structure higher than African peers



Source: Company data, Credit Suisse estimates

Figure 7: Enough cash generation to sustain any upside risks to Africa capex or interest costs (despite our already high estimates for these items)

(US$ mn)	FY3/11E	FY3/12E	FY3/13E	Cumulative
EBITDA (India+Africa)	4,802	6,333	7,752	
Interest payments (India+Africa)	965	1,246	1,293	
Cash taxes (India+Africa)	325	513	783	
Cash which can be deployed	3,512	4,574	5,675	13,761
Estimated capex (India)	2,808	2,626	2,394	7,828
Estimated capex (Africa)	930	1,548	1,335	3,813
Surplus	704	1,948	3,281	5,933

Source: Company data, Credit Suisse estimates

Fortune favours the bold

Bharti Africa CEO Mr Manoj Kohli has stated that he targets US$5 bn in revenue by FY3/13, with EBITDA margin reaching 40% and capex US$800-1000 mn. In this note, we examine if these targets are reasonable. First, we believe the top-line target does not require a significant market share increase. Second, while the margin targets are challenging, we see a number of opportunities to improve the cost structure from the current level – with potential key savings in SG&A, employee costs and network opex.

Risks are not on strategy, but execution

So, while we agree that the targets for Africa operations are not easy to achieve for Bharti, we believe the risks are on execution rather than strategy. Our valuation of negative Rs31 per share for the Zain acquisition adequately captures the downside involved in the acquisition, in our view. We maintain our OUTPERFORM on Bharti and our target price of Rs415.

Could Bharti achieve US$5 bn in revenue by FY3/13?

Management targets do not require market share gains

A look at the consensus expectations for other major listed African telecoms indicates that expectations for Bharti are in line with the peers' growth estimates. So, we believe that Bharti targets to grow in line with the industry rather than gain revenue market share.

We believe Bharti's African operations has some inherent advantages in terms of: (1) early mover in nine countries and (2) reasonable quantity of spectrum. We also believe that Bharti's acquisition should remove one of the biggest obstacles for these operations – access to adequate capital. History shows that the African telecom market presents adequate opportunities to gain market share for companies with good quality assets, strong processes and systems.

Further, we believe that a few characteristics of the African market could favour Bharti. These include (1) regulation-driven move towards lower interconnect charges, (2) poor network coverage and (3) multiple SIMs with users.

Margin improvement is the key

The most debated of management's FY13 targets are the ones on margins (1,200 bp EBITDA margin increase) and capex (US$800-1000 mn in annual capex).

Management expects margins to rebound to historical levels and in line with peers

We believe that Bharti's capex targets should be viewed using the same prism as its revenue targets. Bharti does not factor in significant revenue market share gains and so, we conclude that consensus concerns about Bharti turning into a 'price aggressor' could be wrong. This would not lead to a disproportionate increase in traffic and so could allow for lower capex. Further, we also believe that Bharti could get significant (over 50%) discount on its electronics capex.

We believe management largely expects margins to rebound to historical levels (Zain Africa earned 38% margins in 2006). This is also realistic, given that Bharti's African operations currently spend 39% of sales on SG&A vs sub-26% for other African operators.

Key risks are currency and credit costs

The un-hedged US$9 bn loan and volatility in African currencies are key risks

Bharti has taken a loan of US$9 bn to fund its purchase of these African assets. We believe that the African currency exposure is largely un-hedged and so could suffer if currencies turn volatile. Further, the loan funding is tied to six-month LIBOR (195 bp over six-month LIBOR) and could become expensive if LIBOR rises.

Further, there would be risks from operating in emerging economies of Africa. The regulatory framework is at a nascent stage, and there could be political and security risks. Further, tax laws and laws governing profit repatriation to a foreign company could also be evolving.

Valuation table

Figure 8: **Asian mobile valuation summary**

			Close	Mkt cap		Target	Normalised P/E		EV/EBITDA		P/B	
01-Mar-11	**Ticker**	**Ccy**	**price**	**(US$ bn)**	**Rating**	**price**	**FY3/12 11E**	**FY3/13 12E**	**FY3/12 11E**	**FY3/13 12E**	**FY3/12 11E**	**FY3/13 12E**
AIS	ADVANC TB	Bt	83.0	8.1	N	95.0	10.3	9.8	4.9	4.9	5.9	6.0
AXIATA	AXIATA MK	RM	5.0	13.9	O	6.0	14.6	12.7	6.8	6.1	2.0	1.9
Bharti Airtel	**BHARTI IN**	**Rs**	**338.3**	**28.4**	**O**	**415.0**	**12.6**	**9.4**	**6.9**	**5.5**	**2.4**	**2.2**
China Mobile	941 HK	HK$	74.8	192.5	O	116.0	9.7	9.0	3.8	3.3	2.2	2.0
DiGi	DIGI MK	RM	26.8	6.9	O	29.6	16.0	15.0	8.1	7.7	15.5	15.4
Excelcom	EXCL IJ	Rp	5,850.0	5.7	O	6,700.0	13.1	11.4	5.6	5.0	4.3	3.5
FarEasTone	4904 TT	NT$	42.7	5.3	N	40.0	16.5	15.7	5.2	5.1	1.8	1.7
Globe	GLO PM	P	697.0	2.1	N	800.0	10.8	11.0	4.3	4.1	2.0	1.9
Idea Cellular	**IDEA IN**	**Rs**	**59.1**	**4.1**	**O**	**85.0**	**13.7**	**9.2**	**5.8**	**4.5**	**1.4**	**1.3**
Indosat	ISAT IJ	Rp	5,100.0	3.1	O	7,900.0	23.2	13.6	5.2	4.4	1.5	1.4
LGT	032640 KS	Won	5,670.0	2.6	N	8,500.0	5.6	4.8	5.0	4.4	0.6	0.6
Maxis	MAXIS MK	RM	5.5	13.5	O	6.1	17.6	17.4	10.3	10.2	4.7	5.3
M1	M1 SP	S$	2.4	1.7	N	2.7	13.2	12.5	7.0	6.8	7.1	6.4
NTT DoCoMo	9437 JP	¥	156,400.0	83.7	N	150,000.0	12.6	12.3	4.0	3.8	1.4	1.3
RCOM	**RCOM IN**	**Rs**	**90.4**	**4.1**	**N**	**120.0**	**6.8**	**5.3**	**5.3**	**4.3**	**0.4**	**0.4**
SKT	017670 KS	Won	163,000.0	11.7	N	183,000.0	8.5	7.9	3.6	3.5	1.1	1.0
SmarTone	315 HK	HK$	24.2	1.6	U	15.6	15.5	13.8	9.4	7.7	4.5	4.5
StarHub	STH SP	S$	2.6	3.5	U	2.4	13.8	13.5	7.6	7.4		
TAC	DTAC TB	Bt	41.5	3.2	N	45.0	10.6	12.9	3.6	3.9	1.4	1.4
Average							**11.8**	**10.9**	**4.8**	**4.3**	**2.4**	**2.3**

Source: Bloomberg, Company data, Credit Suisse estimates

Could Bharti achieve US$5 bn in revenue by FY3/13?

Bharti Africa CEO stated he expects the African business to reach a revenue run rate of US$5 bn by FY3/13. We find that these revenue targets are in line with growth rates of other large pan-African telecoms (adjusted for geographical divergence). Hence, Bharti's management is not factoring in a significant revenue market share gain in its forecasts.

African operations have a few inherent advantages which Bharti can exploit

We agree that Bharti is new to African markets and hence could face some teething delays in its plans. We also agree that Bharti's track record outside India has not been great. However, we argue that Bharti's African operations has some inherent advantages: (1) early mover in nine countries and (2) reasonable quantity of spectrum. We also believe that Bharti's acquisition would remove one of the biggest obstacles for this business – access to adequate capital. Volatility in market share in African countries also indicate that this market could present adequate opportunities to companies with good quality assets and strong processes and systems.

Further, we believe that a few characteristics of the African market could favour Bharti. These include (1) regulation-driven move towards lower interconnect charges, (2) poor network coverage and (3) multiple SIMs with users. We thus believe that Bharti should be able to reach its target of US$5 bn in revenue in the next three years.

Management guidance aka CEO's personal target

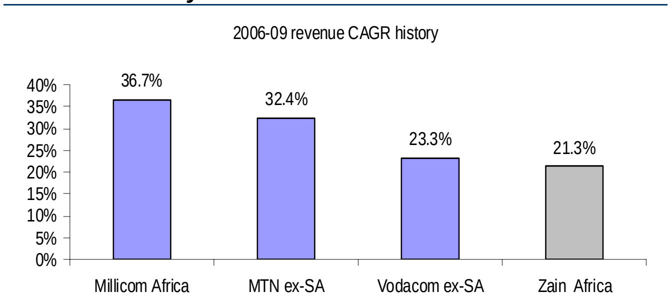
Mr Manoj Kohli stated in July 2010 that he expects the African business to reach an annual revenue run-rate of US$5 bn with 100 mn subscribers (from its US$3.6 bn p.a. run-rate and 40 mn current subscribers) and EBITDA of US$2 bn. He also said that capex p.a. should stay under US$1 bn. The company later clarified that these were not formal guidance but CEO's personal targets. However, we believe that these numbers give a flavour of management's three-year goal.

Management revenue targets not aggressive

Management growth targets are in line with consensus expectations for peers

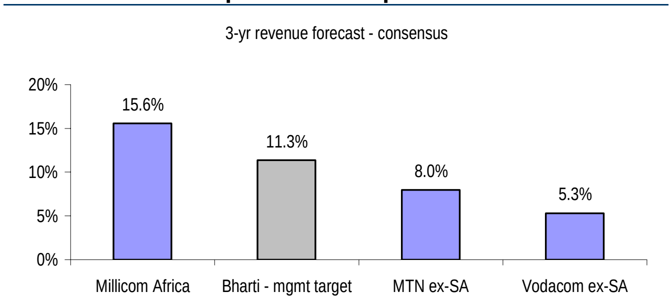
Comparing Bharti's revenue targets with consensus expectations for other pan-African telecom players, we find that these targets are broadly in sync with expectations for other players. We recognise that Bharti management's target is to grow its business faster than consensus expectations for MTN and believe that this hinges on Bharti being able to come up with a quick action plan to return to growth – especially in markets such as Nigeria where it lost market share and revenue in 2008/09.

Figure 9: Zain has lagged peers on top-line growth in Africa in recent years



Source: Company data

Figure 10: Bharti management's growth target in line with what consensus expects for competitors



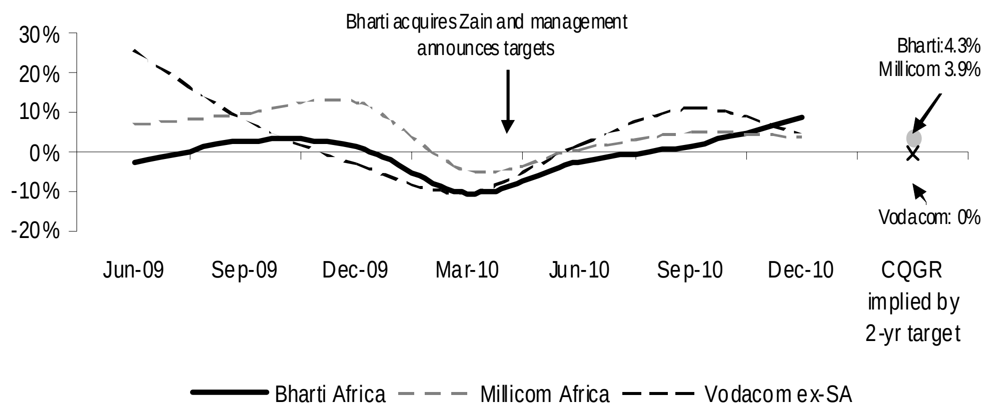
Source: Company data, Thomson Reuters

Bharti's revenue growth trajectory has rebounded strongly post acquisition

The following chart on recent quarterly performance of African operators shows that Bharti's revenue growth profile has improved in line with peers after the acquisition and that it in fact overtook Millicom and Vodacom in the December 2010 quarter. Bharti management's target requires the company to deliver a CQGR similar to that expected for Millicom (by consensus) over the next two years.

Figure 11: **QoQ revenue growth (in US$)**

Bharti needs to grow in line with Millicom to reach management targets



Note: MTN reports only half yearly numbers, with the last reported period being June 2010.
Source: Company data, Credit Suisse estimates

In its recent earnings announcement, Millicom's management said that although growth remains strong in Africa, there was pricing pressure in recent months. Management stated that the elasticity for on-net traffic is very strong in the company's customer base. Off-net price cuts are a recent phenomenon (only in 4Q CY10) and hence the company is monitoring the elasticity on this segment.

Nigeria could be a key growth driver

Different country exposures could lead to some divergence across company growth rates

A look at the country-wise estimates for the companies shows that Nigeria for MTN and Lesotho/DRC for Vodacom could be biggest growth drivers over the next three years (based on CS estimates). Our growth estimates for Bharti (Zain) are driven by Nigeria and Zambia.

