

Q1 2015

www.businessmonitor.com

IRAN

TELECOMMUNICATIONS REPORT

INCLUDES 5-YEAR FORECASTS TO 2018





Iran Telecommunications Report Q1 2015

INCLUDES 5-YEAR FORECASTS TO 2018

Part of BMI's Industry Report & Forecasts Series

Published by: **Business Monitor International**

Copy deadline: November 2014

Business Monitor International
Senator House
85 Queen Victoria Street
London
EC4V 4AB
United Kingdom
Tel: +44 (0) 20 7248 0468
Fax: +44 (0) 20 7248 0467
Email: subs@businessmonitor.com
Web: <http://www.businessmonitor.com>

© 2014 **Business Monitor International**
All rights reserved.

All information contained in this publication is copyrighted in the name of **Business Monitor International**, and as such no part of this publication may be reproduced, repackaged, redistributed, resold in whole or in any part, or used in any form or by any means graphic, electronic or mechanical, including photocopying, recording, taping, or by information storage or retrieval, or by any other means, without the express written consent of the publisher.

DISCLAIMER

All information contained in this publication has been researched and compiled from sources believed to be accurate and reliable at the time of publishing. However, in view of the natural scope for human and/or mechanical error, either at source or during production, **Business Monitor International** accepts no liability whatsoever for any loss or damage resulting from errors, inaccuracies or omissions affecting any part of the publication. All information is provided without warranty, and **Business Monitor International** makes no representation of warranty of any kind as to the accuracy or completeness of any information hereto contained.

CONTENTS

BMI Industry View	7
SWOT	9
<i>SWOT Mobile</i>	<i>9</i>
<i>SWOT Wireline</i>	<i>11</i>
<i>Political</i>	<i>13</i>
<i>Economic</i>	<i>14</i>
Industry Forecast	15
<i>Mobile</i>	<i>15</i>
<i>Table: Telecoms Sector - Mobile - Historical Data & Forecasts (Iran 2011-2018)</i>	<i>15</i>
<i>Wireline</i>	<i>18</i>
<i>Table: Telecoms Sector - Wireline - Historical Data & Forecasts (Iran 2011-2018)</i>	<i>18</i>
Industry Risk Reward Ratings	21
<i>Industry Risk Reward Index</i>	<i>21</i>
<i>Table: MENA Q115 Risk/Reward Index</i>	<i>24</i>
Market Overview	26
<i>Mobile</i>	<i>26</i>
<i>Regional Perspective</i>	<i>26</i>
<i>Table: Iran's Mobile Market Regional Comparison, 2013</i>	<i>27</i>
<i>Key Developments</i>	<i>27</i>
<i>Market Growth</i>	<i>27</i>
<i>Table: Mobile Market, June 2014</i>	<i>30</i>
<i>Market Shares</i>	<i>30</i>
<i>Usage</i>	<i>32</i>
<i>Networks</i>	<i>34</i>
<i>Mobile Content</i>	<i>35</i>
<i>Mobile Operator Data</i>	<i>36</i>
<i>Table: Iran Mobile Market Overview</i>	<i>36</i>
<i>Table: MTN Irancell</i>	<i>36</i>
<i>Table: Hamrahe Aval (Mobile Communications Company of Iran)</i>	<i>37</i>
<i>Table: Taliya (Rafsanjan Industrial Complex)</i>	<i>37</i>
<i>Middle East And North Africa Mobile Content</i>	<i>37</i>
<i>Wireline</i>	<i>43</i>
<i>Fixed-Line</i>	<i>43</i>
<i>Broadband</i>	<i>43</i>
<i>Pay-TV</i>	<i>48</i>
Industry Trends And Developments	49
<i>Table: Industry Trends And Developments</i>	<i>50</i>

Regulatory Development	52
<i>Table: Iran's Regulatory Bodies And Their Responsibilities</i>	<i>52</i>
<i>Regulatory Developments</i>	<i>56</i>
Competitive Landscape	58
<i>Table: Key Players: Iranian Telecoms Market</i>	<i>58</i>
Company Profile	59
<i>Telecommunications Company Of Iran (TCI)</i>	<i>59</i>
<i>MTN Irancell</i>	<i>63</i>
Regional Overview	67
<i>Table: Ericsson Major Contract Wins, Q413-2014</i>	<i>70</i>
Demographic Forecast	71
<i>Table: Iran's Population By Age Group, 1990-2020 ('000)</i>	<i>72</i>
<i>Table: Iran's Population By Age Group, 1990-2020 (% of total)</i>	<i>73</i>
<i>Table: Iran's Key Population Ratios, 1990-2020</i>	<i>74</i>
<i>Table: Iran's Rural And Urban Population, 1990-2020</i>	<i>74</i>
Glossary	75
<i>Table: Glossary Of Terms</i>	<i>75</i>
Methodology	77
<i>Industry Forecast Methodology</i>	<i>77</i>
<i>Sources</i>	<i>79</i>
<i>Risk/Reward Index Methodology</i>	<i>79</i>
<i>Table: Risk/Reward Index Indicators</i>	<i>80</i>
<i>Table: Weighting Of Indicators</i>	<i>81</i>

BMI Industry View

***BMI View:** Iran's telecoms market is an underperformer in the Middle East as a result of political and economic risks, exacerbated by currency depreciation, which is limiting access to the latest device and so limiting the market's growth. Furthermore, the Iranian government is keen to restrict access to international internet content, creating a national internet network that will bypass international gateways and cut off large swathes of global content. For this, the government began talks with the Chinese government in early 2014. That said, over the medium term there is catch-up potential in Iran, and its large population should make it one of the most attractive telecoms markets in the Middle East.*

Key Data

- Fixed-line connections increased by just 1.9% in 2013, a significant slowdown. While we expect growth to continue over the medium term, increased competition in the mobile segment could drive down prices and catalyse fixed-to-mobile substitution.
- Mobile subscriptions increased in Q214 as MTN reported a sharp growth with net additions of 914,000 in Q214 compared with the previous quarter.
- We retain our estimate of around 3.8mn 3G subscriptions at the end of 2013 and our forecast for 6.1mn at the end of 2014, and we expect the rapid growth to continue over the short term. However, additional competition in the market would have a greater impact on growth.

Key Trends And Developments

MTN Irancell's operating results for the 2013 gave some insight to smartphone market in Iran. MTN reported a total of 10.3mn smartphone users, which equates to almost 25% of its subscription base. Considering the lack of 3G service availability in Iran, along with import restrictions on electronics and reduced purchasing power due to currency depreciation, this is an impressive rate of adoption. Nonetheless the smartphone opportunity remains large in Iran due to its late-developer status. **BMI** believes vendors will be able to capitalise on retail opportunities in the smartphone market as the economic environment becomes more supportive. Smartphone adoption will also prove a boost for data revenue growth as users become more accustomed to wireless data usage. According with this trend, in August 2014 MTN became the first national operator to be granted a 3G licence in Iran; **BMI** believe this will increase competitiveness and push the development of the 3G network.

Iran and China will partner to control content online and build a 'clean' internet in Iran, according to news in January 2014. The restrictions will apply to the National Information Network (NIN). The news had little impact on our forecasts for broadband subscriptions as the NIN is already factored into the estimates for

market expansion. **BMI** notes that China's restricted internet access and blocking of content deemed unsuitable has not stopped consumers in that country getting online and developing a number of home-grown social networking services and platforms. Although we do not expect Iran to follow this path as its population is much smaller.

SWOT

SWOT Mobile

Iran Mobile SWOT Analysis

Strengths

- Continued subscription growth despite high mobile penetration rate.
- Competition between operators driving growth and innovation.
- New operator offering 3G shows market moving in right direction.

Weaknesses

- Average customer spending levels are low.
- Mobile data services are subject to government censoring and filtering.
- US embargo puts limits on potential network equipment partners for the operators.
- Only one 3G operator currently serving the market with limited coverage while MTN entering soon.
- The only international operator of note in the Iranian market is South African mobile operator MTN. The UAE's Etisalat and Malaysia's Axiata withdrew from the market.

Opportunities

- Smartphone penetration is low, with Iran a late developer, meaning there are opportunities for vendors over the medium term in smartphone retail and data service up-sell.
- The presence of large numbers of inactive prepaid users inflates the penetration rate and masks the potential for further customer growth.
- Although in the early stages, the market for mobile value-added and data services is expected to see strong growth over the next few years; the youthful orientation of Iran's population should help to underpin future growth.
- MTN Irancell granted a 3G licence and its forthcoming entrance will increase competition and push investment in the 3G market.

Iran Mobile SWOT Analysis - Continued

- Continuing network expansion programmes of Iran's leading operators should have a positive effect on future growth.

Threats

- Government controls over mobile data and internet services could limit the growth of this potentially lucrative sector.
 - The arrival of the third national operator could prompt a price war within the mobile sector and result in a downturn for ARPU.
 - Unstable political and security environment could hinder investment in the sector from equipment manufacturers and content providers.
 - The development of the data market is held back by the government's decision to extend Tamin Telecom's exclusive rights to 3G network services a further year, to September 2014.
-

SWOT Wireline

Iran Wireline SWOT Analysis

Strengths

- Iran's fixed-line penetration rate is one of the highest in the Middle East region; the number of fixed lines has continued to grow as services are rolled out to rural areas.
- Competition exists in the internet access market, with more than 1,200 companies providing internet services, according to reports.
- WiMAX services continue to register strong subscriber growth, with four companies offering services in the country.
- TCI has developed an extensive backbone infrastructure throughout the country.

Weaknesses

- The provision of fixed-voice telephony services remains under the monopoly control of TCI so there is an absence of incentives to invest and improve service quality.
- Despite a significant number of companies providing internet access services, the internet market is dominated by TCI.
- Residential internet customers are subject to government restrictions on the sort of websites they can access.
- Rightel's monopoly over the 3G market will limit the reach of services, slowing the potential for dedicated mobile broadband growth.

Opportunities

- Launch of the EGEP fibre cable has improved access to bandwidth and will allow ISPs to offer improved broadband connections.
- Demand for internet services is strong, if growth in the number of internet users is accurate.
- Fibre-optic deployment plans will allow for more products to be offered including TCI's mooted IPTV platform.
- Broadband penetration is low, particularly among residential customers, even official figures - which may be inflated - show low penetration rates.

Iran Wireline SWOT Analysis - Continued

- Business demand for wireline services is expected to grow, especially for internet and data services.

Threats

- The continuation of government restrictions with regard to internet content will undermine the long-term development of broadband.
 - Unstable political and security environment hinders investment in the sector from equipment manufacturers and content providers.
 - International sanctions prevent operators from accessing lower priced equipment to roll-out services in a cost-effective way.
-

Political

Political SWOT Analysis

- Strengths**
- Since the overthrow of the Pahlavi family in 1979, there has been some reduction in the level of political corruption, while wealth distribution has improved marginally.
 - The Revolutionary Guard and Basij militia are fiercely loyal to the supreme leader, helping to maintain social stability.
- Weaknesses**
- The country has one of the poorest human rights records in the region, and authorities do not hesitate to quell dissidents. A number of journalists and anti-government protesters are being held in custody.
 - While decision-making ultimately rests with the supreme leader, the regime is heavily fragmented, and consensus is hard to reach.
 - Widespread perceptions of electoral fraud during the course of June 2009's presidential elections have damaged the regime's legitimacy in the eyes of many Iranians.
- Opportunities**
- The Majlis (parliament) is more than just a rubber stamp; the move by 150 parliamentarians (out of 290) to hold former president Mahmoud Ahmadinejad accountable for his handling of the economy in March 2012 is a positive indication that checks exist.
 - The victory of moderate cleric Hassan Rouhani in Presidential elections in June 2013 is leading to a significant improvement in relations with the West.
- Threats**
- Despite progress in nuclear talks, the prospect of further US and EU sanctions and the possibility of a military strike by the US or Israel cannot be dismissed.
 - Youth unemployment is high.
 - The strong influence of the Revolutionary Guards within the political and economic arena may present a challenge to reform over the long term.