Figure 12: **Key growth driving countries for African telcos (based on CS estimates)**

	Zain			MTN			Vodacom		
	Contribution to revenues	3Y forecast CAGR	Contribution to 3Y growth	Contribution to revenues	3Y forecast CAGR	% contribution to 3Y growth	Contribution to revenues	3Y forecast CAGR	% contribution to 3Y growth
Nigeria	35.6%	15.6%	46.0%	57.7%	12.0%	72.0%			
Congo Brazzaville	5.7%	9.9%	4.4%	2.3%	15.5%	3.8%			
Gabon	7.0%	7.9%	4.2%						
Zambia	8.2%	15.4%	10.5%	1.1%	29.2%	3.8%			
Tanzania	7.4%	5.7%	3.2%				43.1%	-1.3%	-21.2%
Niger	4.3%	21.9%	8.3%						
Burkino Faso	3.4%	14.5%	4.1%						
Malawi	4.2%	8.7%	2.8%						
Chad	3.6%	9.8%	2.8%						
Sierra Leone	1.2%	7.8%	0.7%						
Madagascar	2.1%	6.7%	1.1%						
Uganda	2.7%	13.1%	2.9%	4.9%	10.9%	5.5%			
DRC	8.8%	2.7%	1.8%				33.8%	3.8%	52.3%
Kenya	4.2%	3.5%	1.1%						
Ghana	1.5%	39.5%	6.3%	9.8%	5.6%	5.3%			
Botswana				1.1%	6.1%	0.6%			
Rwanda				1.0%	14.8%	1.5%			
Swaziland				0.4%	8.5%	0.3%			
Cote D'Ivoire				6.4%	-1.1%	-0.7%			
Cameroon				6.3%	-0.6%	-0.3%			
Conakry				1.5%	18.5%	3.0%			
Bissau				0.7%	3.5%	0.2%			
Benin				2.8%	8.7%	2.4%			
Liberia				1.2%	9.5%	1.1%			
Mozambique							13.9%	-2.0%	-10.7%
Lesotho							9.2%	18.4%	79.6%
Sudan				3.0%	4.4%	1.3%			
Total Africa ex-South Africa	**100.0%**	**12.4%**	**100.0%**	**100.0%**	**9.8%**	**100.0%**	**100.0%**	**2.5%**	**100.0%**

Source: Company data, Credit Suisse estimates

Subscriber/ARPU targets are irrelevant

Sceptics have seized on Bharti's target of 100 mn customers by FY3/13 as a sign of significant market share gain. We disagree.

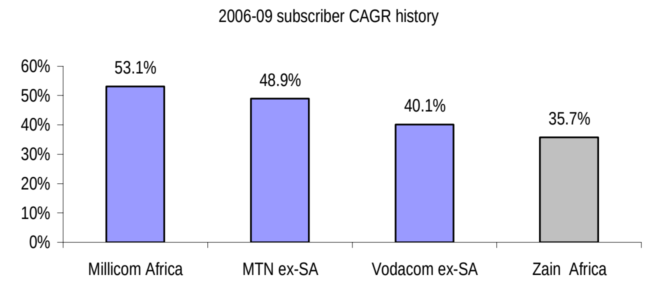
Multiplicity of SIM cards reduces relevance of subscriber numbers

Instead, we argue that subscriber numbers are increasingly becoming irrelevant with the number of multiple SIMs. By industry/management estimates, the actual number of subscribers in Africa could be half the number of active SIM cards. We also note that Bharti wrote off 13% of Zain's subscriber base after the acquisition to ensure that the new subscriber numbers match its more conservative subscriber recognition norms.

Looking at data from India, we find that active subscribers as a proportion of reported subscribers vary between 30% and 90% across operators. Clearly, an aggressive operator could report higher subscriber base while disregarding the lower active subscriber number.

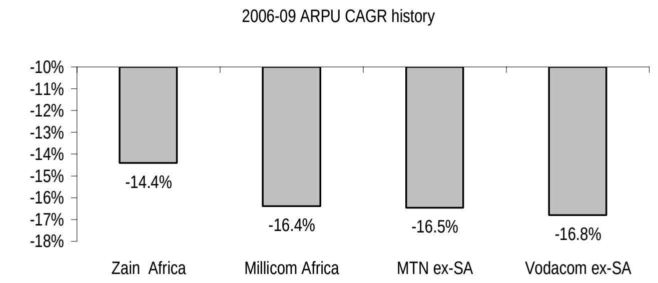
Instead, we believe that investors should focus on revenues, margins and capex numbers, as they are more reflective of actual operations of the company.

Figure 13: Historical subscriber growth rates for African telcos



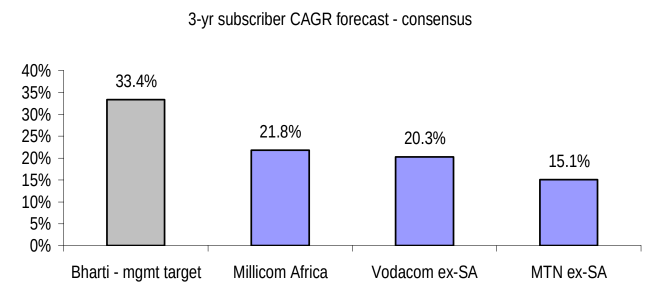
Source: Company data

Figure 14: Historical ARPU growth rates for African telcos



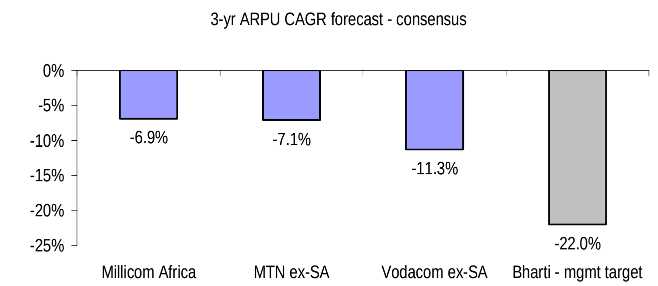
Source: Company data

Figure 15: Subscriber growth estimates (consensus)



Source: Company data, Thomson Reuters

Figure 16: ARPU decline estimates (consensus)



Source: Company data, Thomson Reuters

But is there a case to build market share gains?

While we have shown above that Bharti management's targets do not imply a market share gain, one could still argue that Bharti could increase market share, given the company's impressive execution history in India. We look at this from both top-down and bottom-up basis.

One significant advantage on a top-down basis

On a top-down basis, we believe that there are only three advantages which a telecoms operator could enjoy:

(1) Time to market

(2) Access to capital

(3) Regulatory tilt

Entry of Bharti can help address the issue of access to capital for African operations

While Bharti's acquisition of Zain does not change criterion 1 or 3, it does have a significant impact on the company's access to capital. Bharti could generate close to US$10 bn of free cash over the next three years and theoretically invest all of this to build its African franchise. While competitors such as MTN could be well funded, Bharti could have significant advantage in a few other countries such as Tanzania and Kenya. Also, we note that while Bharti can impact MTN in its home turf in Africa, MTN will not be able to impact Bharti in India.

Figure 17: **Market leaders in countries where Zain is currently weak**

Country	Revenue contribution to Bharti Africa	Market leader /Key competitor	% market share 2009
Nigeria	36%	MTN	45.0%
Tanzania	7%	Vodacom	39.0%
Kenya	2%	Safaricom	83.0%
Uganda	3%	MTN	50.0%
Madagascar	4%	Orange	40.0%
Ghana	2%	MTN	55.0%

Source: Company data, Credit Suisse estimates

But what to make of Bharti's own record outside India?

Bharti has been successful in Seychelles, but not so much in Sri Lanka

Outside India, Bharti has invested in Sri Lanka, Bangladesh and Seychelles (after the Zain acquisition). We note that Bharti's performance in these markets have been mixed.

Figure 18: **Bharti's international mobile ventures other than Zain**

Country	Time of entry	Acquired/ Greenfield	Details	Market share	
				At time of entry	Current
Sri Lanka	Jan-09	Greenfield	Mobile penetration at the time of Airtel's entry was around 50%. Market leader Dialog had 55% market share.	0%	3%
Bangladesh	Jan-10	Acquired	Acquired 70% in Warid Telecom for US$300 mn, a three year old operation with 6% market share	6%	6%
Seychelles	Aug-10	Acquired	Acquired market leader Telecom Seychelles (57% market share) for US$62 mn. Telekom Seychelles was earlier held by a group company of Bharti Enterprises.	57%	na

Source: Company data, Credit Suisse estimates

However, we note that Bharti was a new entrant in Sri Lanka and hence has a significant disadvantage in terms of time to market. As we highlighted in our report, "The night is darkest before dawn" (8 July 2010), late entrants are usually not able to make a significant impact on market leaders.

Figure 19: **Impact of new competition on sector leadership**

Country	Date of new competitor entry	New competitor	Top-three players: At the time of new entry	Top-three players: Three years later
Bangladesh	2007	Warid Telecom (not listed)	Grameenphone	Grameenphone
			Axiata	Banglalink
			Banglalink (not listed)	Axiata
Brazil	2002	Oi	Vivo	Vivo
			Telefónica Italia Movil	Telefónica Italia Movil
			Claro (not listed)	Claro
Egypt	2006	Etisalat	Mobinil	Mobinil
			Vodafone	Vodafone
				Etisalat
Greece	1998	Cosmote (mobile arm of OTE)	Panafon (not listed)	**Cosmote**[1]
			STET (not listed)	Panafon
				STET
HK	1996	Mandarin Communications, New World, P Plus, Peoples Telephone	CSL	Hutch
			Smartone	CSL
			Hutch	Smartone
Indonesia	2007	Hutch	Telkomsel	Telkomsel
			Indosat	Indosat
			Excelcom	Excelcom
Nigeria	2007	Etisalat	MTN	MTN
			Zain	Zain
			Globacom	Globacom
Pakistan	2005	Telenor, Warid	Mobilink (not listed)	Mobilink
			Ufone (not listed)	**Telenor**[2]
			Zong (not listed)	Ufone
Poland	2009	Play Mobile (not listed)	TPSA	TPSA
			Vodafone	Vodafone
			Deutsche Telecom	Deutsche Telecom
Thailand	2003	Hutch	AIS	AIS
			TAC	TAC
			Orange	Orange
Ukraine	2006	Vimpelcom	Kyivstar (not listed)	Kyivstar
			MTS	MTS
			Turkcell	Turkcell

1) Cosmote was the mobile arm of the incumbent dominant fixed-line player OTE.
2) Telenor Pakistan took advantage of poor investments by many incumbents. The company invested heavily getting the second best network footprint within two years of launch, surpassing most incumbents, some of them with more than 10 years of operations.
(Cases where new entrants were able to break into top three are highlighted in bold.)
Source: Company data, Credit Suisse estimates

In Bangladesh, Bharti acquired an existing operator (Warid) in January 2010, but the rebranding to Airtel happened only in December 2010. Warid's market share in Bangladesh had peaked at 5.8% a few months prior to the acquisition and was on a decline. After the acquisition, the market share bottomed out at 5.3% in January 2010 and has been rising ever since (reaching back to 5.9% by January 2011).

The acquisition in Seychelles is recent (August 2010). However, the Seychelles operations was earlier held under a group company of Bharti Enterprises and has been offering mobile services since 1998. Starting GSM three years after the incumbent (Cable and Wireless), Airtel gained market share to become the dominant operator (57% market share at the time of acquisition last year). The company has also led the market in a number of initiatives – importantly, the launch of prepaid services in 1999 and 3G services in 2007.

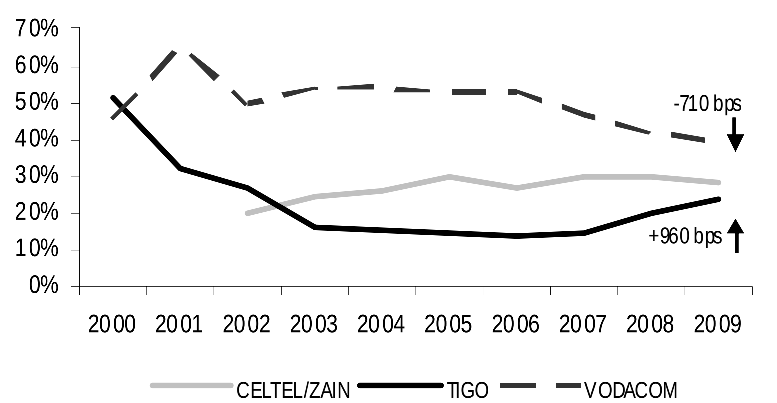
African markets do exhibit a volatility in market share

A combination of differentiated pricing and network coverage has earlier worked in African markets in shifting market shares.

A combination of differentiated pricing and network coverage has earlier worked in African markets in shifting market shares

- **Tigo in Tanzania (network expansion, pricing):** Tigo (earlier known as Mobitel and Buzz), one of the incumbent operators in Tanzania, lost market share to new entrants between 2000 and 2003. In 2006, Millicom acquired full control by buying out equity partners and rebranded the company to Tigo. The company gained share in 2007-09, driven by (1) investment in network capacity (2) investment in direct salesforce and (3) a widely publicised sharp reduction in on-net call tariffs (from Tsh3 to Tsh1 per min)

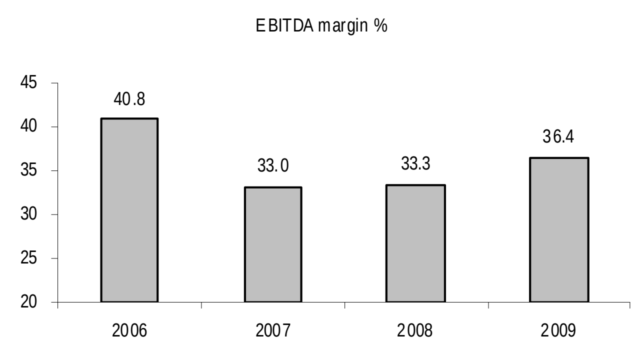
Figure 20: **Tigo in Tanzania gained 1,000 bp subscriber share in two years – with a focus on being the 'price leader'**



Source: Tanzania Communications Regulatory Authority, Credit Suisse estimates

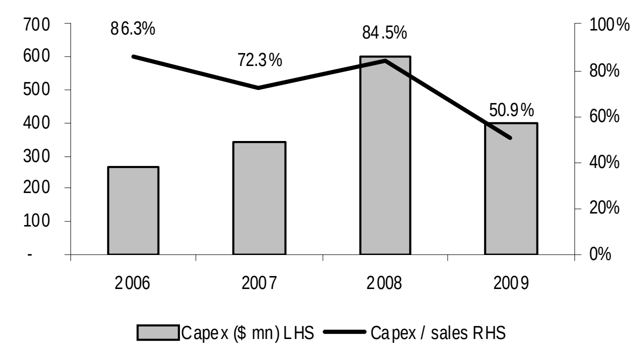
Clearly, a change in management helped Tigo regain market share sharply. We note that this was not done at the expense of margins – Tigo's EBITDA margins expanded 440 bp over this period. The company stepped up its capex during 2007 and 2008.

Figure 21: **After a margin decline in 2007, Millicom saw a margin increase with market share gains in 2008 and 2009**



Source: Company data, Credit Suisse estimates

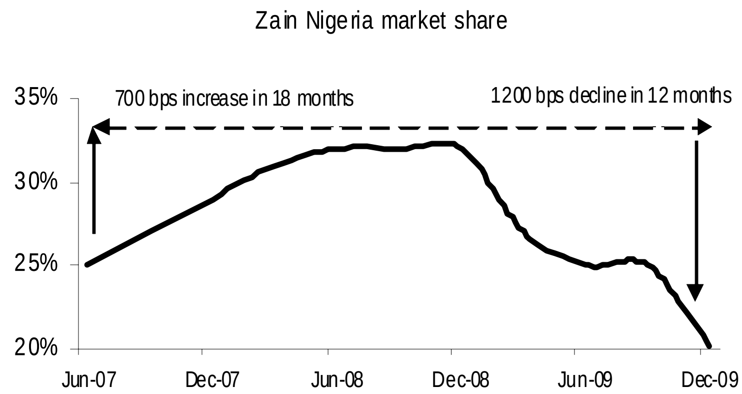
Figure 22: **Capex intensity was high during the years of market share gain**



Source: Company data, Credit Suisse estimates

- **Celtel (Zain) in Nigeria (network coverage):** Celtel (later rebranded as Zain) gained a 700 bp market share in 2007-08, moving ahead of Glo to become the No. 2 operator. After Zain's acquisition in mid-2005, the company stepped up network rollout by investing US$1 bn over two years (similar amount as the market leader MTN) towards improving coverage and adding fibre backbone. The company also invested in expanding its distribution network. However, we note that the following months also saw Zain lose market share significantly given: (1) the company failed to persist with network investments (in fact, the parent company bought back shares for over US$2 bn when many African competitors were investing similar amounts in network enhancements) and (2) the possible undermining of confidence of local management teams with promoters clearly looking for an exit.

Figure 23: Zain Nigeria's market share movement

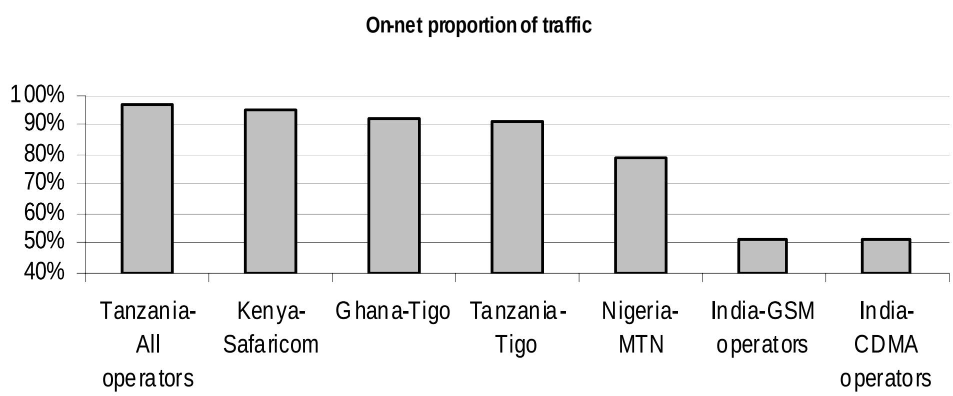


Source: Company data, NCC

Mobile traffic gives some pointers to the key issues

We note that traffic distribution in African mobile networks is highly asymmetric, with a greater concentration in on-net calls vs off-net calls.

Figure 24: Distribution of traffic is skewed towards on-net in Africa



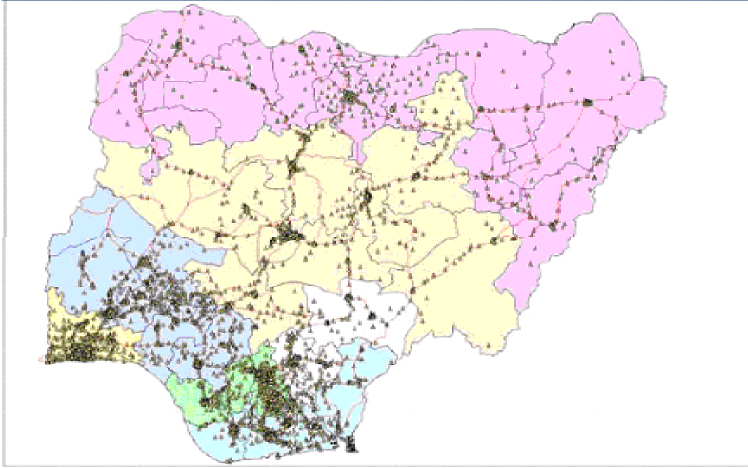
Source: Company data, Credit Suisse estimates

We believe there could be two reasons behind this asymmetry:

1. Network coverage

Our discussions with Nigerian telecom regulator suggest that operators do not have uniform network coverage in all areas. Thus, subscribers use different SIM cards to talk to people in different areas.

Figure 25: MTN's Nigeria network footprint

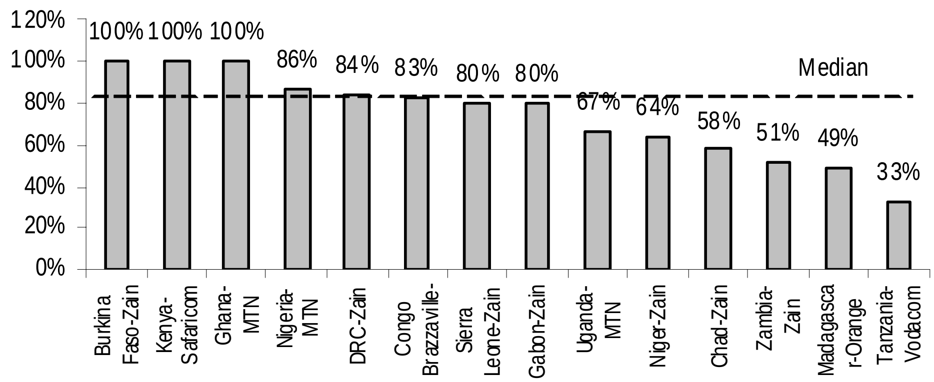


Source: Company data

2. Significant gap between on-net and off-net tariff rates

Median gap between on-net and off-net tariffs in African countries could be around 20%.

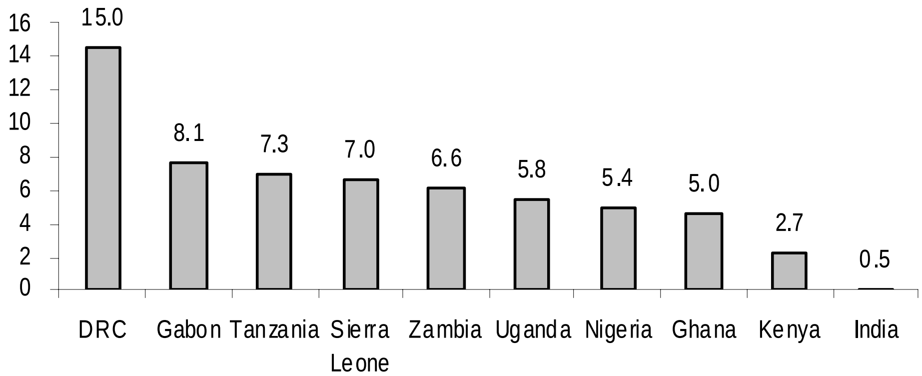
Figure 26: On-net tariffs as a % of off-net rates (peak) in Bharti's African markets



Note: Tariffs of market-leading operators in each of the markets is considered above.

Source: Company data, Credit Suisse estimates

Figure 27: **Termination rates in US cents per min**



Source: Company data, Country telecom regulators, Credit Suisse estimates

What is the path going forward?

First, we note that regulators across countries are working on reducing the termination rates. Nigeria, Kenya and Tanzania – together accounting for ~50% of sales – have already announced a schedule of decreasing termination rates over the next few years.

Termination rates are on the decline across countries

Figure 28: **Glide path for termination rates**

Country	Description
Nigeria	Termination rates were reduced from N11 per min to N8.2 per min from Jan-10 for old operators, and to N10.12 for new operators progressively reducing to N8.2 by 2012
Tanzania	Regulator issues a glide path for termination rates to go from US cents 7.8 per min in 2008 to US cents 7.16 by 2012.
Kenya	The regulator cut termination rates from KES4.42 to 2.21 in Jul-10, with progressive reduction to KES0.99 by Jul-13.

Source: Company data, Credit Suisse estimates

Other countries like Zambia, Uganda (together 11% of sales) have started the regulatory process around fixing termination rates.

Second, we believe that Bharti should be able to put a strong network in place. Bharti's management has already indicated that it could get discounts of up to 60% on electronics from the various manufacturers due to high volume of its India business.

Bharti's scale of network purchases is significantly higher than African peers

Figure 29: **Number of BTS added by operators in the last three years**

EoY no. of BTS	2006/ FY3-07	2007/FY3-08	2008/FY3-09	2009/FY3-10	Added in last three years
Bharti India	39,224	69,141	93,368	104,826	65,602
Bharti Africa				10,840	n.a
MTN Nigeria (30% of MTN revenues)	3,548	4,333	5,893	7,113	3,565
Millicom (global, 3 years up to 2010)	8,186	11,267	12,661	13,523	5,337

Source: Company data, Credit Suisse estimates

Margin improvement is the key

The most debated of Bharti management's FY13 targets are the ones on margins (1,200 bp EBITDA margin increase) and capex (US$800-1000 mn annual capex). We try to explore if these assumptions are reasonably achievable.

First, we note that management expects to take African operations back to the margins it enjoyed in 2006. Second, Bharti's African operations is significantly inefficient (SG&A is 39% of sales vs sub-26% for other African operators) and hence could be improved. Third, increased tower sharing could help all African operators reduce network costs.

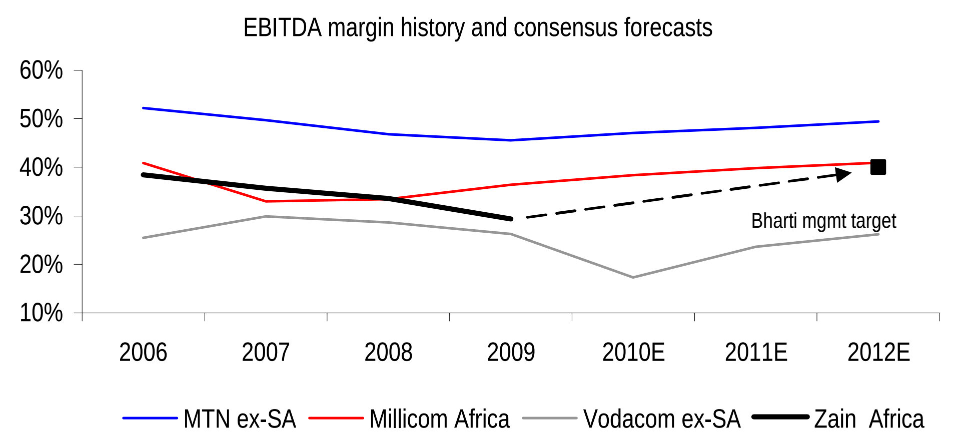
On capex, we believe that Bharti's capex targets should be analysed while keeping its revenue targets in view. Bharti management does not expect significant revenue market share gains and hence we believe will not be a 'price aggressor'. Thus, consensus view of a significant rise in traffic could be belied. We also believe that Bharti will be able to generate significant savings in electronics capex (~50%+) due to its scale in India. In this regard, we believe that our estimate for US$3.8 bn capex over three years (vs management estimate of US$2.4-3.0 bn) should comfortably help meet the growth targets.

Margin targets not challenging given the competition

The EBITDA target of US$2 bn by FY3/13 implies an EBITDA margin of 40% for Bharti's Africa business. Looking at other pan-African telecoms players, we find that Bharti management is targeting an EBITDA level in line with its peers.