Economic

Economic SWOT Analysis

- Strengths**
- Iran has the world's second largest proven oil reserves after Saudi Arabia, and the world's second largest proven gas reserves after Russia.
 - Oil and gas aside, Iran is rich in other resources and has a strong agricultural sector.
- Weaknesses**
- Local consumption of hydrocarbons is rising rapidly; this, coupled with ageing technology in the sector, will have a negative impact on its oil and gas exporting capacity.
 - International sanctions discourage foreign oil companies from bringing much-needed technical knowledge and equipment to maintain oil output levels.
- Opportunities**
- The gas sector remains underdeveloped, and there is considerable room to maximise this source of revenue.
 - A growing population, combined with a shortage of housing, provides opportunities for investment in residential construction.
- Threats**
- A decline in global oil prices would have a marked impact on the economy. Although an Oil Stabilisation Fund exists to protect the economy at times of weaker oil prices, it has increasingly been used to fund government overspending and could be close to empty.
 - Capital flight could continue, particularly should negotiations on the nuclear programme fail.
-

Industry Forecast

Mobile

Table: Telecoms Sector - Mobile - Historical Data & Forecasts (Iran 2011-2018)

	2011	2012	2013e	2014f	2015f	2016f	2017f	2018f
Cellular Mobile Phone Subscribers, '000	76,387.0	87,300.0	93,236.4	98,271.2	103,184.7	107,931.2	112,464.3	116,738.0
Mobile Phone Subscribers/100 Inhabitants	101.3	114.2	120.4	125.2	129.8	134.1	138.1	141.7
3G & 4G phone subscribers, '000		1,100.0	1,600.0	9,920.0	18,947.2	27,473.4	34,067.1	39,177.1
3G & 4G market, % of mobile market		1.3	1.7	10.1	18.4	25.5	30.3	33.6
Monthly Blended ARPU, IRR	83,872.4	47,692.8	49,488.9	49,301.1	48,362.0	47,622.2	47,073.8	46,711.0

National Sources/BMI

The entrance of newcomer **RighTel** has boosted the outlook for subscription growth in Iran, and we expect it to close the gap to regional peers in terms of subscription penetration over the medium term. Our outlook for mobile subscription growth is unchanged in the Q1 update, as we forecast a gradual slowdown in growth over the medium term. By 2018, we expect the market will support nearly 117mn subscribers, which would push the penetration rate to almost 142%.

In the short-to-medium term there remains significant downside to our positive growth outlook. Political and economic turmoil will continue to affect all areas of the Iranian economy, as the Western world's sanctions against Tehran remain in place. This is putting pressure on operators and consumers alike, with inflation cutting into Iranians' spending power, a factor in the sharp drop in mobile handset imports reported in 2013.

The outlook for Iran's nascent 3G market offers upside potential to growth, but RighTel's limited network coverage and services portfolio has weighed on its ability to take advantage of a three-year exclusivity period in Iran's 3G market. However, **BMI** expects the entry of Iran's larger mobile operators MTN Irancell and MCI into the 3G market in H214 to catalyse take-up of advanced mobile data services.

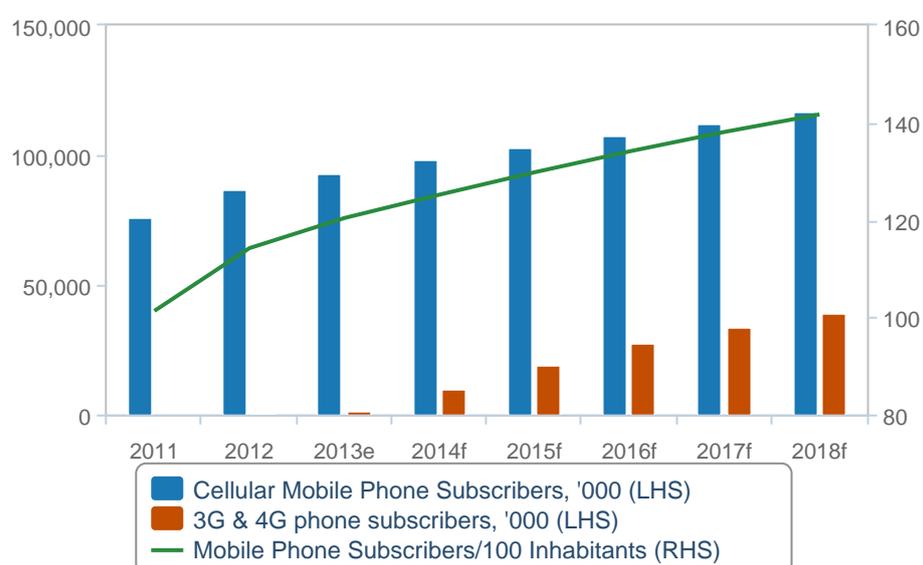
In early August 2014 **MTN Irancell** received permission from the Ministry of Information and Communications Technology to begin piloting 3G services in some university campuses and government

buildings in Tehran. Following technical and financial reviews of the pilot, MTN will be authorised to begin offering commercial 3G services from August 23 2014, marking the end of mobile operator RighTel's period of exclusivity for advanced mobile data services.

This quarter we have adjusted our 3G historical data and forecasts in order to reflect RighTel's weaker than expected performance throughout 2013 and the anticipated launch of 3G services on MTN and MCI's networks in H214. We estimate there were around 1.6mn 3G subscriptions in Iran at the end of 2013 and we forecast this to rise to 9.9mn by the end of 2014.

Industry Trends - Mobile

(2011-2018)



e/f = BMI estimate/forecast. Source: Operators/ BMI

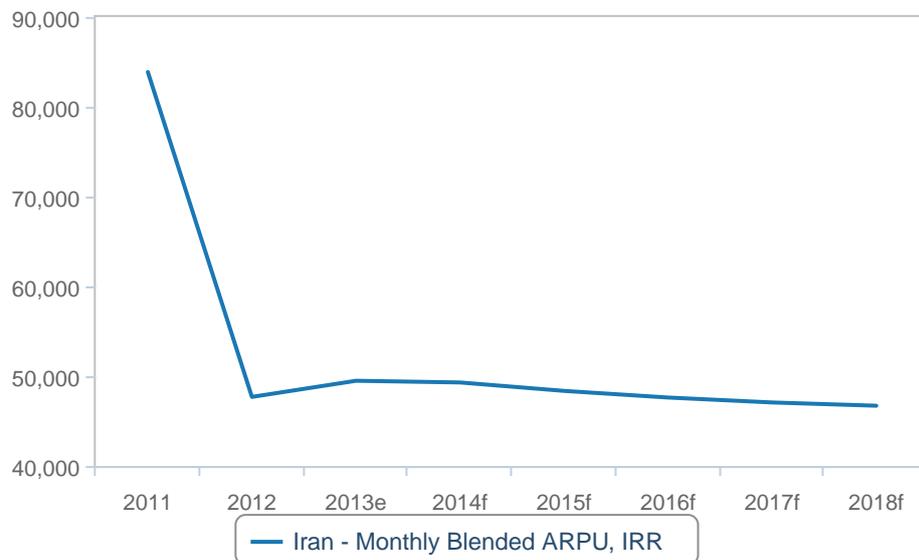
ARPU

We believe economic sanctions on Iran will continue to keep USD ARPUs low over the short to medium term. MTN's ARPU stabilised at just over USD4 in Q313, a figure that increased in Q214 to USD4.26, having fallen from about USD7.4 to USD3.9 between Q312 and Q412. However, in Iranian rials MTN has reported rising ARPUs in every quarter, besides Q412, clearly demonstrating the impact of currency depreciation on USD reported ARPU figures.

In 2011, MTN's average blended ARPU grew by 2.4% in local currency terms to IRR85,655, despite slipping below USD8 to USD7.9. In Q112 and Q212, forex fluctuation meant that MTN reported an uptick in ARPU in local currency terms to IRR85,500 despite a slide in USD terms to USD7.5 in both quarters. ARPU fell to USD7.4 in Q312 and nearly halved in Q412, when it dropped to USD3.91. The growth of ARPU, in local currency terms, occurred despite the promotions which MTN has been introducing in a bid to capture market share from mobile market leader MCI. This suggests the ARPU growth was driven by other factors, including the increase in the level of service usage and a trend towards the use of more lucrative data services.

We expect ARPU levels in Iran's mobile sector will come under increasing downward pressure. This trend will mainly reflect the intensification of competition in the market following the entry of new player Rightel, which has a monopoly over the country's 3G market. However, until a clearer picture emerges of any emerging competition, we expect only a gradual decline in ARPU levels for MTN.

Industry Trends - Mobile ARPU (2011-2018)



e/f = BMI estimate/forecast. Source: BMI/Operator results

By 2018, we forecast the operator's average monthly ARPU should drop to about USD2. However, the launch of 3G services by Rightel poses an important upside risk to our forecast, as we expect there is

significant pent-up demand for more advanced data services. Rightel's 3G service has the potential to bring ARPUs back up to pre-Q412 levels, as the cheapest prepaid service available costs USD6.

Wireline

Table: Telecoms Sector - Wireline - Historical Data & Forecasts (Iran 2011-2018)

	2011	2012	2013e	2014f	2015f	2016f	2017f	2018f
Main telephone lines in service, '000	27,767.0	28,758.5	29,307.7	29,786.4	30,263.0	30,737.1	31,208.4	31,676.4
Main Telephone Lines/100 Inhabitants	36.8	37.6	37.8	38.0	38.1	38.2	38.3	38.5
Internet users, '000	6,312.2	10,674.9	12,525.0	15,090.0	17,715.1	20,683.1	23,868.9	27,395.8
Internet users/100 inhabitants	8.4	14.0	16.2	19.2	22.3	25.7	29.3	33.3
Broadband internet subscribers, '000	1,773.0	3,076.2	3,694.5	4,531.3	5,417.2	6,403.1	7,482.1	8,641.8
Broadband internet subscribers/100 Inhabitants	2.4	4.0	4.8	5.8	6.8	8.0	9.2	10.5

e/f = BMI estimate/forecast. Source: Operators/BMI

Fixed-Line

BMI has a bearish outlook for the Iranian fixed-line sector, as increased competition in the mobile market has the potential to lower prices and make mobile voice more competitive. This development could result in a trend of fixed-to-mobile substitution in terms of subscriptions and usage. Continued investments announced by incumbent **Telecommunications Company of Iran (TCI)** and a lack of competition should mean the fixed-line market continues to show some growth in the short term but we believe this trend will reverse over the medium term.

Considering Iran's relatively high mobile penetration rate, the continued growth of the country's fixed-line sector is unusual in a regional and global context. We suspect growth has been sustained by incumbent operator TCI's commitment to deploying fixed-line infrastructure in rural areas. However, recent statements have indicated the operator's increasing focus on its mobile networks, which indicates a slow-down in growth in the fixed-line in line with our forecasts. We estimate that growth in the market slowed from 3.6% in 2012 to 1.9% in 2013. Over our forecast period to 2018, we expect the market to grow at an average rate of 1.6% and reach 38.5% penetration with 31.7mn fixed lines in service.

In the medium term, the widespread reliance on dial-up internet services using fixed-line infrastructure is expected to continue benefiting Iran's fixed-line market. Over the longer term, regulatory developments to increase the number of fixed-line providers or those authorised to provide VoIP services could see a more significant slowdown in the number of fixed lines.

Broadband

BMI estimates the Iranian broadband market increased by 20% in terms of subscriptions in 2013 to reach a total of 3.695mn subscriptions. This is based on mid-year figures reported for the country, which suggest the growth rate fell sharply between 2012 and 2013. We expect growth will remain robust over the medium term, but remain below the level observed in 2011 and 2012. We forecast average annual growth of 18.5% 2014-2018, with the total number of subscriptions expected to reach 8.6mn and penetration of 10.5% by the end of 2018.

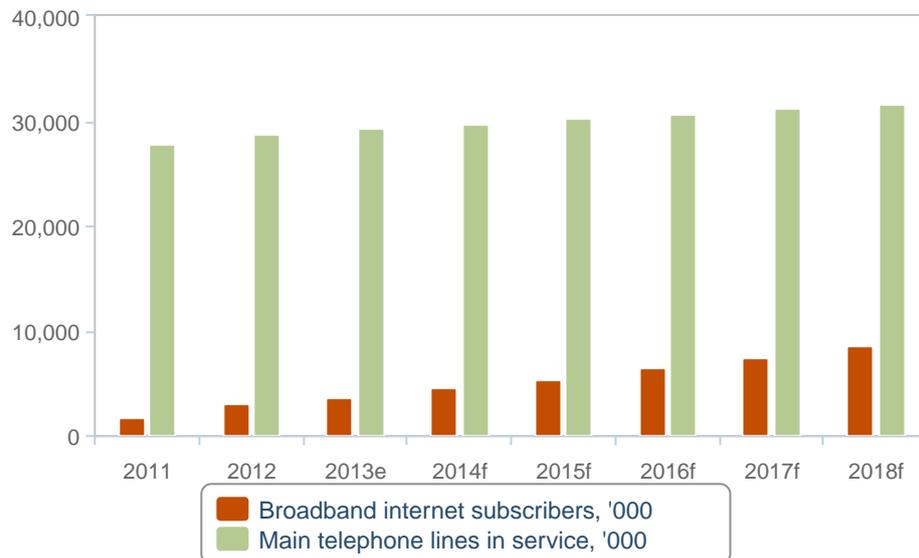
The introduction of a new mobile operator with 3G services including dedicated mobile broadband has the potential to boost the market but **BMI** believes limited coverage as the operator is a relative newcomer to the market will inhibit growth in the short term. Nevertheless, we believe Iran may follow the growing trend in emerging markets for mobile broadband connections to overtake wireline options.