We find that Bharti management is targeting an EBITDA level in line with its peers

Figure 30: Consensus expects an increase in margins for African telcos over the next three years



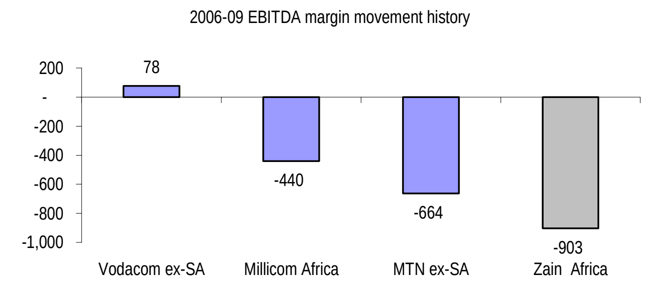
Source: Company data, Thomson Reuters, Credit Suisse estimates

We note that high margins in key markets for operators (Nigeria for MTN and Tanzania for Millicom) help high overall margins. The other African operators too saw a margin decline over the past few years. In the case of Millicom, this was driven by investments in rebranding (launch of Tigo brand in various countries), revamp of the distribution network, network expansion and tariff reductions. MTN stepped up network rollouts in key countries (the number of BTS increased 2x to 4x in three years across countries), and also faced new competition in a few countries.

Reverting to historical EBITDA levels?

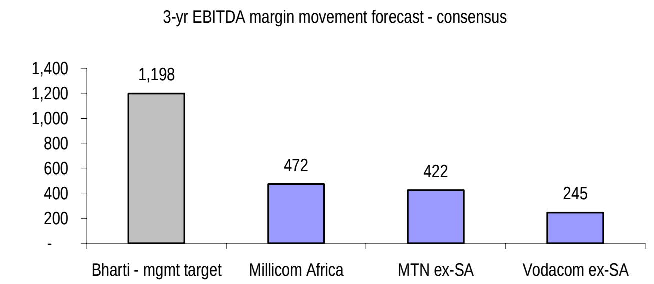
We also find that most of this improvement could be achieved if Bharti is able to reclaim the loss of margins suffered by its African business over the past three years.

Figure 31: Historical margin movement for African telcos



Source: Company data

Figure 32: Consensus forecast for margin movement

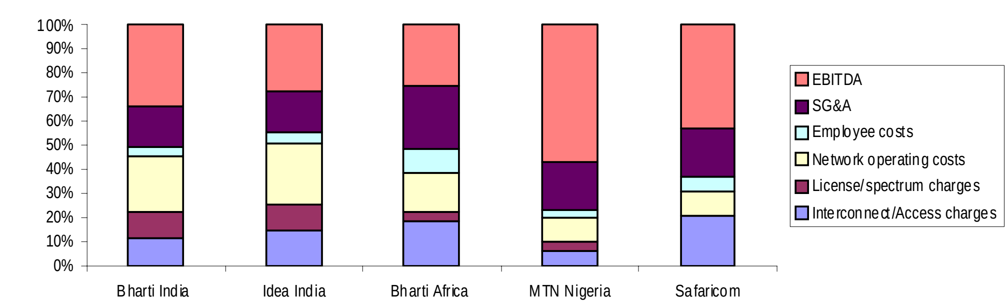


Source: Company data, Thomson Reuters

Only 15-20% of operating costs are regulated/external

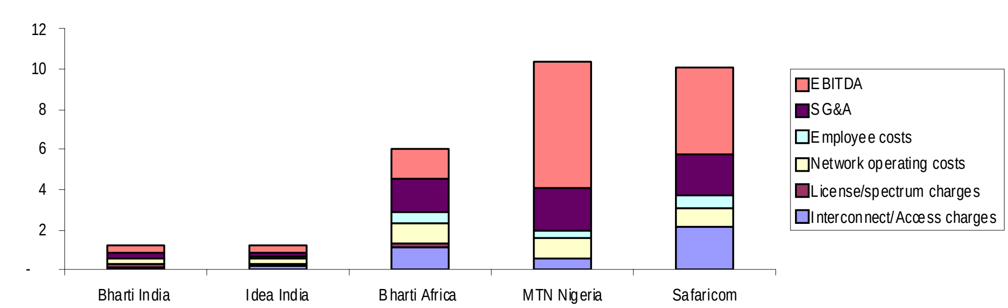
Due to low license/spectrum fees and high on-net density of traffic, the largest cost components in Africa are network costs and SG&A. This is unlike India where license/spectrum and interconnect costs together account for 35% of the total operating cost (15-20% for African operators).

Figure 33: Cost structure (% of sales)



Source: Company data, Credit Suisse estimates

Figure 34: Costs structure (US cents per min)



Source: Company data, Credit Suisse estimates

We believe that an efficient operator like Bharti should be able to influence internal costs like network opex/SG&A – thus having a relatively high impact given the African cost structures.

Networks costs could be further optimised

Higher spectrum allocation

Bharti management has earlier stated that the company has roughly 20 MHz of 2G spectrum in various African countries. This is nearly 2.5x the spectrum available in India.

We note that network capacity is roughly proportional to the square of spectrum allocated. Thus on per BTS basis (assuming similar BTS configuration), Bharti's African network could have 6x capacity of the Indian network.

Spectrum allocated in Africa is 2.5x of that allocated in India

Figure 35: BTS numbers mask the true capacity of networks due to higher spectrum allocations

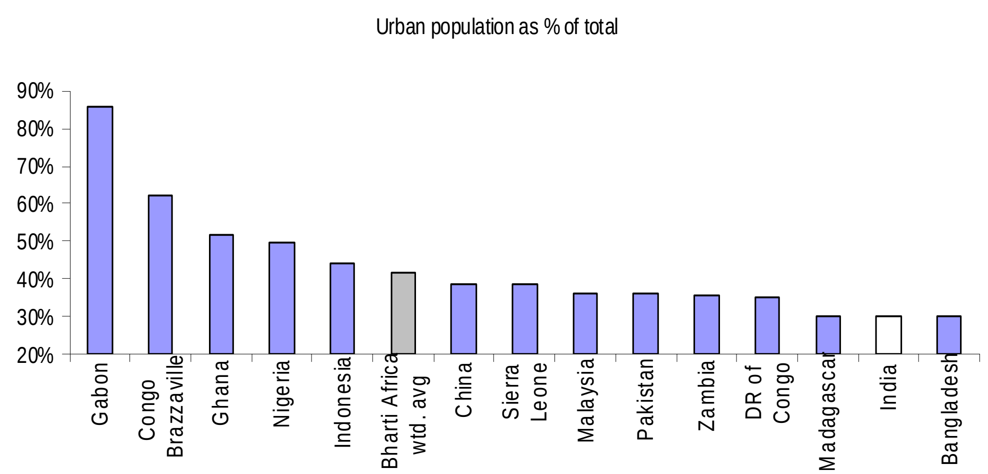
Country	Operator	Subs Dec-09 (mn)	No. BTS A	Subs/BTS	MOU (min / month) B	Monthly MoU / BTS	Spectrum (2x MHz) C	MoU/BTS/MHz A/B/C	MoU/BTS/MHz as % of Bharti
India	Bharti	119	102,190	1,163	480	558,743	8	72,197	100%
India	Idea	52	55,804	937	389	364,574	6	63,621	88%
Nigeria	MTN	35	7,113	4,929	106	522,430	20	26,121	36%
Kenya	Safaricom	15	2,300	6,587	60	395,217	18	22,584	31%
Africa	Zain (Bharti)	42	11,338	3,715	120	446,793	20	22,340	31%
China	China Mobile	522	470,000	1,111	508	564,282	39	14,469	20%

Note: 1) Average spectrum allocated across all circles taken for Bharti and Idea in India.
2) The 'MoU/BTS/MHz' column does not take into account the fact that network capacity is roughly proportional to the square of the spectrum allocated. Making this adjustment, the utilisation of Bharti Africa would be 14% of Bharti India instead of 31% as shown in the last column.
Source: Company data, Credit Suisse estimates

Urbanised population

Around 42% of African population is urbanised compared with 30% in India. This should help population density and also easy servicing of customers.

Figure 36: African countries tend to have higher population concentration in urban areas



Source: UN population database

However, we keep in mind that overall population density in India is significantly higher than that in Africa. Thus, Indian network could continue to enjoy a slightly better utilisation.

Figure 37: **Population density across Bharti's African footprint is lower than India**

Country	Population (mn)	Area (sq km)	Population density
Nigeria	158	923,768	171
Uganda	34	241,038	140
Malawi	16	118,484	132
Ghana	24	238,533	102
Sierra Leone	6	71,740	81
Kenya	41	580,367	70
Burkino Faso	16	274,200	59
Tanzania	45	947,300	48
Madagascar	20	587,041	34
Democratic Republic of Congo	68	2,344,858	29
Zambia	13	752,618	18
Niger	16	1,267,000	13
Congo Brazzaville	4	342,000	11
Chad	12	1,284,000	9
Gabon	2	267,667	6
Bharti Africa blended	**474**	**10,240,614**	**46**
India	**1,214**	**3,287,263**	**369**

Source: UN Population database

Reasonable opportunities for tower sharing

We believe that some countries in Africa could provide conducive situation for tower sharing. On an average, Bharti's African countries have 4+ operators competing in the market. While we agree that operators with significantly better network coverage (such as MTN in Nigeria) might not agree to share their passive infrastructure, sharing among other operators itself could provide some degree of savings in passive capex and opex.

Figure 38: **Average 4+ operators in each country**

Country	Num. Operators	Revenue contribution to Zain	Dominant operator	Dominant market share	Other key operators
Tanzania	7	7%	Zain	39%	Vodacom (33%), Tigo (23%), Zantel (5%)
Democratic Republic of Congo	6	9%	Zain	45%	Vodacom (30%), Tigo(14%)
Nigeria	5	36%	MTN	42%	Glomobile (19%), Zain (25%)
Niger	5	4%	Zain	67%	Orange (14%), Moov (13%)
Uganda	5	3%	MTN	50%	Zain (37%), UTL (8%), Warid (5%)
Ghana	5	2%	MTN	55%	Tigo (25%), Vodafone (12%), Zain (7%)
Gabon	4	7%	Zain	62%	Libertis (22%), Moov (16%)
Malawi	4	4%	Zain	72%	TNM (28%)
Kenya	4	4%	Safaricom	78%	Zain (17%), Orange (4%), Yu(2%)
Madagascar	4	2%	Orange	40%	Zain (38%), Telma (22%)
Sierra Leone	4	1%	Zain	46%	Africell (34%), Comium (15%), Tigo(5%)
Zambia	3	8%	Zain	70%	MTN (23%), Zamtel (7%)
Congo Brazzaville	3	6%	Zain	53%	MTN (40%), Warid (7%)
Chad	3	4%	Zain	70%	Tigo (30%)
Burkino Faso	3	3%	Zain	51%	Telemob (35%), Moov (14%)

Source: Company data, Credit Suisse estimates

We also note that MTN, Tigo and Vodacom appear as common competitors for Zain in many of its circles – allowing for mutual benefit from tower sharing. For instance, DRC and Tanzania could be good markets for collaboration between Zain and Vodacom – where both companies have reasonably similar market positions. Similarly, while Tigo could help Zain in Ghana due to its stronger position, the company could benefit from Zain's strong positioning in other markets such as DRC, Tanzania, Sierra Leone and Chad.

Figure 39: Countries where collaboration is possible between Zain and common competitors

Depicts mutually exclusive countries of strong position for competitors and Zain

Operator	Countries where operator dominant	Countries where Zain dominant
MTN	Nigeria, Ghana, Uganda	Zambia, Congo Brazzaville
Tigo	Ghana	DRC, Tanzania, Sierra Leone, Chad
Vodacom		DRC, Tanzania

Source: Company data, Credit Suisse estimates

We note that nearly 80% of Bharti's revenue in Africa comes from markets with more than four operators. Further, half of Bharti's revenue comes from markets where the dominant operator has market share of 50% or less.

Figure 40: 80% of Bharti's Africa revenue comes from markets that have 4+ operators

No. of operators	No. countries with these many operators	Average market share of leader	Contribution to Zain revenues
3	4	60.9%	21%
4	5	59.6%	19%
5	4	53.5%	44%
6+	2	42.0%	16%

Source: Company data, Credit Suisse estimates

Examples of collaboration among competitors

Past experience shows that similar to India, competing mobile operators can collaborate in Africa on the back-end.

For example, Tigo in Tanzania, along with two other operators, is undertaking a joint fiber optics project. The project comprises metro fiber optic networks in Dar es Salaam, Arusha, Dodoma, Mwanza, Morogor and Mbeya, as well as a regional backbone. Total CAPEX cost will be shared equally by the operators involved. Project is expected to be completed by EoY 2011.

History shows a number of examples of collaboration among African operators

A few recent deals (where tower assets were sold to independent towercos) show growing acceptance of such models.

Figure 41: Recent telecoms tower deals in Africa

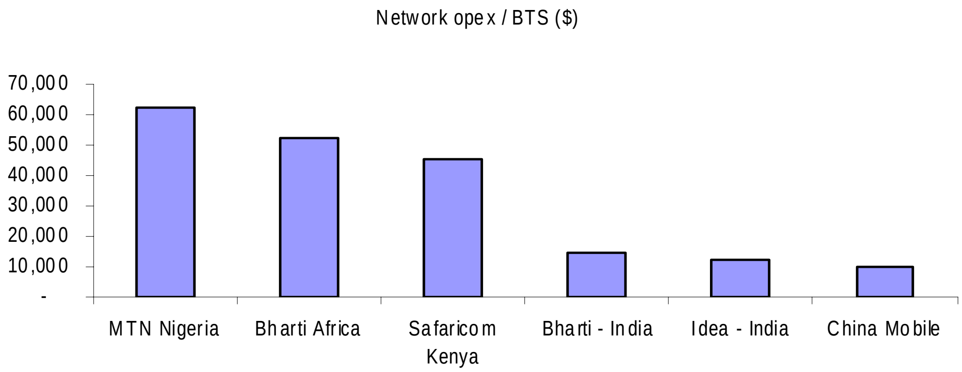
Country	Operator	Towerco	Year	Description
Ghana, Tanzania, DRC	Tigo (Millicom)	Helios Towers	2010	Sale and leaseback of ~2500 telecom towers to Helios.
Ghana	Vodacom	Eaton Telecom	Oct-10	Sale of ~800 towers of Vodacom in Ghana to Eaton

Source: Company data, Credit Suisse estimates

Network opex cost structures high in Africa

A look at the network opex levels across African and Asian telecoms operations shows that network opex on a per BTS basis for African telcos is 3-4x the levels seen in Asia.