Our internet user figures remain unchanged after revisions following the release of data by the National Internet Development Center. While our revised forecast does not match these figures - we believe that they are inflated - we have taken them into account in our estimates of market size. Data from the ministry of ICT suggest there were 45.884mn internet users at the end of March 2013. This latest set of figures apparently contradicts these previous estimates, illustrating the difficulties of obtaining accurate data on Iran's broadband market.

Given that the national authorities are likely to inflate subscriber data - not least given the Iranian government's plan to create a proprietary internet system - we have taken these new figures into account only partially. We now estimate that there were 12.5mn internet subscribers in Iran in 2013 - a little under half the government's estimate. By the end of 2018, we expect Iran to have 27.4mn users, with a penetration rate of 33.3%. This remains relatively low when compared with other Middle Eastern countries.

Industry Trends - Wireline Sector

(2011-2018)



e/f = BMI estimate/forecast. Source: Operators, BMI

One of the reasons for Iran's low broadband penetration rates is the high cost of internet access and the underlying bandwidth. However, Iran also has a highly regulated internet sector and it is possible that various forms of government control serve to further discourage individuals from acquiring their own internet subscription. In addition to basic telephone infrastructure, Iran's incumbent telecoms operator is also investing in the deployment of a high-capacity fibre network from which broadband services may also be provided. It is hoped that such services as e-education, e-governance and e-health may help to benefit rural communities and would boost broadband penetration rates. The creation of a new national internet network, bypassing the World Wide Web, should also serve to increase broadband user numbers, while also continuing to restricting the spread of outside information within the country.

Industry Risk Reward Ratings

Industry Risk Reward Index

BMI View: *Telecoms markets in the Middle East and North Africa (MENA) are experiencing strong value growth on the back of advanced data services uptake and the expansion of operators' unified communications service portfolios. The overall growth outlook is however tempered by the worsening regional security situation, the escalation of which could significantly weigh on investments.*

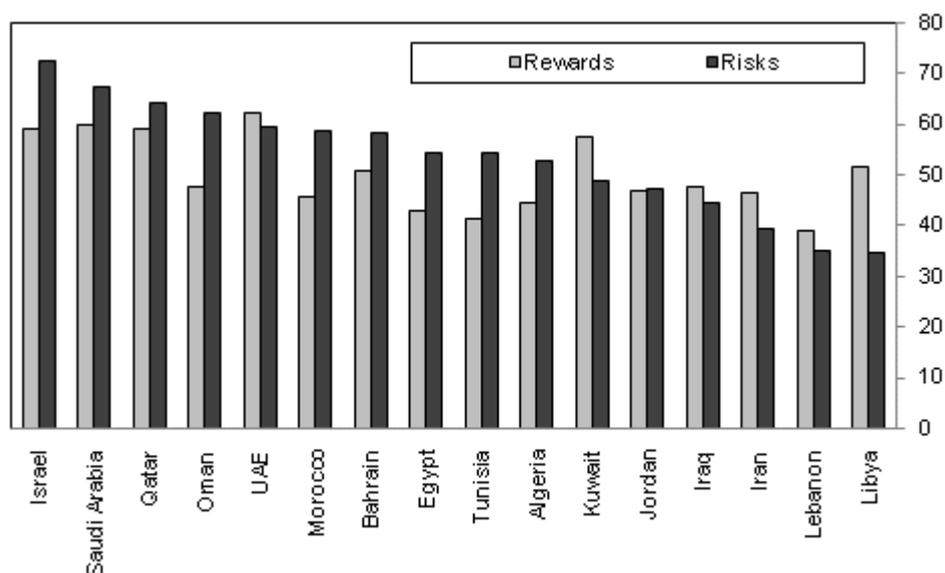
There were notable changes to the scores and rankings of a number of countries in **BMI's** Risk/Reward Index (RRI) table mostly in the bottom half of the table. The majority of changes were due to upgrades in the industry rewards and industry risks scores, resulting in upticks in the average regional score of both categories by 0.5pps and 2.8pps, respectively, over the previous quarter. This was sufficient to offset marginal declines in the average regional scores of the country rewards and country risks categories, bringing the average regional aggregate score for Q115 to 51.2, a 0.5pp increase over the Q414 score.

Israel remains the highest ranked country in the MENA region, despite a 2.3pp decrease to its aggregate score. The country retains the highest country rewards and industry Risks scores regionally, but subscriptions and revenue growth owing to market saturation have dragged its industry rewards score below the regional average for the first time this quarter. Qatar dropped two places to fourth position this quarter, allowing Saudi Arabia and the UAE to each move up one place into second and third positions, respectively. The other four countries in the top half of our table maintained their respective positions, despite changes in the aggregate scores of two of those countries.

Countries in the bottom half of our RRI table saw considerable movements in their rankings compared to the previous quarter, with only Lebanon maintaining its place in last position. Algeria was the biggest gainer, jumping four places to 10th position on the back of 3G-fuelled subscriptions, revenue and capex growth during H114. This development is in line with our prediction in previous updates that the country's performance on our index would improve considerably with the launch of 3G network services. Jordan and Tunisia also moved up our table this quarter into ninth and 14th places, respectively. Three countries - Libya, Iraq and Iran - each moved down two places, mainly due to the outperformance of their peers as highlighted above.

Risk Factors A major Consideration

MENA Risks And Rewards Indices, Q115



Source: BMI

Industry Rewards

The average industry rewards score for Q115 was 43.2. Israel industry rewards scores was downgraded this quarter owing to significant subscriptions losses in H114, which led us to revise down our five-year growth outlook, through to 2018, for the country's mobile market. We however note that the launch of commercial 4G LTE services in the country has the potential to support ARPUs and drive value growth during our forecast period. Lebanon's score was also downgraded to reflect the downward pressure on mobile ARPUs and the slowdown in subscriptions growth as the market approaches saturation.

Saudi Arabia and UAE telecoms operators are leading the way in the development of enterprise solutions and convergence services. This has created new revenue streams for operators and significant investment opportunities in the telecoms ecosystem, leading us to upgrade the two countries' industry rewards scores this quarter. Four North African countries - Algeria, Egypt, Morocco and Tunisia - also saw significant increases to their industry rewards score, mainly due to the strong take-up of 3G services in those countries during H114. In Algeria, the allocation of 3G licences has catalysed investment in the telecoms sector, with

mobile operators scrambling to expand their 3G networks and the incumbent operator, **Algérie Télécom**, responding to the added competition in the broadband sector by upgrading its ageing network infrastructure. These investments have underpinned strong take-up of 3G services and led us to upgrade our five-year 3G/4G growth forecasts for Algeria.

Country Rewards

The average regional score in the country rewards category this quarter was 63.4. Israel and GCC states continue to dominate this category owing to their superior rural-urban ratios and high GDP per capita figures. These factors ensure that network deployment to most parts of the country is less expensive and the majority of consumers can afford high-value telecoms services.

Despite the lower scores of the other countries, the consumer base and youthful demographics in some countries, notably Egypt, Morocco and Iran, create considerable growth opportunities for consumer-based services. We therefore expect improvements in the economic outlook and increasing urbanisation in these countries to bode well for their country rewards scores in the future.

Industry Risks

This category saw significant changes, mostly to the upside, this quarter to reflect improvements in the regulatory environments of some countries. We highlight Morocco and Egypt as outperformers in view of efforts by the respective telecoms regulators in both countries to liberalise the fixed-line sectors and allow fair competition between all market players. In Morocco, the regulator has given the incumbent operator, **Maroc Telecom**, until January 1 2015 to revise its wholesale access tariffs in order to make them more favourable for alternative operators. Algeria's communications minister has also alluded to opening up the fixed-line sector to competition, but we note that the government's significant interest in the telecoms sector, aggravated by the acquisition of a 51% stake in mobile operator **Djezzy**, will continue to weigh on its industry risks score.

Libya, Lebanon, Iran and Kuwait remain the underperformers in the industry risk categories owing to the lack of an independent telecoms regulator and the government's sole ownership of major telecoms operators. The governments of Libya and Lebanon completely own the active telecoms operators in both markets, limiting the prospects for private investments in both markets.

Country Risks

Although our country risks category only witnessed marginal changes this quarter, with the economic prospects of most countries remaining bright. We still expect Iraq to outperform the rest of the MENA region in headline growth in 2014 and 2015, despite the clear deterioration seen in the country's political and security conditions. Morocco and Tunisia are set to benefit from stronger external demand and renewed business and consumer confidence. Egyptian economic activity will regain momentum over the coming quarters, on the back of greater political stability and a rebound in foreign direct investment inflows. On the other hand, the growth prospects for the Levant will remain weighed down by adverse spillover from the Syrian and Iraqi conflicts, including disruptions to regional trade and confidence as well as increased social and political tensions.

Investors will keenly monitor the worsening internal and regional security situation, which pose significant downside risks to investor sentiments and the safety of key telecoms infrastructure. Kuwait's ongoing political crisis will continue to hamper investment activity and long-term economic growth. The government's latest attempts to quell opposition by stripping citizenship from opponents will only further political paralysis. Meanwhile, Saudi Arabia, the UAE, Qatar, Jordan and Bahrain took part in a US-led military campaign against jihadist group Islamic State (IS) in Syria. **BMI's** Country Risk team believes that the involvement of these Arab Gulf states in the campaign will increase risks that IS undertakes retaliatory attacks in the region.

Table: MENA Q115 Risk/Reward Index

	Industry Rewards	Country Rewards	Industry Risks	Country Risks	Telecoms Rating	Rank	Previous Rank
Israel	42.5	90.0	80.0	65.5	63.2	1	1
Saudi Arabia	55.0	69.0	60.0	74.5	62.0	2	3
UAE	60.5	66.0	50.0	69.1	61.6	3	4
Qatar	52.3	72.0	50.0	78.2	60.6	4	2
Kuwait	46.8	78.0	30.0	67.7	55.0	5	5
Bahrain	41.3	69.0	50.0	66.3	53.1	6	6
Oman	41.3	60.0	60.0	64.1	52.1	7	7
Morocco	40.0	56.7	70.0	47.4	49.7	8	8
Jordan	40.0	60.0	50.0	44.9	47.1	9	11
Algeria	40.0	53.0	40.0	66.0	47.1	10	14
Iraq	42.5	57.0	40.0	49.1	46.7	11	9

MENA Q115 Risk/Reward Index - Continued

	Industry Rewards	Country Rewards	Industry Risks	Country Risks	Telecoms Rating	Rank	Previous Rank
Libya	40.0	73.3	10.0	59.6	46.6	12	10
Egypt	42.5	43.7	55.0	54.0	46.4	13	12
Tunisia	35.0	53.3	60.0	48.9	45.3	14	15
Iran	45.0	49.7	20.0	58.8	44.5	15	13
Lebanon	26.3	63.3	25.0	44.8	37.9	16	16
Average	43.2	63.4	46.9	59.9	51.2		

Scores out of 100, with 100 highest. The Telecoms Risk/Reward Index comprises two sub-ratings 'Rewards' and 'Risks'. Scores are weighted as follows: 'Rewards': 70%, of which Industry Rewards 65% and Country Rewards 35%; 'Risks': 30%, of which Industry Risks 40% and Country Risks 60%. The 'Rewards' rating evaluates the size and growth potential of a telecoms market in any given state, and a country's broader economic/socio-demographic characteristics that impact the industry's development. The 'Risks' rating evaluates industry-specific dangers and those emanating from the state's political/economic profile, based on BMI's proprietary Country Risk Index that could affect the realisation of anticipated returns. Source: BMI

Market Overview

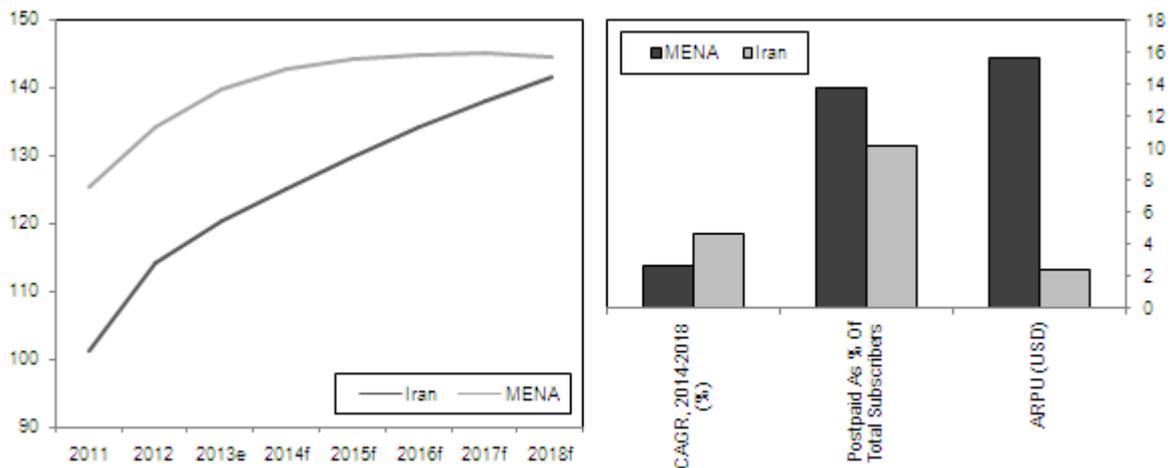
Mobile

Regional Perspective

Iran has a relatively low mobile penetration rate by regional standards and is ranked 12th out of 15 countries in our Middle East and North Africa coverage. This justifies our positive growth outlook for mobile subscriptions in Iran, which envisages a CAGR of 4.6% between 2014 and 2018, compared with the regional average of just 2.6%. Only Iraq, which, unsurprisingly, has a lower penetration rate than Iran, is expected to grow at a faster rate. While the overall growth is positive, operators face challenges. An overdependence on voice service revenues which are under increasing downward pressure from intense competition, combined with the depression of the Iranian rial, means the country has the lowest mobile ARPUs in the region in USD.