Figure 42: African telcos have significantly high network opex cost structures

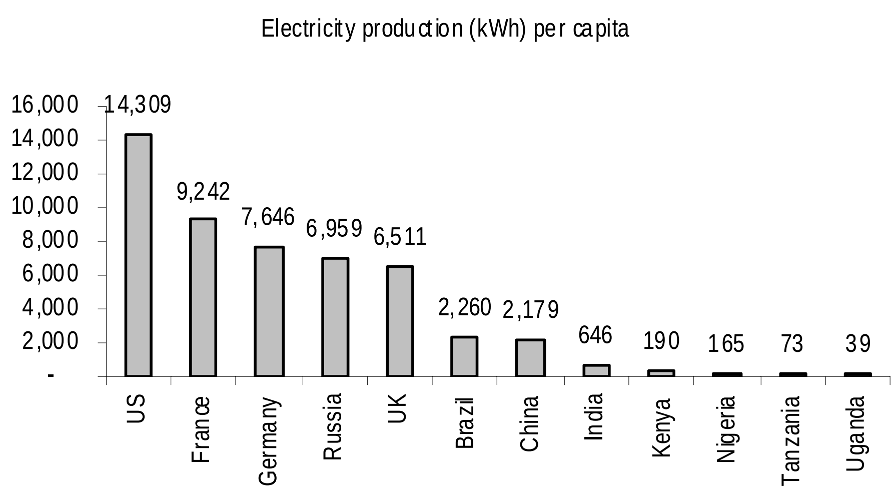


Note: Network opex for Indian operators is on reported basis, and includes tower lease rentals.

Source: Company data, Credit Suisse estimates

One of the key challenges for network expansion, and also one of the key cost drivers in Africa is the weak grid electricity coverage. Our conversations with regulators and operators suggest that power downtime could be 16 hrs+ in most areas (including urban areas). However, we note that Bharti is not new to this either – given the weak electricity infrastructure in India.

Figure 43: Electricity penetration in African economies significantly weaker than India



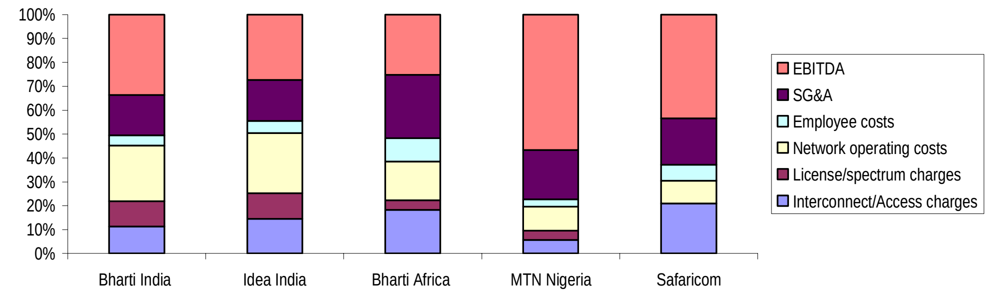
Source: World Bank, Credit Suisse estimates

SG&A costs – opportunity to increase efficiency

SG&A costs could be the key reason for divergence in profitability of Bharti's African operations vs peers or vs Bharti's Indian operations. Figure 44 indicates that SG&A costs (including employee costs) were 39% of Bharti's Africa revenue compared to 24% for MTN, 26% for Safaricom and 18% for Bharti India.

SG&A as percentage of sales is 39% for Bharti Africa versus 24-26% for peers

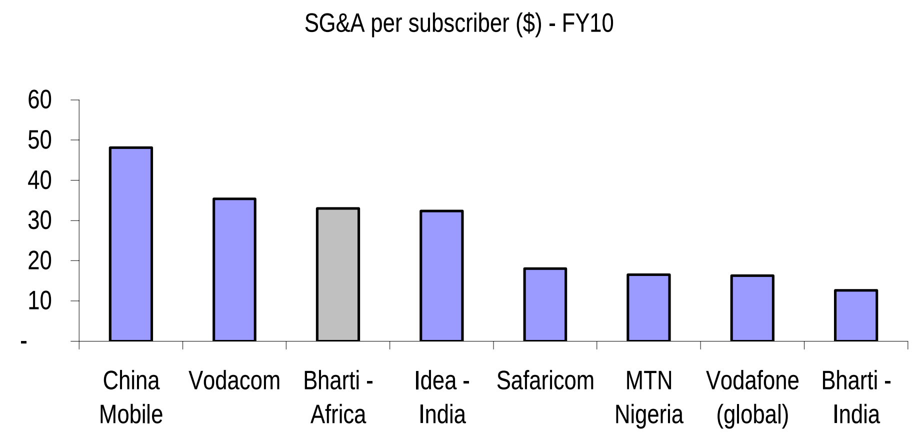
Figure 44: **Cost structure (% of sales)**



Source: Company data, Credit Suisse estimates

We also note that SG&A on per subscriber basis for Bharti Africa is also nearly double of MTN Nigeria.

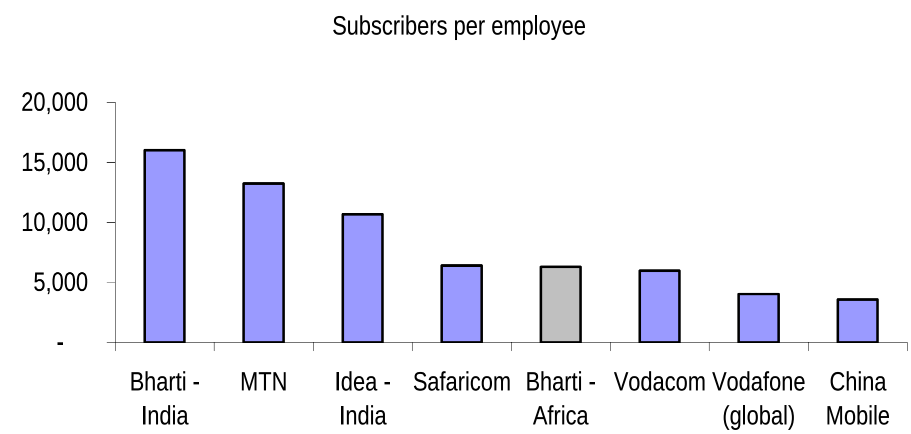
Figure 45: **Bharti African operations inefficient on SG&A even compared to African peers**



Source: Company data, Credit Suisse estimates

We see Bharti already bringing changes to the way the African operations work. In January 2011, the company introduced Easy Recharge system in Nigeria; this allows for prepaid top-ups without scratch cards, at any denominations starting at N50. Compared to prevailing recharge denominations starting at N200, this provides greater flexibility to customers, while at the same time helping save on costs of printing scratch cards.

Figure 46: **Employee utilisation has significant upside in Bharti Africa**



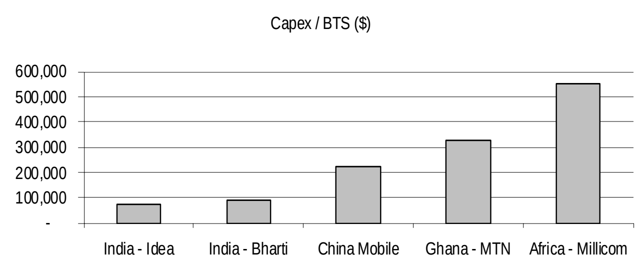
Source: Company data, Credit Suisse estimates

Capex – could be a low hanging fruit

Unit capex levels higher in African operations

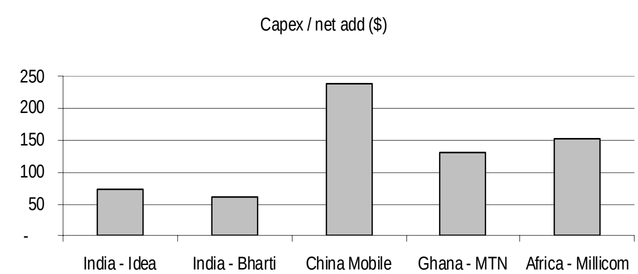
We note that capex intensity on a per BTS basis is higher in African operations than in India. On a capex per BTS basis, African operators see capex costs 3-5x the levels seen in India.

Figure 47: **Capex per BTS (three-year average, US$)**



Note: Capex used above includes passive infra capex for Indian operators.
Source: Company data, Credit Suisse estimates

Figure 48: **Capex per net add (three-year average, US$)**



Note: Capex used above includes passive infra capex for Indian operators.
Source: Company data, Credit Suisse estimates

Bharti should be able to negotiate lower rate for electronics

Bharti management has indicated that it should be able to get discounts of as much as 60% from Ericsson on capex, compared to prevailing rates of Zain. Looking at the scale of India spend vs African spend, we believe that this should be possible.

Figure 49: **Number of BTS added by operators in the last three years**

EoY no. of BTS	2006/ FY3-07	2007/FY3-08	2008/FY3-09	2009/FY3-10	Added in last three years
Bharti India	39,224	69,141	93,368	104,826	65,602
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Millicom (global, 3 years up to 2010)	8,186	11,267	12,661	13,523	5,337

Source: Company data, Credit Suisse estimates

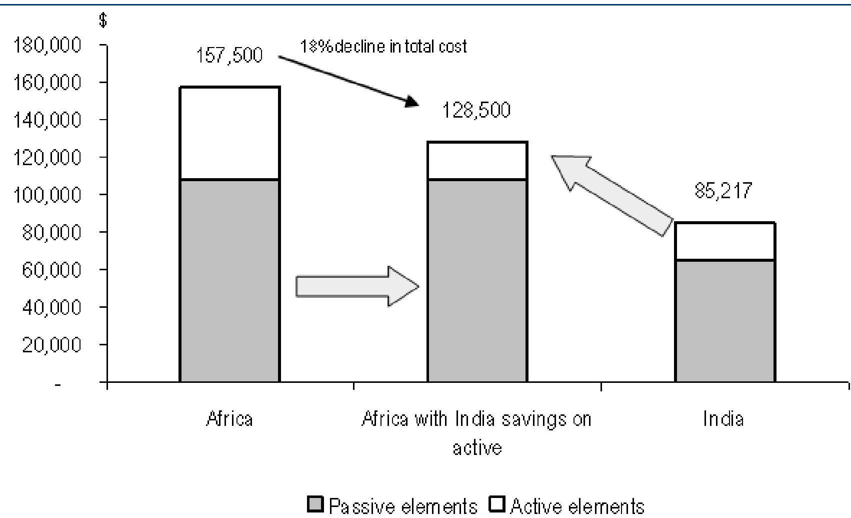
Looking at the data from MTN, we note that 1) construction costs are more than 1.5x that in India and 2) cost of active electronics is ~2.5x that for Indian operators. Assuming that Bharti is able to renegotiate the active element pricing down by 60%, we believe that the company could save 18% of capex per BTS.

Figure 50: **Breakdown of costs for setting up a tower + BTS (MTN Africa)**

Cost element	Cost $	Nature of element
Tower structure cost	17,500	Passive
Electricals cost (Acs, DB trays etc)	6,000	Passive
Internal power systems	8,000	Passive
Shelter	5,000	Passive
Tower civils and installation cost	17,500	Passive
Electrical installation and connection	6,000	Passive
Generator and fuel system	16,000	Passive
Fencing	5,000	Passive
Management fee	13,500	Passive
General installation civil works	14,000	Passive
Antenna System	14,000	Active
Transmission EQ cost	15,000	Active
RBS cost (average single BTS)	20,000	Active
Total	**157,500**	

Source: Company data, Credit Suisse estimates

Figure 51: **20% overall capex savings from lower equipment cost for large Indian operators**

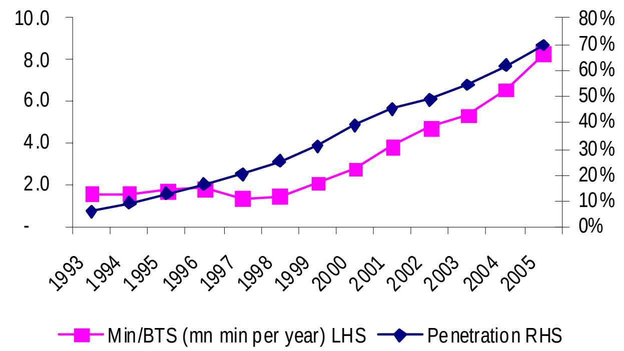


Source: Company data, Credit Suisse estimates

Increasing network utilisation should help

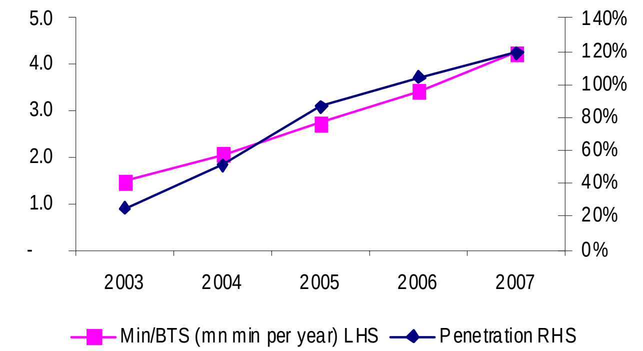
We note that as companies grow and penetration increases, companies are able to improve network utilisation significantly. Thus, as African penetration increases, we should expect higher network utilisation and hence lower capex.

Figure 52: US telecoms industry – network utilisation grows with penetration



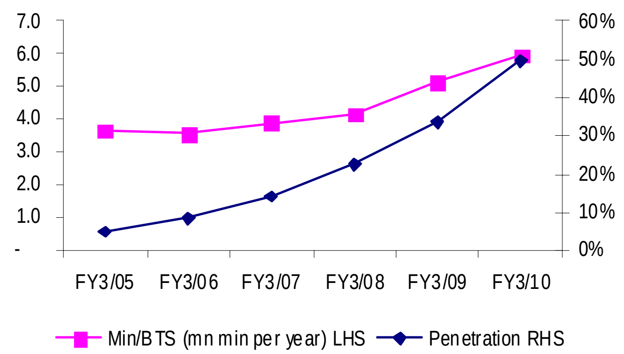
Source: CTIA, Credit Suisse estimates

Figure 53: Vimpelcom Russia – network utilisation grows with penetration



Source: Company data, Credit Suisse estimates

Figure 54: Bharti India – network utilisation grows with penetration



Source: Company data, Credit Suisse estimates

Other vendors also indicate peaking of capex

Other African wireless vendors including MTN have said that their capex could have peaked.

Figure 55: Comments by operators on capex outlook

Operator	Comments on capex
MTN	We believe that 2010 capex will be lower than 2009, and this trend will continue. Capex for the group peaked in 2009. Group capex guidance for 2010 reduced from ZAR23.6 bn to ZAR21.3 bn in Aug-10. Capex as percentage of revenues in Nigeria continues to decrease.
Vodacom	Capex in International operations (Africa ex. South Africa) was lower in FY3/10 vs FY3/09. Going forward, capex budget will be tightly controlled. Capex in the DRC would be flat in FY3/11 vs FY3/10.

Source: Company data, Credit Suisse estimates

We expect US$3.8 bn of capex in next three years

Building flat costs per BTS, we believe that this should translate into 23,806 additional BTS, taking the total number of BTS to 34,646.

Figure 56: **BTS network size comparisons**

2009	BTS	Subs/BTS
MTN Nigeria	7,113	4,929
MTN Ghana	2,453	3,556
Safaricom	2,300	6,587
Bharti Africa - current	11,338	3,715
Bharti Africa 3yr later	35,613	2,514

Source: Company data, Credit Suisse estimates

What if capex budget overshoots

Our estimate for Bharti's Africa capex is already 40% higher than management target (FY11: US$800 mn; FY12 and FY13: US$1 bn, at the upper end). However, even if there is significant upside risk to these capex estimates, we note that the level of cash generation from Bharti's operations gives sufficient room to accommodate higher capex without having to raise additional funds.

Figure 57: **Enough cash generation to sustain any upside risks to Africa capex**

(US$ mn)	FY3/11E	FY3/12E	FY3/13E	Cumulative
EBITDA (India+Africa)	4,802	6,333	7,752	
Interest payments (India + Africa)	965	1,246	1,293	
Cash taxes (India+Africa)	325	513	783	
Cash which can be deployed	3,512	4,574	5,675	13,761
Estimated capex (India)	2,808	2,626	2,394	7,828
Estimated capex (Africa)	930	1,548	1,335	3,813
Surplus	704	1,948	3,281	5,933

Source: Company data, Credit Suisse estimates

Key risks are currency and credit costs

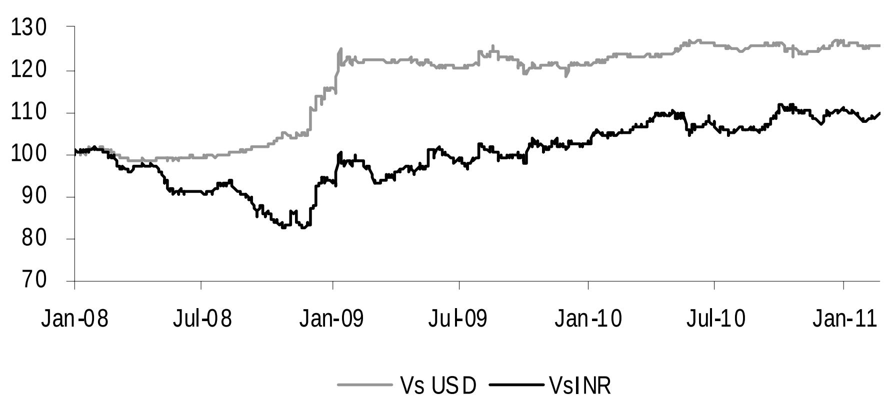
While we remain confident about Bharti's ability to make the best of the market/margin opportunities that we discussed in the earlier sections, our concerns remain on the economic/regulatory factors. If recent volatility in African currency exchange rates were to repeat, all of Bharti's gains in operations could be erased. Further, volatility in economic growth, dependence on fluctuating global factors and frequent changes to tax structures reduce the overall predictability of the business, in our view. These remain the biggest risks to Bharti's African story.

Currency volatility could wipe out operational gains

All through the global economic slowdown, the African currencies that Bharti has exposure to demonstrated significant volatility – as shown in Figure 58. There have been times when currencies have depreciated 15%+ in just a month. Thus, any improvement in operating margins/revenue growth could be quickly offset by currency movements.

There have been times when currencies have depreciated 15%+ in just a month

Figure 58: Exchange rate movement of Bharti's African currency basket (revenue-weighted average)



Source: Bloomberg, Company data, Credit Suisse estimates

Further, since its US$9 bn loan for the transaction is in US$ – this issue could also lead to risks to Bharti's cash flows from Africa.

Volatility in macroeconomic factors could also impact business

Political uncertainty notwithstanding, some of the African countries in Bharti's footprint have also seen volatile economies (large swings in GDP growth rates) with high dependence on a few commodities/foreign aid.

Figure 59: **Economic overview of Bharti's African countries**

Country	GDP per capita (2009, US$)	Real GDP growth over last five years (loc. cur) Max	Min	Inflation rate (last 5Y avg)	Key drivers of economy
Nigeria	1,092	6.4	2.9	11.1	Oil exports
Congo Brazzaville	2,361	7.7	-1.6	4.9	Oil exports, forestry, agriculture
Gabon	7,502	5.6	-1.0	2.9	Oil Exports, mining
Zambia	985	6.3	5.2	12.8	Copper, Foreign Aid, Agriculture
Tanzania	509	7.4	5.5	8.3	Agriculture, Foreign Aid
Niger	352	9.5	1.0	4.7	Agriculture, Foreign Aid
Burkino Faso	517	6.4	3.5	4.4	Agriculture, Foreign Aid
Malawi	326	9.7	2.6	10.9	Agriculture (tobacco), Foreign Aid
Chad	596	17.3	-0.2	4.3	Oil, Agriculture, Foreign Aid
Sierra Leone	341	7.3	4.0	14.5	Agriculture, Foreign Aid, Minerals
Madagascar	461	7.3	0.4	11.6	Agriculture, Fishing, Forestry
Uganda	481	10.8	6.3	9.3	Agriculture, Coffee exports, Foreign Aid
Democratic Republic of Congo	163	6.5	2.7	17.2	Mineral Exports
Kenya	759	7.1	1.7	14.0	Trade, Foreign Aid
Ghana	655	7.3	3.5	14.5	Gold, Cocoa, Foreign Aid, Remittances
Average	**1,140**	**8.2**	**2.4**	**9.7**	

Source: World Bank, CIA World Factbook, Company data, Credit Suisse estimates

There have been instances of operators seeing sharply fluctuating revenues due to economic volatility. For example, Millicom commented in Jun-2010 that a few regions in DRC had seen revenues shrink 60-80% in the after math of collapse in commodity prices.

Frequent changes in regulations increase uncertainties in running a business

Frequent changes to tax structures and imposition of new taxes add to the difficulties of running a business.

Figure 60: **Changes to tax structure lead to unpredictability**

Country	Timeframe	Key changes to taxes
Nigeria	2009	Doubling of VAT tax rate from 5% to 10%
Tanzania	2008	An excise duty of 10% was imposed on telecom services
DRC	2009	Tax on every mobile number that has been provisioned on the MSC
Ghana	2010	Temporary ban on new tower installations
Niger	2011	Additional taxes on the telecom operators to fund the budget deficit.

Source: Company data, Credit Suisse estimates

Appendix: Country summaries (in order of revenue contribution)

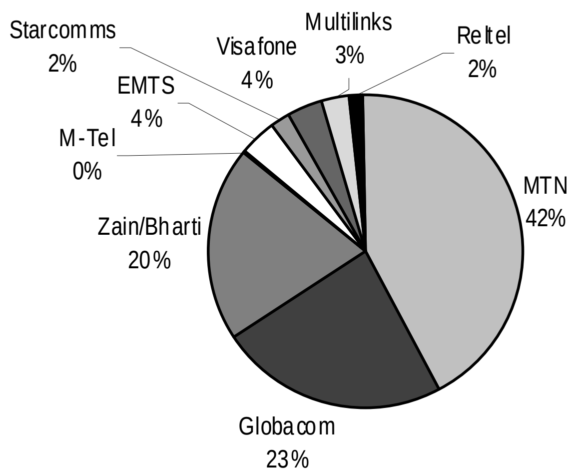
Nigeria

Figure 61: **Country statistical snapshot**

Country statistics	
Area (sq km)	923,768
Population (mn)	158
Population density	171
Urban population (%)	50
Population less than 15 yrs (%)	43
GDP per capita (US$)	1,092
GDP growth 5-yr avg (%)	5
Key drivers of economy	Oil exports
World Bank ease of doing business ranking (Best=1; India=135)	134
Telecom statistics	
Mobile subscribers (2009, mn)	73
Mobile penetration (2009)	46%

Source: World Bank, Company data

Figure 62: **Subscriber market shares**



Source: NCC - Dec-09

Figure 63: **Zain/Bharti operations snapshot**

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR up to 2009
Subscribers (mn)	15	35.1%	32.2%
ARPU (US$)	6.8		-5.0%
Revenues (US$ mn)	1,307	35.6%	28.9%
EBITDA (US$ mn)	392	36.3%	21.0%
EBITDA margin	30.0%		-625 bps

Source: Company data, Credit Suisse estimates

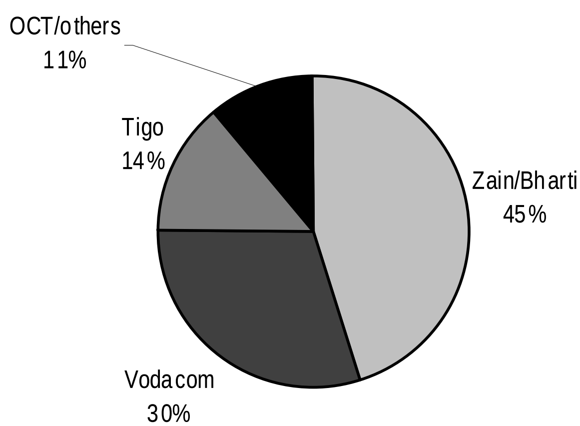
Democratic Republic of Congo

Figure 64: **Country statistical snapshot**

Country statistics	
Area (sq km)	2,344,858
Population (mn)	68
Population density	29
Urban population (%)	65
Population less than 15 yrs (%)	47
GDP per capita (US$)	163
GDP growth 5-yr avg (%)	5
Key drivers of economy	Mineral exports
World Bank ease of doing business ranking (Best=1; India=135)	179
Telecom statistics	
Mobile subscribers (2009, mn)	9
Mobile penetration (2009)	13%

Source: World Bank, Company data

Figure 65: **Subscriber market shares**



Source: Zain company presentation 2009

Figure 66: **Zain/Bharti operations snapshot**

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR up to 2009
Subscribers (mn)	4	8.5%	24.8%
ARPU (US$)	7.8		-12.2%
Revenues (US$ mn)	322	8.8%	8.3%
EBITDA (US$ mn)	66	6.1%	-10.2%
EBITDA margin	20.5%		-1545 bp

Source: Company data, Credit Suisse estimates

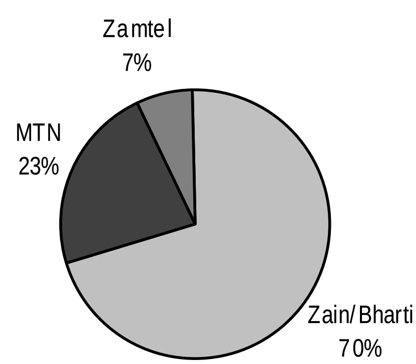
Zambia

Figure 67: Country statistical snapshot

Country statistics	
Area (sq km)	752,618
Population (mn)	13
Population density	18
Urban population (%)	64
Population less than 15 yrs (%)	46
GDP per capita (US$)	985
GDP growth 5-yr avg (%)	6
Key drivers of economy	Copper, Foreign Aid,Agriculture
World Bank ease of doing business ranking (Best=1; India=135)	84
Telecom statistics	
Mobile subscribers (2009, mn)	5
Mobile penetration (2009)	35%