Regional Perspective Data

2011-2018



e/f = BMI estimate/forecast. Source: BMI, Operators, Regulators

Table: Iran's Mobile Market Regional Comparison, 2013

	Iran	Middle East & North Africa	Rank (Out of 16)
CAGR 2014-2018 (%)	4.6	2.6	2
Mobile Penetration (%)	120.4	139.7	12
Postpaid as % of entire market	10.1	13.8	7
ARPU (USD)	2.4	15.6	16

Source: BMI

Key Developments

- In early August 2014 **MTN Irancell** received permission from the Ministry of Information and Communications Technology to begin piloting 3G services in some university campuses and government buildings in Tehran. Following technical and financial reviews of the pilot, MTN will be authorised to begin offering commercial 3G services from August 23 2014, marking the end of mobile operator **RighTel**'s period of exclusivity for advanced mobile data services.
- On August 20 2013 the mobile arm of **Telecommunication Company of Iran**, MCI, listed on the Tehran Stock Exchange. There were no financial details of the event, however. This development was the follow-up to an initial offering of 5.5% of MCI's shares on Iran's Over-The-Counter market for USD396mn in December 2010.
- After four years of censorship, internet users in Iran were allowed to access social networking sites Twitter and Facebook on September 16 2013, but access to the sites was promptly blocked again on September 17 2013. The secretary of the Iranian state committee responsible for filtering web content wrote the incident was written off as a technical problem and denied any government intention to lift the ban on the social networking sites.

Market Growth

Iran has two leading mobile operators, MTN Irancell and **Mobile Communications Company of Iran**. The latter is a state-owned entity, owned by fixed-line incumbent TCI. Irancell is 49% owned by South Africa's **MTN** and is the only operator to offer consistent data to inform our assumptions on market growth. We believe these companies have controlled almost 99% of the market for several years. However, a new operator in the form of 3G-focused RighTel launched in 2011.

The Newest Player

Data from RighTel is scarce, with no definite subscriber data released on a quarterly or even annual basis. The company states it is the third largest operator in the market, which **BMI** believes is easily achievable as the only other operators aside from Irancell and MCI are regional with limited scope. **BMI** estimates data for **Taliya**, **MTCE** and **Kish Free Zone Organisation**, with the operators controlling less than 1mn

subscribers between them. If Rightel has achieved third place in the market - a remarkable feat given its recent launch - **BMI** estimates it must have over 1mn subscribers.

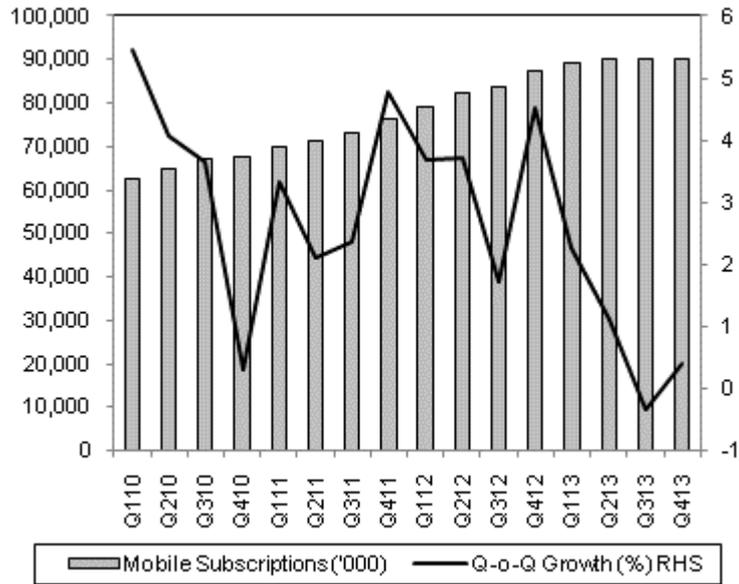
Rightel's position in the market is difficult to ascertain as the company does not release any subscriber figures. However, **BMI** has said several times it believed there was pent-up demand for 3G services, which suggests take-up could easily have been very fast. **Tamin Telecom** was authorised to provide 2G and 3G services in April 2010, the first 3G licence to be granted in the country. However, it was not until late November 2011 that services were launched, under the Rightel brand. In February 2013, Tamin was granted an extension of its exclusive rights to the 3G network for another year - to September 2014. In the absence of data from the operator, we estimate Rightel to have had around 3.45mn subscribers by the end of June 2013. The news surrounding Rightel remains confused and conflicting. In March 2013 the Tehran Chronicle quoted local SIM card sellers saying that Rightel had a strong subscribership among students. The news agency also reported that the cheapest plan is a data-only plan retailing for IRR200,000 (USD6), while a postpaid contract costs IRR2mn (USD60). TeleGeography referred to local press reports stating that Rightel only began selling 3G SIMs in February 2012 but has faced criticism from the authorities. The Iran Project reported four grand ayatollahs had condemned the company's video calling services in February 2013 saying it would 'jeopardise the public chastity' and inflict damage on the country's religion and political system. With the operator not currently publishing financial or operating performance, and no suggestions in local press or from the regulator, our data for Rightel remains estimated for the foreseeable future.

Rightel's position at the end of 2013 is still impressive, if any of the above stories are true. To reach third position in the market with more limited network coverage than the two leading operators in the market highlights **BMI**'s view of pent-up demand for 3G. Objections to video calling or media messaging could put downside risks on the company's continued growth, but negative press on the subject appears to have subsided for the time being. If criticism resurfaces, however, **BMI** believes the company could mitigate the negative impact with its wide range of new products. The company emphasises on its website that it offers mobile TV, location-based services and mobile internet. The company also indicates it will soon offer mobile banking services.

Although we believe Rightel has built up an impressive subscriber base in a short period of time, because its cheapest plan offers data-only services, we expect that a large majority of Rightel subscribers also own MTN Irancell or MCI SIMs for voice services.

Mobile Market Growth

2010-2013



Source: BMI, Operators

Data from MTN Irancell show 42.697 mn subscribers at the end of Q214, up 1.6% year-on-year (y-o-y). According to its half year results, Irancell holds second place in Iran's mobile market with a share of 47.2%. This fits with our expectation that Irancell and MCI control more than 95% of Iran's mobile market, even after newcomer Rightel's impressive growth. Nevertheless, Rightel has been making an impact and the expected popularity of 3G in the country could see it be a leader in net addition terms in 2013 and 2014.

Table: Mobile Market, June 2014

Operator	No. of subscribers ('000)	Market share (%)
MCI (e)	46,510	51.4
MTN Irancell	42,697	47.2
Taliya (e)	1200	1.3
MTCE (e)	54	0.1
TKC (e)	18	0
Total	90,479	100

e = estimate. Source: BMI, operators

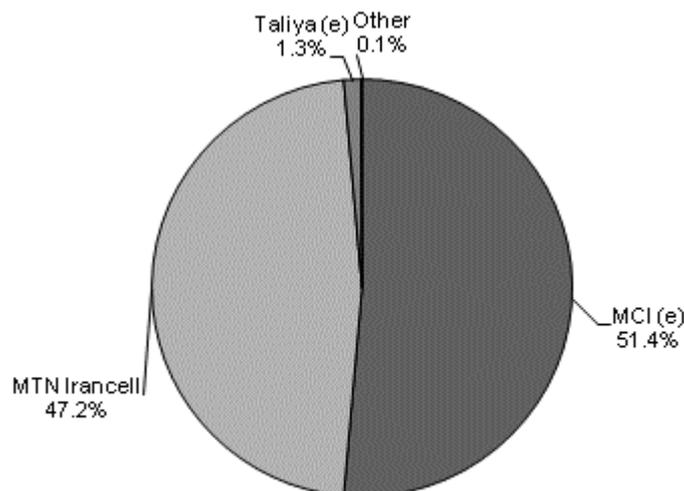
Market Shares

MCI continues to lead the mobile market with an estimated market share of subscriptions at 51.4% at the end of Q214, up from over 50% at the end of 2012. **BMI** believes the company added around 1.104000 net new subscriptions in 2013, which is significantly less than H114 which registered 1.905,000 subscriptions.

As for MTN Irancell, growth accelerated in 2012, after a weak performance in 2011, with net additions of 5.821mn new subscribers during the year. Strong performance continued in 2013, with net additions of 872,000, but a net loss of 1.323mn subscriptions in H114 saw its position weaken. **BMI** calculates Irancell's market share declined from 47.5% in Q213 to 47.2% by the end of the Q214.

Market Shares

June 2014 (%)



e - BMI estimate. Source: BMI, Operators

BMI revised its assessment of the number of mobile subscribers served by fourth-ranked operator Taliya in early 2011. The operator provides prepaid services only and we believe this included a significant number of inactive subscribers. This led us to make substantial downward revisions to our estimate for the number of Taliya mobile subscribers. We believe the operator's subscriber base was largely flat during 2012 and 2013, resulting in a contraction in its market share to 1% because of the strong growth recorded by its bigger rivals.

Fourth-ranked MTCE commenced operations in mid-2002 as the first provider of mobile prepaid SIM cards in Iran. It is licensed to operate a GSM 900MHz mobile service, with a capacity of 35,000 customers in Esfahan. Its 15-year licence expires in May 2016. MTCE is 49% owned by Malaysian company **Axiata**, which announced in July 2010 it was possibly looking to sell its stake in MTCE. In May 2011, Axiata entered into an agreement to dispose of its holding in MTCE to **Telecommunication Company of Esfahan**, thought to be its partner in the venture, subject to certain (unspecified) conditions. In Axiata's annual report for 2011, the 49% holding in MTCE was classed as a 'non-current asset held for sale'. Based on market share data provided by MTN and old operating data provided by Axiata, we estimate MTCE had

some 30,000 subscribers by the end of 2013, up from 26,000 at the end of 2012, and 18,000 in 2011, but still an insignificant share of the overall mobile market. There is little change on a quarterly basis.

TKC is owned by the Kish Free Zone Organization and operates solely on the island of Kish. We estimate its subscriber base to be just over 10,000.

BMI had hoped that the sale of MTCE could present an opportunity for one of Iran's smaller operators to expand their market share and network reach or attract a new company to the Iranian market, thereby stimulating price competition and service innovation. However, it now seems likely that the company will remain operating in Esfahan province only. Although UAE-based **Etisalat** secured exclusive rights for two years to provide 3G services in Iran, in 2009 its licence was withheld and it has since indicated it may no longer be interested in entering Iran's telecoms market. International sanctions against Iran, the continued state dominance of all sectors of the telecoms market and the difficulties faced by international investors in the country are all likely to act as deterrents to potential foreign investors.

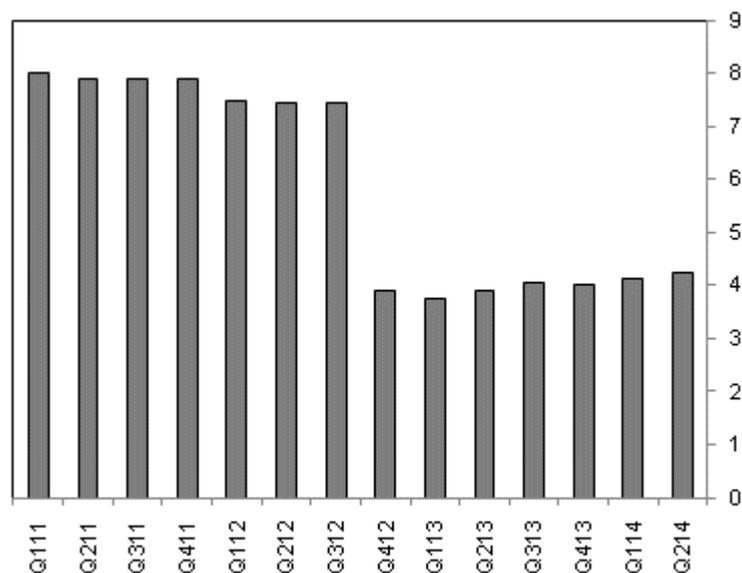
Usage

Irancell is the only operator for which ARPU figures are available. After staying above USD8 for most of 2009, 2010 and the early part of 2011, MTN's ARPU slipped to USD7.9 in Q211 and remained at that level for the remainder of the year. In 2012 it plummeted to USD3.91 - partly a reflection of exchange rate discrepancies, and partly because of Iranians' low purchasing power. This low rate remained in 2013, rising only slightly to USD4.26 in Q214.

The downtrend in MTN's ARPU in USD is due to the depreciation of the local currency following a raft of international sanctions against Iran, as the operator reported increasing ARPU in local currency in every quarter between Q312 and Q313, except for Q412. That said, we foresee an increase in downward pressure on MTN's ARPU in the near future as price competition between operators intensify amid increasing market saturation, and increasing competition from RighTel.

MTN Irancell ARPU, (USD)

2011-2014



Source: BMI, MTN

We believe there is significant potential for ARPU levels to rise over the longer term, if data and 3G services take off, but troubles surrounding the kinds of products offered by the market's only 3G operator could limit the impact of 3G if objections remain. In addition, the inability of other operators to offer 3G network services will hold back growth and investment in the country. However, in the short and medium term, as long as the overwhelming predominance of prepaid services continues and MTN continues to attack MCI's market share with price as a key competitive factor, ARPU levels are likely to remain very low.

Considering the dominance of prepaid subscriptions and low use of value-added services and mobile data across the market as a whole, we suspect MCI and the smaller operators have ARPUs that are similar to those of MTN.

Networks

3G

Tamin Telecom was the first operator awarded the right to offer 2G and 3G services in April 2010. The company was granted the exclusive right to provide 3G services for a two-year period, and in February 2013, this was extended by a third year - to September 2014. It was not until November 2011 that services were launched, under the RighTel brand.

In early August 2014 MTN Irancell received permission from the Ministry of Information and Communications Technology to begin piloting 3G services in some university campuses and government buildings in Tehran. Following technical and financial reviews of the pilot, MTN will be authorised to begin offering commercial 3G services from August 23 2014, marking the end of mobile operator RighTel's period of exclusivity for advanced mobile data services. MCI is also expected to receive a 3G licence and launch services during H214.

In November 2013 RighTel's managing director stated that nearly two years after launching services the operator had around 1.5mn subscriptions on its network. **BMI** believes weak take-up of 3G is due to RighTel's limited network coverage as well as its hostile relationship with the country's religious leaders, resulting in several of its services being banned.

BMI believes MTN is in a much better position to capture growth in the 3G market, owing to strong financial backing and the vast experience of MTN Group, as well as the ability to rely on existing customers upgrading to 3G services. In its latest results announcement, relating to the six months ended in June 2014, MTN stated there were 12.6mn data users and 13mn active smartphones on its network, accounting for more than 30% of its total subscriber base of 42.7mn. Access to 3G-enabled devices is therefore not expected to act as an obstacle to take-up of 3G services in the country.

BMI has adjusted its 3G historical data and forecasts in order to reflect RighTel's weaker than expected performance and the anticipated launch of 3G services on MTN and MCI's networks in H214. We estimate there were around 1.6mn 3G subscriptions in Iran at the end of 2013 and we forecast this to rise to 9.9mn by the end of 2014.

We believe Iran's brightening macroeconomic outlook will also underpin strong take-up of 3G services. On the back of improving relations with the West, **BMI**'s country risk team increased Iran's GDP growth forecast for 2014 from 2.8% to 3.2%. This is an important improvement on the contraction of Iran's

economy in 2012 and 2013, and is expected to continue throughout the rest of our forecast period to 2018. Private consumption growth is also on the rebound, forecast to reach 4% in 2014 and climb to 5.5% by 2018.

That said, there remains important political opposition to the proliferation of advanced mobile data services. In 2013 RighTel's video calling service faced strong criticism from the country's clerical elite, who argued that it conflicted with traditional values. Iran's Ayatollahs issued a fatwa against video calling in February 2013 and RighTel was forced to suspend the service. MTN may face similar challenges, but **BMI** believes its strong position in the Iranian mobile market and vast experience launching 3G networks in other countries will allow it to overcome them more easily than its newer competitor.

Mobile Content

Compared with other regional mobile markets, Iran can be considered to be at an early stage in the deployment of mobile VAS. Although all of the country's mobile operators offer basic voice-based VAS such as call forwarding, call barring, caller ID (call line identification presentation, or CLIP), conference calling and voicemail, the market for data services has, until recently, been limited to SMS.

SMS

All of Iran's mobile operators, including the smaller regional operators MTCE and TKC, offer SMS services. So-called 'value-added SMS services' offered by MTCE include a mobile dictionary service, which enables customers to translate words in Farsi into English and vice versa, and a 'Mobile Qur'an' service, which enables users to receive verses from the Qur'an in English and Persian by entering the verse and Surah Number.

Mobile Operator Data

Table: Iran Mobile Market Overview

	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14
Total Mobile Subscribers	79,196	82,128	83,534	86,000	87,485	88,464	87,966	88,534	88,120	90,479
Q-o-Q Growth (%)	3.7	3.7	1.7	3.0	1.7	1.1	-0.6	0.6	-0.5	2.7
No of Net Additions	2,811	2,932	1,406	2,466	1,485	979	-498	568	-414	2,359
Penetration (%)	103.6	107.5	109.3	112.5	113.0	114.2	113.6	114.3	112.3	115.3

Source: BMI, operators

Table: MTN Irancell

	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14
Subscriber Numbers ('000)										
Total Number	36,831	38,296	39,382	40,502	41,542	42,025	41,295	41,374	41,783	42,697
Market Share (%)	46.51	46.63	47.14	47.10	47.48	47.51	46.94	46.73	47.42	47.19
No of Net Additions	2,150	1,465	1,086	1,120	1,040	483	-730	79	409	914
Market Share of Net Additions (%)	76.49	49.97	77.24	45.42	70.03	49.34	146.59	13.91	34.49	38.75
Subscriber Usage										
Minutes of Use/Subscriber	62	65	64	65	Na	Na	Na	80	Na	84
Blended ARPU (USD)	7.48	7.44	7.44	3.91	3.76	3.9	4.06	4	4.13	4.26
Financial/Structure										
Operating Revenue (USDmn)	Na	6,506	Na	5,669	Na	4,402	Na	Na	Na	Na

na = not available. Source: BMI, MTN

Table: Hamrahe Aval (Mobile Communications Company of Iran)

	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14
Subscriber Numbers ('000)										
Total Number	41,500	42,950	43,265	43,501	43,820	44,190	44,298	44,605	45230	46510
Type: Prepaid	36,935	38,226	38,506	38,716	39,000	39,329	39,425	39,698	Na	Na
Type: Postpaid	4,565	4,725	4,759	4,785	4,820	4,861	4,873	4,907	Na	Na
Market Share (%)	52.40	52.30	51.79	50.58	50.09	49.95	50.36	50.38	51.33	51.40
No of Net Additions	657	1,450	315	236	319	370	108	307	625	1280
Market Share of Net Additions (%)	23.37	49.45	22.40	9.57	21.48	37.79	-21.69	54.05	52.70	54.26

Source: BMI, Hamrahe Aval

Table: Taliya (Rafsanjan Industrial Complex)

	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14
Subscriber Numbers ('000)										
Total Number	838	850	852	861	875	890	899	910	1050	1200
Type: Prepaid	838	839	840	849	860	874	874	883	Na	Na
Type: Postpaid	0	11	12	12	15	16	25	27	Na	Na
Market Share (%)	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.3
No of Net Additions	3	12	2	9	14	15	9	11	140	150
Market Share of Net Additions (%)	0.1	0.4	0.1	0.2	0.7	1.5	-3.1	3.1	11.8	6.4

Source: BMI, Taliya

Middle East And North Africa Mobile Content

With most markets in the Middle East and North Africa (MENA) region now fully saturated in the mobile voice market, operators' opportunities for value growth in the consumer segment lie firmly in encouraging greater use of mobile data services. In GCC countries, which enjoy more political stability and have more robust economies, LTE network coverage is nearly ubiquitous in major urban centres and operators are increasing their efforts to promote data-intensive content, such as video and music streaming. In the Levant and North Africa, where consumer spending power is weaker, LTE networks are rare and 3G has yet to become the dominant technology; indeed, the first 3G network in Algeria was launched at the end of 2013

and Iraqi operators only received 3G licenses in May 2014. Therefore, mobile content outside the GCC remains more heavily skewed towards mobile financial services (MFS) and limited 3G offers.

New Services Encourage Increased Data Usage

BMI has well documented rapid take-up of mobile data services throughout the MENA region, on the back of mobile operators' heavy investments in 3G and 4G networks and well as the continually falling cost of smartphones and other data-enabled devices. Here, we highlight other investments and agreements mobile operators have made in order to help sustain growth in data usage among consumers and enterprises.

Since late 2013, **du**, **Etisalat** and **Zain KSA** have all launched new multiple SIM data sharing plans targeting enterprises and consumers. These plans often have high data limits, with Zain KSA offering a staggering 1TB of data, and are meant to encourage subscribers to use mobile data networks on devices other than their smartphones, including tablets, portable gaming devices and cars. Taking another approach, **Saudi Telecommunications Company (STC)** pioneered the establishment of LTE roaming services, signing an agreement with its subsidiary Viva Kuwait to enable subscribers roam on LTE networks while travelling between Saudi Arabia and Kuwait. Meanwhile, Etisalat SmartHub partnered with **Aicent** to offer international LTE roaming services, enabling all operators connected to the SmartHub to benefit from the service.

Another emerging trend is the implementation of carrier billing services for mobile app stores. **Zain Kuwait** partnered with **Microsoft Devices** to enable prepaid and postpaid subscribers to pay for apps, games and premium content from the Nokia app store through their account balances or monthly bills. Microsoft announced in June that it is also in discussions to set up operator billing agreements with the Etisalat and du in the UAE. STC launched integrated billing for **BlackBerry** smartphone customers in Saudi Arabia, likewise enabling subscriber to pay for purchases from the Blackberry app store through their standard mobile bills. In the UAE, Etisalat set up a similar service for purchases made in the Google Play store. **BMI** expects this trend to spread across the region, as the simplified payment method is likely to encourage greater usage of premium apps and mobile data services, thus benefiting both content and service providers.

Finally, operators are also getting more directly involved in developing mobile content; in June 2014 **Mobily** launched an app developer club and **Zain Jordan** announced plans to open an innovation campus for start-ups by the end of the year. As well as a means for operators to increase customer loyalty and distinguish themselves from competitors, these new services are designed to encourage subscribers to rely

more heavily on their mobile devices to access content on the internet such as videos, music, financial, public and health services.

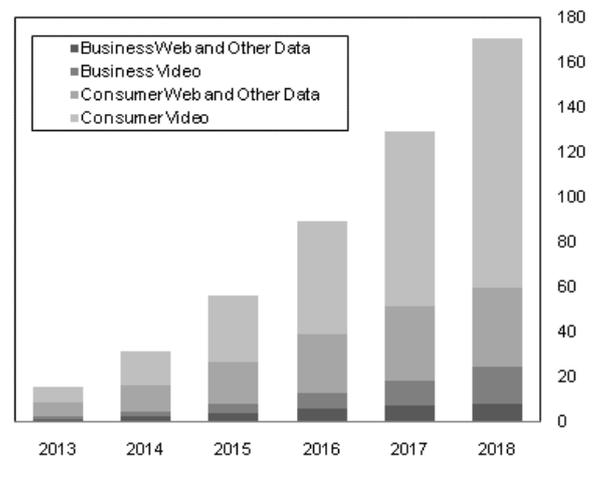
Entertainment Content

Video is by far the most data intensive value-added service and mobile operators are quickly developing services to encourage subscribers to access video over mobile networks with their smartphones and tablets. In March 2014, Etisalat launched eLife ON in the UAE, a live streaming TV service with more than 200 channels for mobile devices. In May, **Zain Bahrain** introduced a new mobile TV app which allows subscribers on iOS and Android-based devices to watch up to 58 TV channels and access a wide range other documentaries, movies and TV series on demand. Following the launch of its 4G network in June 2014, **Vodafone Qatar** also partnered with leading pay-TV provider **OSN** to offer a package that allows customers to stream up to 8GB of music and videos from 'Go by OSN' for QAR37 (USD10.2), after a six-month free trial period. In the same month, Qatar's incumbent operator **Ooredoo** launched live streaming for its on demand mobile TV service, Mozaic Go. Finally, in July Zain KSA launched a new weekly prepaid mobile package, targeted at the youth market, which includes 1GB of data and unlimited **YouTube** viewing.

While **Spotify** has taken the North American and European markets by storm with its music streaming platform, **Anghami**'s lower cost service and focus on local content has enabled it to establish a leading position in the Middle East. In February 2014 Anghami partnered with Lebanese operator **Alfa** to offer 150MB of music streaming data for just USD1 a month. Since then, Ooredoo's subsidiary **Nawras** in Oman, **Viva Bahrain** and Vodafone Qatar have also partnered with Anghami to offer music streaming services. The Anghami app is available for iOS and Android devices and includes extra features such as making playlists and downloading digital content for offline listening. In a June 2014 press release, Viva Bahrain stated Anghami had 5mn users across the MENA region.