Source: World Bank, Company data

Figure 68: Subscriber market shares



Source: Zain company presentation 2009

Figure 69: Zain/Bharti operations snapshot

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	3	7.3%	32.4%
ARPU (US$)	8.7		-10.0%
Revenues (US$ mn)	300	8.2%	16.4%
EBITDA (US$ mn)	128	11.9%	14.8%
EBITDA margin	42.7%		-183 bp

Source: Company data, Credit Suisse estimates

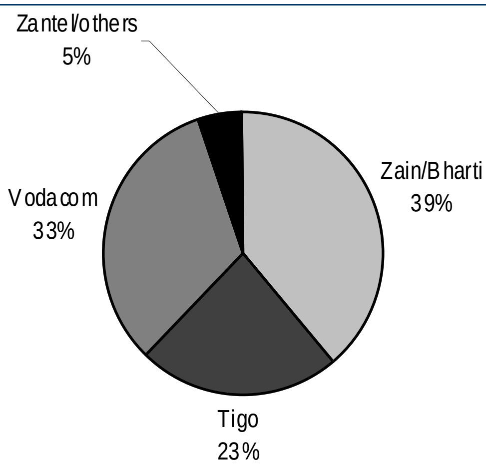
Tanzania

Figure 70: Country statistical snapshot

Country statistics	
Area (sq km)	947,300
Population (mn)	45
Population density	48
Urban population (%)	74
Population less than 15 yrs (%)	45
GDP per capita (US$)	509
GDP growth 5-yr avg (%)	7
Key drivers of economy	Agriculture, Foreign Aid
World Bank ease of doing business ranking (Best=1; India=135)	125
Telecom statistics	
Mobile subscribers (2009, mn)	18
Mobile penetration (2009)	40%

Source: World Bank, Company data

Figure 71: Subscriber market shares



Source: Zain company presentation 2009

Figure 72: Zain/Bharti operations snapshot

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	5	11.6%	47.9%
ARPU (US$)	5.2		-17.8%
Revenues (US$ mn)	272	7.4%	17.1%
EBITDA (US$ mn)	93	8.6%	13.8%
EBITDA margin	34.1%		-301 bp

Source: Company data, Credit Suisse estimates

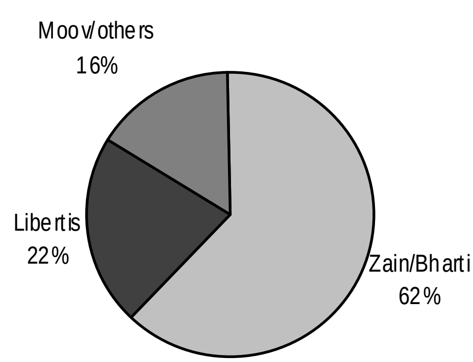
Gabon

Figure 73: Country statistical snapshot

Country statistics	
Area (sq km)	267,667
Population (mn)	2
Population density	6
Urban population (%)	14
Population less than 15 yrs (%)	36
GDP per capita (US$)	7,502
GDP growth 5-yr avg (%)	2
Key drivers of economy	Oil Exports, mining
World Bank ease of doing business ranking (Best=1; India=135)	158
Telecom statistics	
Mobile subscribers (2009, mn)	2
Mobile penetration (2009)	120%

Source: World Bank, Company data

Figure 74: Subscriber market shares



Source: Zain company presentation 2009

Figure 75: Zain/Bharti operations snapshot

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	0.9	2.2%	22.1%
ARPU (US$)	24.5		-2.8%
Revenues (US$ mn)	256	7.0%	15.9%
EBITDA (US$ mn)	101	9.4%	4.5%
EBITDA margin	39.4%		-1446 bp

Source: Company data, Credit Suisse estimates

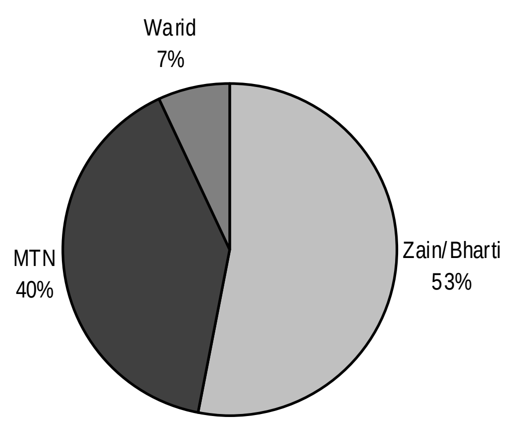
Congo (Brazzaville)

Figure 76: **Country statistical snapshot**

Country statistics	
Area (sq km)	342,000
Population (mn)	4
Population density	11
Urban population (%)	38
Population less than 15 yrs (%)	40
GDP per capita (US$)	2,361
GDP growth 5-yr avg (%)	5
Key drivers of economy	Oil exports, forestry, agriculture
World Bank ease of doing business ranking (Best=1; India=135)	177
Telecom statistics	
Mobile subscribers (2009, mn)	3
Mobile penetration (2009)	77%

Source: World Bank, Company data

Figure 77: **Subscriber market shares**



Source: Zain company presentation 2009

Figure 78: **Zain/Bharti operations snapshot**

	2009 ($mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	1.4	3.4%	27.5%
ARPU (US$)	12.7		-10.2%
Revenues (US$ mn)	208	5.7%	13.2%
EBITDA (US$ mn)	56	5.2%	-0.2%
EBITDA margin	27.1%		-1239 bp

Source: Company data, Credit Suisse estimates

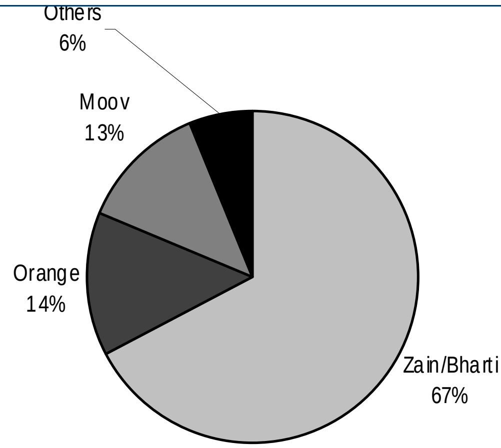
Niger

Figure 79: Country statistical snapshot

Country statistics	
Area (sq km)	1,267,000
Population (mn)	16
Population density	13
Urban population (%)	83
Population less than 15 yrs (%)	50
GDP per capita (US$)	352
GDP growth 5-yr avg (%)	5
Key drivers of economy	Agriculture, Foreign Aid
World Bank ease of doing business ranking (Best=1; India=135)	171
Telecom statistics	
Mobile subscribers (2009, mn)	3
Mobile penetration (2009)	17%

Source: World Bank, Company data

Figure 80: Subscriber market shares



Source: Zain company presentation 2009

Figure 81: Zain/Bharti operations snapshot

	2009 ($mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	1.5	3.7%	57.4%
ARPU (US$)	9.9		-8.5%
Revenues (US$ mn)	157	4.3%	36.9%
EBITDA (US$ mn)	71	6.6%	34.2%
EBITDA margin	45.2%		-279 bp

Source: Company data, Credit Suisse estimates

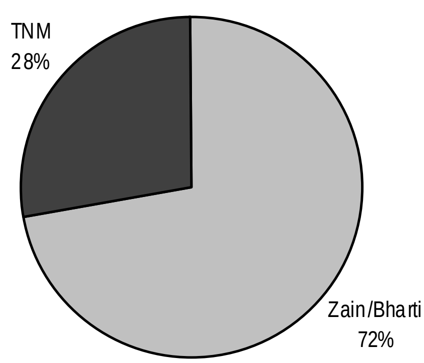
Malawi

Figure 82: Country statistical snapshot

Country statistics	
Area (sq km)	118,484
Population (mn)	16
Population density	132
Urban population (%)	80
Population less than 15 yrs (%)	46
GDP per capita (US$)	326
GDP growth 5-yr avg (%)	7
Key drivers of economy	Agriculture (tobacco), Foreign Aid
World Bank ease of doing business ranking (Best=1; India=135)	132
Telecom statistics	
Mobile subscribers (2009, mn)	3
Mobile penetration (2009)	17%

Source: World Bank, Company data

Figure 83: Subscriber market shares



Source: Zain company presentation 2009

Figure 84: Zain/Bharti operations snapshot

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	1.7	4.1%	69.4%
ARPU (US$)	8.5		-4.8%
Revenues (US$ mn)	154	4.2%	53.8%
EBITDA (US$ mn)	67	6.3%	58.6%
EBITDA margin	43.8%		386 bp

Source: Company data, Credit Suisse estimates

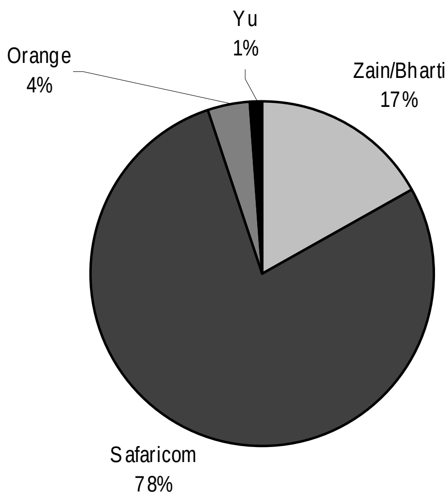
Kenya

Figure 85: Country statistical snapshot

Country statistics	
Area (sq km)	580,367
Population (mn)	41
Population density	70
Urban population (%)	78
Population less than 15 yrs (%)	43
GDP per capita (US$)	759
GDP growth 5-yr avg (%)	5
Key drivers of economy	Trade, Foreign Aid
World Bank ease of doing business ranking (Best=1; India=135)	94
Telecom statistics	
Mobile subscribers (2009, mn)	20
Mobile penetration (2009)	48%

Source: World Bank, Company data

Figure 86: Subscriber market shares



Source: Zain company presentation 2009

Figure 87: Zain/Bharti operations snapshot

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	2.1	5.0%	2.6%
ARPU (US$)	5.0		-12.9%
Revenues (US$ mn)	154	4.2%	-4.1%
EBITDA (US$ mn)	7	0.6%	-48.9%
EBITDA margin	4.4%		-2490 bp

Source: Company data, Credit Suisse estimates

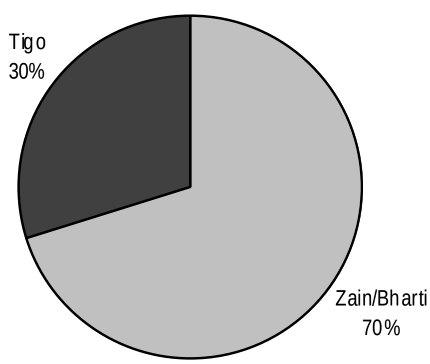
Chad

Figure 88: Country statistical snapshot

Country statistics	
Area (sq km)	1,284,000
Population (mn)	12
Population density	9
Urban population (%)	72
Population less than 15 yrs (%)	46
GDP per capita (US$)	596
GDP growth 5-yr avg (%)	4
Key drivers of economy	Oil, Agriculture, Foreign Aid
World Bank ease of doing business ranking (Best=1; India=135)	183
Telecom statistics	
Mobile subscribers (2009, mn)	2.3
Mobile penetration (2009)	20%

Source: World Bank, Company data

Figure 89: Subscriber market shares



Source: Zain company presentation 2009

Figure 90: Zain/Bharti operations snapshot

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	1.2	2.9%	51.5%
ARPU (US$)	9.9		-14.1%
Revenues (US$ mn)	133	3.6%	26.8%
EBITDA (US$ mn)	55	5.1%	28.2%
EBITDA margin	41.5%		129 bp

Source: Company data, Credit Suisse estimates

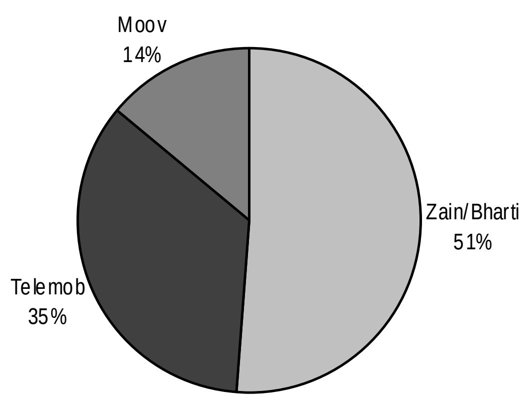
Burkina Faso

Figure 91: Country statistical snapshot

Country statistics	
Area (sq km)	274,200
Population (mn)	16
Population density	59
Urban population (%)	74
Population less than 15 yrs (%)	46
GDP per capita (US$)	517
GDP growth 5-yr avg (%)	5
Key drivers of economy	Agriculture, Foreign Aid
World Bank ease of doing business ranking (Best=1; India=135)	154
Telecom statistics	
Mobile subscribers (2009, mn)	3.9
Mobile penetration (2009)	24%

Source: World Bank, Company data

Figure 92: Subscriber market shares



Source: Zain company presentation 2009

Figure 93: Zain/Bharti operations snapshot

	2009 ($mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	1.5	3.7%	43.9%
ARPU (US$)	7.3		-9.3%
Revenues (US$ mn)	126	3.4%	27.1%
EBITDA (US$ mn)	52	4.8%	22.8%
EBITDA margin	41.3%		-440 bps