Consumer Video To Drive Content Growth

Saudi Arabia Mobile Traffic By Type And Segment, 2013-2018 (PB)



Source: Cisco Virtual Networking Index

Another development entertainment related mobile content was the launch of Arabic language e-book store **Kotobi** in February 2014, backed by **Vodafone Egypt**. In response to limited access to credit cards for online purchases, Kotobi enables customers to purchase e-books using mobile payment platforms, and download them through mobile apps on the iOS and Android operating systems. In the following month, Jordan based e-book retailer **iKitab** also launched an app for Android devices.

Forecasts from **Cisco Systems'** Virtual Networking Index (VNI) support **BMI's** view that consumer demand for video and other entertainment-related content will drive demand for data services over the five years to 2018. Although the VNI only offers detailed forecasts for Saudi Arabia in the MENA region, **BMI** believes a similar trend will play out across the GCC and in major economies in North Africa, notably Egypt and Morocco.

M-Government And MFS Crossover

Adapting e-government and e-commerce services to mobile devices remain other key areas of mobile content development in MENA, particularly in GCC countries. New developments in the region include a partnership between the Bahrain traffic department and the e-government authority to launch mobile vehicle registration. Zain Jordan and Microsoft also signed an agreement with the Ministry of Information and Communications Technology to launch a competition to develop mobile-based government services.

In the UAE, which has been at the forefront of developing m-government services in the region, there has been increasing crossover between mobile financial services and m-government. For example, mobile operator du joined the government mPay platform in June 2014 to enable subscribers to pay for telecoms services and utility bills in one place. Around the same time, nine members of the UAE Banks Federation announced plans to develop a mobile wallet, as part of the Smart Government initiative, which will allow residents to pay for more than 90 government services over their mobile handsets. The m-wallet will also function as a means for those without traditional bank accounts to store and transfer money, and serve as a payment method in retail outlets.

North Africa Picking Up

North Africa remains less developed than the Middle East in terms of mobile content, owing to lower consumer spending power and the slower deployment of 3G mobile data networks. However, several developments indicate that take-up of more data-intensive mobile content is on the rise in North Africa.

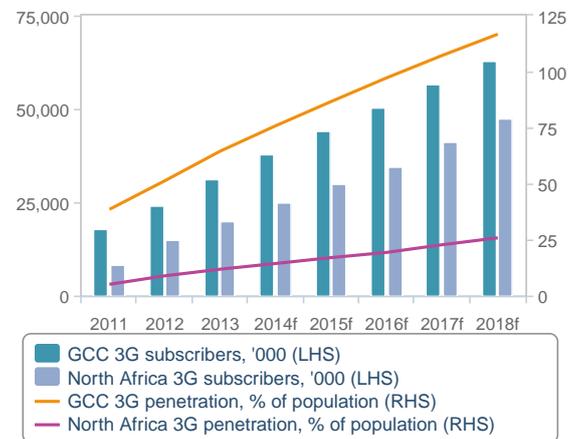
A study conducted by the Moroccan telecoms regulator, Agence Nationale de Réglementation des Télécommunications showed that one third of Moroccans aged 12 to 65 owned a smartphone at the end of 2013 and that usage of mobile apps had doubled between 2012 and 2013. The study also reported that e-commerce grew by 72% year-on-year in 2013. As smartphone ownership continues to rise, we expect this to translate into increasing m-commerce opportunities throughout the rest of 2014 and our forecast period to 2018.

Meanwhile, new data from Tunisia's regulator, l'Instance National des Télécommunications, revealed that 3G penetration is far higher than previously estimated. According to the new data, at the end of 2013 there were nearly 3mn 3G subscriptions in Tunisia, equal to around 23% of total mobile subscriptions. This was up from 11.4% in 2012, and more than three times as many subscriptions as earlier regulatory data indicated.

These developments suggest that demand for more advanced mobile content services is set to take off in North Africa. Operators are encouraging this trend through prepaid offers to access the most popular over the top messaging and entertainment content. For example, **Maroc Télécom** added unlimited **Whatsapp** messaging and on demand access to four **MTV** channels to its MT-Talk passes in April 2014, which already allowed subscribers without 3G subscriptions to use **Facebook** Messenger and **Twitter** for MAD5 (USD0.59) for two days or MAD30 (USD3.5) for a month. Similarly, in **Ooredoo Tunisia** launched PocketNet in February 2014, a mobile data service that allows subscribers without 3G subscriptions to

North Africa Following In GCC

3G Growth Forecasts, 2011-2018



f = BMI forecast. Source: BMI

access **Wikipedia**, a French-English dictionary, a translation website and currency converter for TND0.2 (USD0.12) for one day or TND1 (USD0.59) for 30 days.

In Algeria, mobile operator **Mobilis** signed a three-year partnership with Ecole Nationale Supérieure d'Informatique (ESI) to develop 3G services, apps and local content, following the launch of 3G services in early 2014. Meanwhile, in July its parent company, state-owned fixed-line operator **Algérie Télécom** launched a digital library service powered by France-based **Cyberlibris**, available on PCs and tablets with an internet connection.

While **BMI** maintains a positive outlook for the Egyptian telecoms market over the long term, we note that development of mobile content services in 2014 has been overshadowed by the country's economic challenges and **Telecom Egypt's** (TE) anticipated entry into the mobile market as an MVNO. Although TE's entry into the mobile market is expected to apply further downward pressure on ARPUs, we believe Egypt's large population and rising GDP and private consumption growth over the five years to 2018 to result in growing consumer demand for mobile content.

Wireline

Wireline services in Iran are limited to major cities with rural networks undeveloped. Incumbent **Telecommunications Company of Iran (TCI)** remains in state hands, with no competition, limiting incentives for investment and service development. This has been detrimental to the interests of consumers, as well as wider state development goals.

While both TCI and the **Telecommunications Infrastructure Company of Iran (TIC)** continue to invest in networks, long-term demand potential is limited by the government's decision to build out its own internet network, with restricted access to content it deems unsuitable. In addition, wireline broadband faces the threat of dedicated mobile broadband in the longer term but has had little impact over 2013.

Fixed-Line

The main drag on the development of Iran's fixed-line market are the comparatively expensive products offered by monopoly provider TCI. There were 28.759mn lines in service at the end of 2012, a figure **BMI** believes grew by less than 2% to reach 29.31mn at the end of 2013. We believe growth will continue to slow as mobile voice continues to become more attractively priced, which will result in fixed-to-mobile substitution as witnessed in other regional markets and indeed globally. The addition of a new operator to the mobile sector could encourage competition and competitive pricing.

Incumbent TCI releases little data on its performance in any sector of the telecoms market in which it is present. The latest data from TCI relate to the end of June 2010, when it had 25.4mn fixed lines. This compares with 25.8mn at the end of 2009 and 24.8mn at the end of 2008. With no new data available from the operator, **BMI** believes the market may have seen some growth in 2011 and 2012 in line with the ITU's expectations, but we believe growth was slower than reported.

TCI's growth, **BMI** believe, is down to its focus on increasing the number of villages that are connected to its network. While the data from the operator only relates to June 2010, the number of connected villages reached 52,600, while some 9,800 villages were equipped with rural ICT services, highlighting the company's rural focus. **BMI** believes this will have continued as a move to boost TCI's reputation.

Broadband

Iranian incumbent operator TCI also dominates the internet market through its subsidiary **Data Communication Company of Iran (DCI)**. TCI has announced ambitious plans to expand its internet user

base but **BMI** believes the market's long-term growth will be held back by the heavy interference from the government on what Iranians are allowed to access. This threat has not diminished, and in January 2014 it was reported Iran was seeking help from China to build its National Information Network (NIN).

BMI estimates there were just under 3.7mn broadband subscriptions in Iran at the end of 2013, growth of 20% for the country's market. However, we note there is considerable downside potential to our forecast outlook as the government adds more restrictions to what consumers can and cannot access. Iranian data for end-March 2013 claim around 6mn people access the internet using fibre-optic connections; **BMI**'s estimate that the actual number of broadband connections stood at about half this figure for end-2012 was on target. The Islamic Republic News Agency also claims that there were 867,000 people using high-speed internet access in Q113.

The launch of 3G operator **Rightel** in 2011 has the potential to bring dedicated mobile broadband options to a wider number of Iranians and catalyse a dynamic of competition that should incentivise the incumbent to improve quality of service. However, Rightel's network is only covering a handful of cities and the company has given little indication of its plans regarding dedicated mobile broadband options. Rightel's website states its dedicated mobile broadband service offers connections up to 21Mbps and 42Mbps, with prices ranging from IRR20,000 to IRR100,000. At these prices, accessing internet services will remain out of reach for many.

BMI believes that Iran's internet market has the potential to follow global emerging market trends whereby mobile internet services drive market growth. At present, the potential in the market is limited by a lack of competition for 3G services and also wider problems such as access to computers and network infrastructure outside major towns and cities.

Although ADSL is the main form of broadband internet connectivity, other broadband technologies have emerged and have the potential to grow in significance (e.g. **Laser Company** announcing in January 2007 that all of Tehran's districts had been covered by its WiMAX-based wireless broadband network).

Infrastructure

Ongoing investments by TCI in the expansion of optical fibre and international bandwidth capacity should go some way towards improving internet service quality. According to a report in March 2010 by news agency Zawya, TCI had announced plans to extend the National Internet Network (NIN) to achieve true national coverage over the next 12 months. It is understood that the expansion project would also increase network capacity fourfold. Mohammad Ali Aryanian, TCI's deputy director of IT, is reported as saying that

contractors were in the process of setting up facilities and equipment for the upgrade, which was to come on stream within six months. The national internet network is scheduled to come online during 2013, and could potentially permit the authorities to cut off the entire country from the World Wide Web.

Meanwhile, several Iranian companies, including TCI, have been involved in different initiatives aimed at expanding the amount of international bandwidth capacity. In November 2009, it was reported that privately owned Iranian company **Iran Mobin** had formed a 50/50 equity joint venture with **C-Ring Telecom**, itself a venture of Russian long-distance operator **Synterra** and Azerbaijan's **AzTelekom**. The project aimed to collaborate on the planned roll-out of a new fibre-optic ring around the Caspian Sea to handle Europe-Asia voice and data transmission and improve internet service delivery in the Caspian region. Iran Mobin will connect to the C-Ring network through the backbone of state-owned Telecommunication Infrastructure Company (TIC), the only backbone infrastructure operator in Iran.

For its part, TIC has signed an agreement with another Russian carrier, **Rostelecom**, to share international transmission links. The two companies were reported in April 2010 to have signed a joint memorandum of understanding to act as strategic partners to create a North-South telecommunications transit corridor. The project reportedly aimed to meet growing demand for telecommunications services in the Caspian and Middle East region and would increase the capacity of international backbone links to transit voice traffic and internet access. As the first step the memorandum included the joint modernisation of national networks and relevant international border crossings through installation of DWDM, increasing total capacity of the transit corridor to 100Gbps. TIC is also involved in two new cable systems providing regional and international capacity.

One of them, the Europe-Persia Express Gateway (EPEG) fibre optic cable system, is a 10,000km cable running from Frankfurt, Germany, through eastern Europe, Russia, Azerbaijan, Iran, the Persian Gulf and finishing in Oman, which went live in September 2013. TIC was one of the major investors in the cable system, along with Russian operator Rostelcom, **Omantel** and UK-based **Cable and Wireless Company** (CWC). At launch, the cable reportedly brought Iran's international bandwidth capacity up from 72Gbps to 82Gbps, which Iran's Communications Minister announced plans to increase to 100Gbps by December 4 2013.

WiMAX licences were awarded to four companies in March 2009, with specific provinces per licensee. **MTN Irancell** was licensed to provide WiMAX services in Tehran, East Azarbaijan, Isfahan, Razavi Khorasan, Fars and Khuzestan, however, it has stated that take-up remains slow on account of bandwidth and content limitations. In its H113 results, **MTN** claimed its Iranian subsidiary, Irancell, had 307,000

WiMAX subscribers as of June 2013, up by almost 33% year-on-year (y-o-y) from 231,000 subscribers in June 2012. In December 2013 MTN Irancell extended its WiMAX network to the city of Khorramshahr. The extension has helped the operator expand its WiMAX service to a total of 38 towns, compared with seven cities at the time of the launch of the service in January 2010.

Two other companies, **Espadan** and **Rayaneh Danesh Golestan**, were respectively permitted to offer WiMAX services in Esfahan Province and Golestan Province, while **MobinNet Telecom** was the fourth company to be awarded a nationwide WiMAX licence to offer services in all 31 provinces. The company paid USD107mn for the licence in 2008, launching services in 35 major cities the following year.