Source: Company data, Credit Suisse estimates

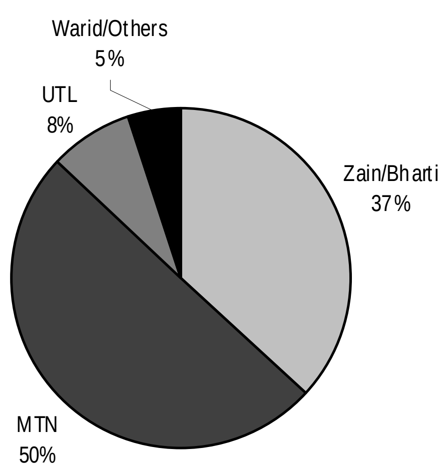
Uganda

Figure 94: Country statistical snapshot

Country statistics	
Area (sq km)	241,038
Population (mn)	34
Population density	140
Urban population (%)	87
Population less than 15 yrs (%)	49
GDP per capita (US$)	481
GDP growth 5-yr avg (%)	8
Key drivers of economy	Agriculture, Coffee exports, Foreign Aid
World Bank ease of doing business ranking (Best=1; India=135)	129
Telecom statistics	
Mobile subscribers (2009, mn)	12.2
Mobile penetration (2009)	36%

Source: World Bank, Company data

Figure 95: Subscriber market shares



Source: Zain company presentation 2009

Figure 96: Zain/Bharti operations snapshot

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	1.9	4.6%	60.0%
ARPU (US$)	4.2		-16.1%
Revenues (US$ mn)	100	2.7%	35.9%
EBITDA (US$ mn)	12	1.1%	294.7%
EBITDA margin	12.3%		1182 bps

Source: Company data, Credit Suisse estimates

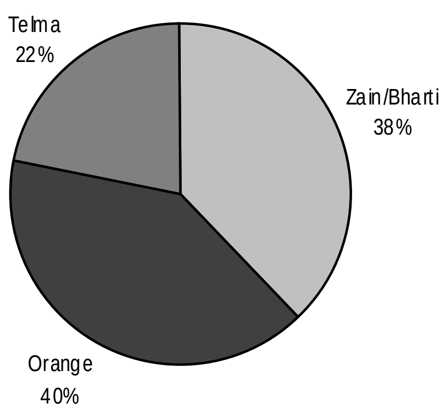
Madagascar

Figure 97: Country statistical snapshot

Country statistics	
Area (sq km)	587,041
Population (mn)	20
Population density	34
Urban population (%)	70
Population less than 15 yrs (%)	43
GDP per capita (US$)	461
GDP growth 5-yr avg (%)	5
Key drivers of economy	Agriculture, Fishing, Forestry
World Bank ease of doing business ranking (Best=1; India=135)	138
Telecom statistics	
Mobile subscribers (2009, mn)	4.4
Mobile penetration (2009)	22%

Source: World Bank, Company data

Figure 98: Subscriber market shares



Source: Zain company presentation 2009

Figure 99: Zain/Bharti operations snapshot

	2009 ($mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	1.6	3.7%	68.0%
ARPU (US$)	4.6		-20.1%
Revenues (US$ mn)	77	2.1%	29.5%
EBITDA (US$ mn)	18	1.6%	14.4%
EBITDA margin	22.7%		-1026 bp

Source: Company data, Credit Suisse estimates

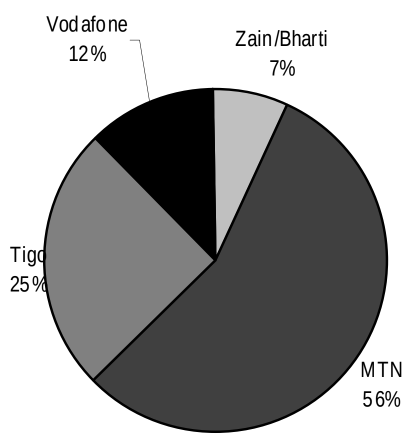
Ghana

Figure 100: **Country statistical snapshot**

Country statistics	
Area (sq km)	238,533
Population (mn)	24
Population density	102
Urban population (%)	49
Population less than 15 yrs (%)	38
GDP per capita (US$)	655
GDP growth 5-yr avg (%)	6
Key drivers of economy	Gold, Cocoa, Foreign Aid, Remittances
World Bank ease of doing business ranking (Best=1; India=135)	77
Telecom statistics	
Mobile subscribers (2009, mn)	15.1
Mobile penetration (2009)	62%

Source: World Bank, Company data

Figure 101: **Subscriber market shares**



Source: Zain company presentation 2009

Figure 102: **Zain/Bharti operations snapshot**

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	1.3	3.0%	Na
ARPU (US$)	6.1		Na
Revenues (US$ mn)	57	1.5%	Na
EBITDA (US$ mn)	-42	-3.9%	Na
EBITDA margin	-74.6%		Na

Source: Company data, Credit Suisse estimates

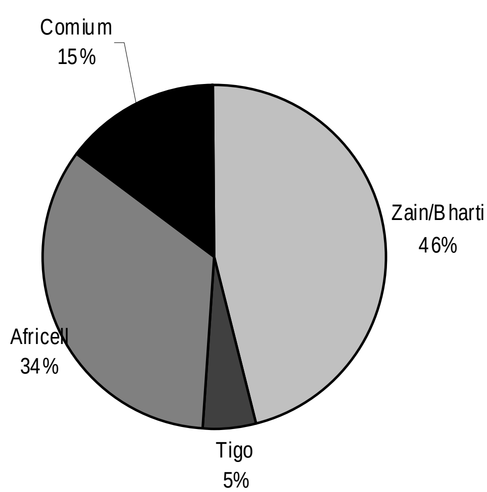
Sierra Leone

Figure 103: Country statistical snapshot

Country statistics	
Area (sq km)	71,740
Population (mn)	6
Population density	81
Urban population (%)	62
Population less than 15 yrs (%)	43
GDP per capita (US$)	341
GDP growth 5-yr avg (%)	6
Key drivers of economy	Agriculture, Foreign Aid, Minerals
World Bank ease of doing business ranking (Best=1; India=135)	143
Telecom statistics	
Mobile subscribers (2009, mn)	2.3
Mobile penetration (2009)	39%

Source: World Bank, Company data

Figure 104: Subscriber market shares



Source: Zain company presentation 2009

Figure 105: Zain/Bharti operations snapshot

	2009 (US$ mn)	% contribution to Zain (2009)	3-yr CAGR upto 2009
Subscribers (mn)	0.6	1.3%	32.4%
ARPU (US$)	7.2		-22.2%
Revenues (US$ mn)	44	1.2%	-0.3%
EBITDA (US$ mn)	2	0.2%	-52.6%
EBITDA margin	5.2%		-4320 bps

Source: Company data, Credit Suisse estimates

Companies Mentioned *(Price as of 01 Mar 11)*
Advanced Info Service PCL (ADVA.BK, Bt83.00, NEUTRAL, TP Bt95.00)
Axiata Group Berhad (AXIA.KL, RM4.99, OUTPERFORM, TP RM5.98)
Bahrain Telecom (BTEL.BH, BD.47)
Bharti Airtel Ltd (BRTI.BO, Rs338.30, OUTPERFORM, TP Rs415.00)
China Mobile Limited (0941.HK, HK$74.75, OUTPERFORM, TP HK$116.00)
Etisalat (ETEL.AD, Dhs10.85)
Excelcomindo Pratama PT (EXCL.JK, Rp5850.00, OUTPERFORM, TP Rp6700.00)
Far EasTone Telecom (4904.TW, NT$42.65)
France Telecom (FTE.PA, Eu15.88, UNDERPERFORM, TP Eu16.00, MARKET WEIGHT)
Globe Telecom Inc (GLO.PS, P697.00, NEUTRAL, TP P800.00)
Grameenphone (GRAM.BD)
Hutchison Telecommunications HK Holdings Ltd (0215.HK, HK$2.84, OUTPERFORM, TP HK$2.75)
Idea Cellular Ltd (IDEA.BO, Rs59.05, OUTPERFORM [V], TP Rs85.00)
LG Uplus (032640.KS, W5,670, NEUTRAL, TP W8,500)
M1 Limited (MONE.SI, S$2.41, NEUTRAL, TP S$2.66)
Mahanagar Telephone Nigam (MTNL.BO, Rs41.60)
Maxis Berhad (MXSC.KL, RM5.46, OUTPERFORM, TP RM6.10)
Mobinil (EMOB.CA, £E133.21, UNDERPERFORM, TP £E185.00)
MTN Group (MTNJ.J, R122.82, UNDERPERFORM, TP R117.00)
NTT DoCoMo (9437, ¥156,400, NEUTRAL, TP ¥150,000, OVERWEIGHT)
Orascom Telecom (ORTEq.L, $3.06, RESTRICTED [V])
OTE (OTEr.AT, Eu7.30, NEUTRAL, TP Eu12.00, MARKET WEIGHT)
PT Indosat Tbk (ISAT.JK, Rp5100.00, OUTPERFORM, TP Rp7900.00)
PT Telkom (Telekomunikasi Indo.) (TLKM.JK, Rp7500.00, OUTPERFORM, TP Rp10300.00)
Reliance Communication Ltd (RLCM.BO, Rs90.35, NEUTRAL [V], TP Rs120.00)
Singapore Telecom (STEL.SI, S$3.00, OUTPERFORM, TP S$3.73)
Sistema (SSAq.L, $25.50, OUTPERFORM [V], TP $32.00)
SmarTone Telecom (0315.HK, HK$24.20, UNDERPERFORM, TP HK$15.60)
StarHub Ltd (STAR.SI, S$2.63, UNDERPERFORM, TP S$2.35)
Taiwan Mobile (3045.TW, NT$67.20)
Tata Communications Ltd (TATA.BO, Rs217.90, OUTPERFORM, TP Rs375.00)
Telecom Italia (TLIT.MI, Eu1.12, NEUTRAL, TP Eu1.10, MARKET WEIGHT)
Telemar Norte Leste S/A (TMAR5, R$48.29, NEUTRAL, TP R$61.00)
Telenor (TEL.OL, NKr91.75, OUTPERFORM, TP NKr105.00, MARKET WEIGHT)
Total Access Communication PCL (DTAC.BK, Bt41.50, NEUTRAL, TP Bt45.00)
TPSA (TPSA.WA, PLN16.70, UNDERPERFORM, TP PLN15.50)
True Corp PCL (TRUE.BK, Bt6.25, UNDERPERFORM [V], TP Bt3.30)
Turk Telekom (TTKOM.IS, TRY7.16, OUTPERFORM, TP TRY7.43)
Turkcell (TCELL.IS, TRY8.72, OUTPERFORM, TP TRY11.57)
Unitech Ltd (UNTE.BO, Rs35.25, OUTPERFORM [V], TP Rs76.00)
Vivo Participacoes (VIVO4, R$59.70, RESTRICTED)
Vodafone Group (VOD.L, 174.45 p, OUTPERFORM, TP 185.00 p, MARKET WEIGHT)
ZAIN (ZAIN.KW, KD1.36, UNDERPERFORM [V], TP KD1.25)

Disclosure Appendix

Important Global Disclosures

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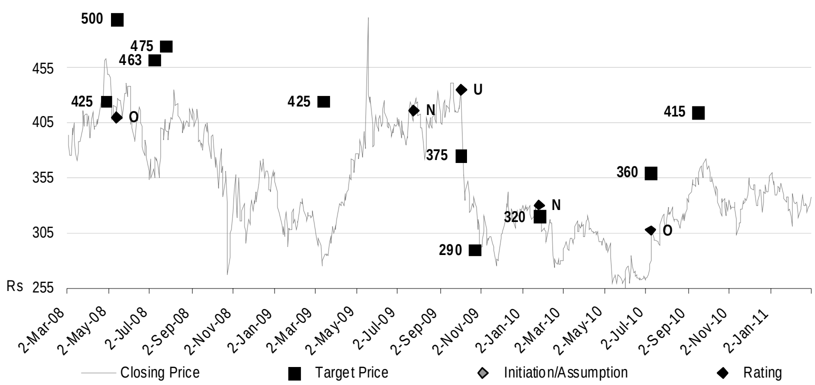
3-Year Price, Target Price and Rating Change History Chart for BRTI.BO

BRTI.BO Date	Closing Price (Rs)	Target Price (Rs)	Rating	Initiation/ Assumption
28-Apr-08	463.925	425		
13-May-08	410.625	500	O	
08-Jul-08	355.95	462.5		
25-Jul-08	398.225	475		
13-Mar-09	279.35	425		
24-Jul-09	416.95		N	
02-Oct-09	435	375	U	
22-Oct-09	337.5	290		
25-Jan-10	331	320	N	
09-Jul-10	307.5	360	O	
17-Sep-10	359.5	415		



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Restricted	2%	

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Price Target: (12 months) for (BRTI.BO)

Method: We arrive at our TP of Rs415 by Discounted cash flow (DCF). We assume a weighted average cost of capital (WACC) of 12 and beta of 0.9. Our DCF model builds in strong cashflow growth till FY3/15, a 8% medium term growth (FY3/15 - FY3/30) and 3% terminal growth. This includes a Rs-30/share value destruction from Zain Africa acquisition

Risks: Risks to our 12-month target price of Rs415 for Bharti include 1) TRAI recommendations get implemented 2) increased capex/slower improvement in EBITDA for African operations and 3) increased competitive intensity in the Indian market

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