In June 2013, **ISP Iranian Net Communication and Electronic Services** (Iranian Net) announced plans to begin deploying a fibre-to-the-x (FTTx) network by the end of August, according to Iran's telecoms watchdog, the Communications Regulatory Authority. Iranian Net has been granted a licence to deploy the FTTx network in Mashhad, Tehran, Shiraz, Karaj, Qom, Isfahan and Tabriz. The company announced its intention to provide services to 400,000 subscribers by the end of August 2013 and gradually increase its subscriber base to a total of 1mn over the next two years.

Iran National Internet Network

The continued concern by the Iranian government relating to the spread of outside information within the country remains at the fore and the regime has pressed ahead with the creation of a separate internet network for domestic use only. Plans for the National Internet Network (NIN) were approved by the Iranian cabinet in May 2007, and the June 2009 presidential election, in which the internet disseminated news and images, convinced the authorities that they urgently needed their own, controllable version of the web. The government also argues the NIN is a matter of national security.

In Q212, Ali Aghamohammadi, the Iranian deputy vice president of economic affairs, announced that the country will be launching a new 'halal' internet that will aim to rid the web of Western influences. 'Iran will soon create an internet that conforms to Islamic principles,' he said, 'to improve its communication and trade links with the world.' The network would bypass international gateway connections. In early 2014, TIC deputy head Hassan Karimi said that 35% of domestic data consumption in Iran was hosted by Iranian companies.

According to a 410-page report examining freedom on the internet and published by Freedom House, an American NGO, Iran was the least free country, as it has high levels of oppressive policies, such as intimidating and even in some cases jailing people for what they write online.

In September 2012, the halal network was launched, with government agencies and the military initially being migrated to the closed network. The civilian population will be switched to the new network in due course, which banned Google and Gmail at the end of September 2012. Iran has one of the biggest Internet filters of any country in the world, preventing normal Iranians from accessing countless sites on the official grounds they are offensive or criminal.

In January 2014, it was announced that China would provide the Iranian government with support to build the NIN with the aim of controlling content online and building a 'clean' internet. Details of what support China would offer was not divulged but both governments are known to cut access to content they believe to be unsuitable.

Incumbent Investment

TCI announced planned investments in May 2013 amounting to IRR25trn for the current Iranian year (beginning March 21 2013). Head of the board of directors, Mostafa Seyyed-Hashemi, also reported TCI's investment reached IRR17trn (USD1.4bn) in the previous Iranian year, following the privatisation process in 2009. **BMI** believes this large sum may have been provided by the government to be used to expand the country's National Internet Network.

The quoted figure of USD25trn also appears to be a large amount, potentially more than TCI could afford, despite its operations in mobile and broadband services. It is therefore possible that some of the funding for its investment is coming directly from the government. This would allow Iran to increase the number of internet users in the country, while restricting their access. **BMI** estimates that the number of internet users reached 21.528mn at end-2012 and forecasts this total to reach 37.841mn at the end of our five-year forecast period in 2017. This could result in a boost to our forecasts if the investment is confirmed to be for the ININ as we believe.

TCI has not provided any more detailed information regarding the development of its national fibre-optic network, which we believe the operator continues to steadily expand. This was supported by the operator's announcement in May 2013 of plans to invest IRR25trn (USD20.34mn) in its network before the end of the Iranian year, ending March 2014. According to the head of the Board of Directors, Mostafa Seyyed-Hashemi, investment during the Iranian year ended March 2012 was IRR17trn. However, he also stated that the majority of the investment over the last two years has been on revitalising the company's mobile phone network. This is in line with **BMI**'s view of a slowdown in the fixed-line sector, as consumers increasingly favour mobile phone services.

Pay-TV

Iran's ministry of ICT announced in December 2013 that it had launched the first phase of its IPTV project. Six provinces are to be reached, covering 140,000 households. The ministry expects 7mn subscribers to the service over the long-term, but details on the project remain scarce. **BMI** believes there will be considerable restrictions on content, in same way the wider internet is restricted in Iran. This may dampen demand for the service in the long-term and the government's involvement with the network may also put off some potential subscribers.

In April 2013, Iran's government announced that it plans to launch its own communications satellite into space within five years, which will broadcast five local channels. Demand for Pay-TV services is minimal in Iran currently.

Industry Trends And Developments

State Launches First Phase Of IPTV Project

In December 2013 the Ministry of Information & Communication Technology (MICT), in collaboration with national broadcasting and telecoms firms in Iran, is understood to have launched the first phase of an IPTV project. About 140,000 households in six provinces - Tehran, Isfahan, Khorasan Razavi, East Azarbaijan, Yazd and Qazvin - are due to be covered in the first stage of the deployment. MICT expects the service to attract around 7mn domestic subscribers.

MCI Listed On TSE

In January 2014, it was announced that China would provide Iran with help to build the country's long-planned National Information Network (NIN). China will help Iran to control content online and build a 'clean' internet. The policy of internet control is hardly surprising as the NIN was planned as a means of bypassing the worldwide web.

BMI notes that China's restricted internet access and blocking of content deemed unsuitable has not stopped consumers in that country getting online and developing a number of home-grown social networking services and platforms. However, the difference in the size of population does make a difference for China so we do not expect Iran to follow directly in its footsteps. It is also important to highlight that tech-savvy consumers will find ways around national internet restrictions; setting up their own virtual private networks (VPNs) to connect to sites they want to access.

Improving Networks

The Europe-Persia Express Gateway (EPEG) fibre optic cable system, a 10,000km cable running from Frankfurt, Germany, through eastern Europe, Russia, Azerbaijan, Iran, the Persian Gulf and finishing in Oman, finally went live in September 2013. The cable system, which was originally meant to be launched in March 2013, brought Iran's international bandwidth capacity up from 72Gbps to 82Gbps. In October 2013, Iran's Communications Minister announced the country's goal to further increase its international bandwidth capacity to 100Gbps by December 4 2013.

According to Infrastructure Communications Company deputy head, Mehdi Karimi Neyestani, connection to the EPEG will allow Iran to become an internet service provider to other countries. In March 2013,

Neyestani stated that Iran would be upgraded from the Tier3 level (Internet service consumer) to Tier2 level (Internet service provider) after the official inauguration of this project.

Table: Industry Trends And Developments

Date	Details
Jun-14	MTN Irancell announced that it would reduce the tariffs on voice calls for postpaid SIM cards. The operator stated that prepaid subscribers could opt for changing their SIM card to a postpaid plan. The tariffs were revised from IRR625 (USD0.024) per minute for off-net calls to IRR499 (USD0.019) for all off-net, on-net and calls to landlines. All postpaid subscribers would receive a detailed copy of their bill after every two months.
Dec-13	MTN Irancell extended its WiMAX network to the city of Khorramshahr. The extension has helped the operator expand its WiMAX service to a total of 38 towns, compared with seven cities at the time of the launch of the service in January 2010. The prepaid and postpaid packages, offering maximum download speeds up to 2Mbps, will be available for business and residential users in Khorramshahr.
Nov-13	Telecommunication Company of Iran reported that the third auction to provide voice-over-internet protocol services will take place, although dates were not announced. Over 100 VoIP service providers in the country were previously deemed illegal, following loss of fixed telephony revenues complaints by TCI. The country will make several investments to improve the Information and Communications Technology (ICT) infrastructure and establish a communication corridor linking whole of Asia, according to Minister of ICT Mahmoud Vaezi.
Sep-13	Internet users were allowed to access social networking sites Twitter and Facebook on September 16 2013. However access to Facebook and Twitter was promptly blocked again by September 17 2013. The secretary of the Iranian state committee responsible for filtering web content wrote the incident was written off as a technical problem and denied any government intention to lift the ban on the social networking sites.
Aug-13	MCI, the mobile arm of Telecommunication Company of Iran, listed on the Tehran Stock Exchange. There were no financial details of the event, however. This development was the follow-up to an initial offering of 5.5% of MCI's shares on Iran's Over-The-Counter market for USD396mn in December 2010.
Jul-13	The Iranian government announced citizens that require an email address will have accounts designated to them by the Communications Ministry. Iranian state television reported the country now has its own domestic email service. The government said that the national system would aid interaction between the state and the people.
Jun-13	Iranian Net Communication and Electronic Services (Iranian Net) will begin deploying a fibre-to-the-x (FTTx) network by end-August, according to Iran's telecoms watchdog, the Communications Regulatory Authority. Iranian Net has been granted a licence to deploy the FTTx network in Mashhad, Tehran, Shiraz, Karaj, Qom, Isfahan and Tabriz. The firm will provide services to 400,000 subscribers by end-August, gradually increasing this to a total of 1mn subscribers over the next two years.
May-13	TCI announced planned investments amounting to IRR25trn (USD2bn) for the current Iranian year (beginning March 21 2013). Head of the Board of Directors, Mostafa Seyyed-Hashemi, also reported that TCI's investment had reached IRR17trn (USD1.4bn) in the past Iranian year, following the privatisation process in 2009.
May-13	The Iranian Net Optic Fiber Operator said the operator plans to offer services to 400,000 people by August and 1mn subscribers within the next two years. The operator aims to attract 8mn subscribers within eight years. In addition, a memorandum of understanding between the Aras Free Trade Zone Organization and Iranian Net Optic Fiber Operator was signed on the launch of the pilot plan of a optic fibre network in Aras Free Zone, East Azarbaijan province.
Feb-13	MTN Group said it has been cleared of accusations that it bribed Iranian officials in a bid to gain a mobile licence for operations in the country. The proceedings against MTN were initiated by Turkish mobile operator Turkcell after a subsidiary of Turkcell failed to obtain Iran's second GSM licence in 2005. The allegations were investigated by a committee, which was led by retired British judge Lord Hoffmann, for more than a year.

Industry Trends And Developments - Continued

Date **Details**

Source: BMI

Regulatory Development

Table: Iran's Regulatory Bodies And Their Responsibilities

Regulatory Body	Responsibilities
Ministry of ICT Dr Ali Shariati Avenue Tehran Iran 1631713461 Tel: 9821 811 3355 Fax: 9821 811 3926	<ul style="list-style-type: none"> ■ Overseeing the implementation of the information and communication technology (ICT) national development plan. ■ Drafting national telecommunications policy. ■ Drafting and implementing amendments to existing legislation or new laws, as necessary. ■ Issuing licences, concessions and general authorisations. ■ Mediating interconnection agreements between operators, where relevant. ■ Regulating tariffs for dominant operators and establishment of calculations for setting prices for other operators. ■ Monitoring of frequencies and interference with use of the frequency spectrum.

Source: BMI

Legislation And Market Liberalisation

Iran has partially liberalised its telecoms sector by allowing competition and numerous private sector operators in the mobile telephony, data services and internet sectors. In contrast, the fixed-line market remains a monopoly under the control of the Ministry of Communications and Information Technology (MICT).

In December 1999, Iran's *majlis*, or parliament, approved Article 122 of the 'third five-year economic plan,' which gave wider powers to the MICT (which at the time was called the Ministry of Post Telegraph and Telephone). In accordance with Article 122, the ministry was granted powers to authorise private sector companies looking to establish communications networks in Iran. These included companies seeking to set up mobile phone networks, low capacity telephone exchanges (with up to 5,000 numbers), data transfer networks, value-added service networks, rural communication networks, postal networks and postal transport networks. Article 122 further allowed the MICT to license private and co-operative telecoms companies to set up communications networks in areas in which no such networks were offered by government-owned companies.

In addition to removing government monopoly control over the provision of telecoms services, Article 122 of Iran's Third Five-Year Plan established the foundations for increased public participation and foreign investment in the country's telecoms sector, and for the eventual creation of an independent regulatory body. In 2003, the ministry established the Communications Regulatory Authority (CRA) as a body to

supervise and promote healthy competition in the telecoms sector. However, the CRA remains under the umbrella of the MCIT, which has retained ultimate control over the sensitive telecoms sector.

In 2007, Supreme Leader Ayatollah Khamenei requested that government officials speed up implementation of the policies outlined in the amendment of Article 44 of the country's constitution and move towards further economic privatisation (the pre-amended Article 44 of the constitution had decreed that core infrastructure should remain state run). Khamenei also suggested that ownership rights should be protected in courts set up by the justice ministry in the hope that this new protection would give an additional measure of security and encourage private investment.

Privatisation Of TCI

Iran's privatisation programme was launched during the government of Mohammed Khatami in the late 1990s. One of the objectives behind selling shares in key state enterprises was the desire to attract greater foreign investment. The government's privatisation programme also forms part of a wide-ranging economic liberalisation programme. Under Iran's Fourth Five-Year Economic Development Plan (2005-2010), the Iranian Privatization Organization, which is affiliated with the Ministry of Economic Affairs and Finance, was charged with the responsibility for setting prices, ceding shares to the general public and listing shares on the stock market of incumbent operator **TCI**.

Repeated preparations to privatise Iran's fixed-line incumbent have been characterised by a mixture of high expectations, disappointment and controversy. In May 2007, a representative from the Iranian Privatization Organization announced that a majority stake in monopoly provider TCI would be sold by the end of September 2007. In mid-June 2007, Supreme Leader Ayatollah Ali Khamenei urged the government and officials to speed up moves to reduce the government's economic role by reviving the privatisation process. TCI's managing director, Saber Feizi, said in late July 2007 that three foreign companies from Asia, Europe and the Middle East had already submitted official requests to buy a stake in the company. One of these companies was reported to be the Russian operator **Altimo**.

Despite the early optimism surrounding the privatisation of TCI, by end-2007, no visible progress had been made towards achieving this goal. In September 2007, Deputy Communications and Information Technology minister, Vafa Ghaffarian, announced 51% of TCI would be privatised before the end of the Iranian calendar year on March 20 2008. Although the privatisation of TCI did not take place by the date set, reports suggested that the Iranian government was still committed to selling the operator.

As a forerunner to the sale of a controlling stake in TCI, a 5% stake in the operator was scheduled to be floated on the Tehran Stock Exchange before the end of December 2007. The floatation finally took place in August 2008.

Meanwhile, in April 2008 TCI Chairman Saber Feizi reportedly suggested that the 31 companies belonging to TCI should be interconnected in such a way as to make it impossible to separate them when the company was eventually privatised. Feizi therefore stressed that TCI would be sold along with all its subsidiaries. However, he also suggested that this would not happen in 2008, as the necessary amendments had been made to TCI's budget.

In November 2008, the government announced that the part-privatisation of TCI would take place before the end of the Iranian calendar year on March 20 2009. However, in January 2009, it was reported that the government had once again delayed the planned sale. Feizi was reported as saying that the documents for the tender would not be available to interested parties until mid-March 2009 at the earliest. According to media reports, the state was expected to offload up to 49% of TCI's shares, with foreign telecoms companies able to hold up to 35%, and local partners the remainder. Another 5% is held by employees and 20% was reserved for poor Iranian families. Local press reports in December 2008 suggested that firms from Russia, Turkey, China and Indonesia were chasing a stake in TCI. The press reports did not name the potential investors. However, in October 2008, **PT Telekomunikasi Indonesia** (Telkom) stated that it was looking to acquire a stake in the company.

In late September 2009, it was reported that local consortium **Etemad Mobin** paid more than USD7.8bn to secure a 50% plus one share stake in TCI. Etemad Mobin comprises three companies, two of which are reportedly controlled by the Iranian Revolutionary Guard. A few weeks after the announcement, it was reported that Iran's General Inspections Organisation (GIO) had launched a probe into the connections between Etemad-e-Mobin and the Iranian Revolutionary Guard.

In November 2009, it was announced by the Mehr News Agency that 50% plus one share of TCI had been offered over the stock market to Tose'e Etemad Mobin consortium for IRR77.985trn.

Competition

In contrast to the monopoly in the fixed-line sector, mobile phone services, based on GSM standard, are offered by TCI and by four private sector companies: **MTN Irancell**, **Taliya**, **MTCE** and **TKC**. A third national operator was licensed in April 2010 but it was not until late November 2011 that **Rightel**, reportedly owned by Iran's Social Security Organization, launched limited services. Iran also has a large

number of privately owned ISPs operating within the country; this is in spite of the high levels of government control over the sector. Iran is also one of the few countries in the Middle East in which development of VoIP has been legalised.

Licensing And Spectrum

The usage and allocation of communications spectrum in Iran is supervised by the country's Radio Communications Administration (Radtel), which is part of the MICT. The MICT has licensed six operators to provide mobile telephony services in the GSM standard. Two of those operators - **MCI**, which is the mobile unit of fixed-line incumbent TCI, and MTN Irancell - offer services using the GSM 900 and GSM 1800 spectrum bands. Three companies - Taliya, MTCE and **Kish Free Zone Organization (KFZO)** - offer services using GSM 900 spectrum only.

In July 2007, the Iranian government revealed plans to offer another national cellular licence sometime in 2008. It was not until 2010 that a third national operator received a mobile licence. Rightel, reportedly owned by Iran's Social Security Organization, launched limited services in late November 2011. It is believed that the Rightel licence contains a provision allowing it to provide the country's only 3G services for a period of two years - an agreement that was extended for a further year in early 2013. However, given the time taken between the award of the licence and the launch of initial services, it is unlikely the company will benefit from being the first to market and it is unlikely to have the necessary resources to swiftly roll-out services.

In January 2007, it was reported that **Laser Company** had become the first privately owned operator to launch a WiMAX wireless network in Iran, based on 802.16 standards. At launch, the WiMAX network provided wireless internet access to the capital Tehran and it was believed that Laser Company would extend its WiMAX network services to other Iranian provincial capitals. Other companies that have been licensed to provide WiMAX internet access services include **Pars Online** and **Datak Telecom**. However in June 2013, the CRA announced that Datak Telecom failed to get authorisation for continuation of its WiMAX, as the one year deadline to finalise a licence agreement with the regulator had passed. At the time of writing, Laser's service was no longer operational either.

Iran's first wireless internet project, based on 802.11 (WLAN) standards, was reportedly implemented in March 2006. The country's first Wi-Fi project ensured the provision of internet services to large areas of the islands of Qeshm, Hengam, Lark and Hormuz.

Regulatory Developments

In January 2013, the government of Iran confirmed it is developing new smart filtering software which will allow Iranians to gain limited access to social networking sites such as **Facebook** and **Twitter**. The government has introduced a national intranet service which contains only approved content, while the conventional worldwide web remains subject to heavy restrictions.

The telecoms industry in Iran is regulated by the Ministry of Communications and Information Technology (MICT, formerly the Ministry of Post, Telegraph and Telephones). The MICT is responsible for all aspects of telecoms sector regulation and for the adjudication of disputes that arise among service providers. Despite long-term plans to establish an independent regulatory body, there appears to have been little progress towards this accomplishment.

Although Iran's telecoms market has been partially liberalised and opened to competition in the mobile, data and internet sectors, the state retains high levels of control over online content and telecoms service usage. Internet usage in particular is subject to strict controls; in October 2006, it was reported that Iran's government had opened a new front in its drive to stifle domestic political dissent and combat the influence of Western culture by banning high-speed internet links. The country's numerous ISPs were ordered to restrict online speeds to 128Kbps and forbidden from offering fast broadband packages. The move by Iran's authorities would make it more difficult for internet users to download foreign music, films and television programmes, which the authorities blame for undermining Islamic culture among the younger generation. It would also impede efforts by political opposition groups to organise by uploading information on to the net. In November 2006, Mahmoud Khosravi, the head of Iran's Radio Communications and Regulations Organization (RCRO), was reported as saying that universities and other academic centres, research institutes, business companies, industrial townships, public libraries and culture houses were exempt from the 128Kbps restriction on the condition that they install the required content filters.

In September 2007, it was reported that Iran would begin regulating and filtering multimedia messaging services (MMS) in order to prevent 'immoral' video and audio messages being sent through mobile phones. Iran's Supreme Council of the Cultural Revolution is understood to have instructed the MICT to acquire equipment that will enable it to filter MMS.

Data Market Held Back By 3G Exclusivity

Tamin Telecom's exclusive rights to 3G network services in Iran were extended by another year, to September 2014, according to local technology news provider **ICTna**. This means that the two biggest

mobile network operators, MCI and MTN Irancell, will not be able to offer 3G services until late 2014. In our view, this will hold back growth and investment in the underserved data market.

Iranian Internet Controls Grow

Iran would serve as an internet service provider to other countries by March 2013, revealed Infrastructure Communications Company deputy head Mehdi Karimi Neyestani. This development took place after the first phase of the Europe-Persia Express Gateway (EPEG), which is a communications highway connecting Europe with Eastern Asia, that started operations in September 2013. Iran would be upgraded from the current Tier3 level (Internet service consumer) to Tier2 level (Internet service provider) after the official inauguration of this project, Neyestani added.

In January 2014 it was reported that Iran was seeking help from China to build its National Information Network (NIN). While cooperation would usually indicate the presence of Chinese equipment manufacturers to aid build-out, on this occasion the help on offer to Iran is to control content online and build a 'clean' internet. The policy of internet control is hardly surprising as the NIN was planned as a means of bypassing the World Wide Web.

The NIN was first mooted in 2005, creating a network separate from the global internet containing content that is 'compatible with religious and revolutionary values'. It is feared that Iran will have the power to cut off all access to the global internet, with many reports of slowing or declined access to international social media sites and a long history of blocking sites as the government sees fit.

Competitive Landscape

Table: Key Players: Iranian Telecoms Market

Company name	Ownership	Market
Telecommunications Company of Iran (TCI)	Etemad Mobin (50% plus one share), Government (50%)	Fixed-line (local, domestic long distance, international), mobile, data operations
Taliya	Rafsanjani Industrial Complex (RIC)	Mobile (GSM900)
MTN Irancell	MTN (49%), Iran Electronic Development Company (51%)	Mobile (GSM900/1800)
Mobile Telecommunications Company of Esfahan (MTCE)	Telecommunication Company of Esfahan Province (51%), Axiata (49%)	Mobile (GSM900)
Telecommunication Kish Co. (TKC)	LibanCell (100%)	Mobile (GSM900), Internet (dial-up, WLAN)
Pars Online	Private (100%)	Internet (dial-up, ADSL, WiMAX)
Datak Telecom	Private (100%)	Internet (dial-up, ADSL, Wi-Fi, direct fibre), Residential VoIP

Source: BMI

Company Profile

Telecommunications Company Of Iran (TCI)

Strengths

- Remains the only fixed-line operator in Iran.
- Investing in fixed-line operations to the country's rural areas.
- Continuing to record steady growth within mobile market.

Weaknesses

- Poor growth within its internet sectors, especially broadband, further hindered by governmental control on data access.
- Growing number of ISPs competing for market share in internet sector.
- Delays to privatisation may have limited the scope of expansion and introduction of new services.
- New ownership is under investigation, potentially distracting the company from releasing new services.
- Privatisation failed to bring an international strategic partner with telecoms experience and financial backing.
- Lack of transparency in publishing financial and operating data means it is impossible to gain a true picture of the company's performance.

Opportunities

- The Iranian mobile market continues to be characterised by relatively low penetration rates, providing plenty of potential for mobile unit MCI.
- Higher import tax could provide fledgling domestic handset manufacturers with opportunity to grow.

Threats

- Award of country's second national GSM licence to MTN Irancell coupled with Taliya's growth into a national operator has resulted in loss of mobile market share.
 - Possible liberalisation of fixed-line sector following TCI's part privatisation.
 - Unstable political and security environment could hinder investment in the sector from equipment manufacturers and content providers.
-

Company Overview

Telecommunications Company of Iran (TCI) was formed in 1972 out of its predecessor, the Telephone Company of Iran. After restructuring during July 2005, TCI announced it had reformed into a parent company overseeing 33 subsidiaries including data communications, mobile communications and backbone communications.

In early 2007, the Iranian Privatization Organization announced that a majority (51%) stake in TCI was due to be sold by the end of September 2007. However, it was not until September 2009 that privatisation finally took place. It was reported that local consortium Etemad Mobin paid more than USD7.8bn to secure a 50% plus one share stake in TCI. Etemad-e-Mobin comprises three companies, two of which are reportedly controlled by the Iranian Revolutionary Guard. Shares were exchanged through the Tehran Stock Exchange in November 2009.

A few weeks after the announcement, it was reported that Iran's General Inspections Organisation (GIO) had launched a probe into the connections between Etemad-e-Mobin and the Iranian Revolutionary Guard (see *Regulatory Developments*).

On August 20 2013, the mobile arm of TCI, Mobile Company of Iran (MCI) listed on the Tehran Stock Exchange's Second Market. MCI had previously offered 5.5% of its shares on the Iranian Over-The-Counter (OTC) market, for a combined value of USD396mn.

Strategy

As a state-owned operator, TCI's strategy is strongly influenced by the priorities of Iran's governing authorities. Central to the government's telecommunications strategy has been the expansion of the country's national communications infrastructure. Priority areas include the development of the national fibre-optic network and the development of rural communications infrastructures. Within the field of mobile communications, TCI has pursued the deployment of new technologies, such as GRPS, as well as a range of new data-based value-added services.

In March 2014 TCI reviewed its strategic objective of achieving full convergence of fixed and mobile services. Mr. Jurki Markku Runola, TCI Transformation Plan Advisor, stated

that 2013 saw TCI focus on the basics and 2014 will see TCI produce practical outcomes, before growth in 2015 and full convergence of fixed and mobile services in 2016.

Financial Results

At the time of writing, the most recent financial results published by TCI relate to the year ending March 2008, when TCI reported operating revenue of IRR33.2mn (EUR2.7bn or USD3.7bn). Net income for the period was IRR8.7mn (EUR707.7mn). TCI has not provided a breakdown of its revenue so it is unclear what contribution came from mobile services. Earlier TCI had forecast that its mobile unit, MCI, would generate revenue of about USD2bn, due to rapid expansion of the mobile market and strong economic growth in the country.

Operational Developments

Fixed-Line Network

In a bid to find new avenues for growth, TCI has focused on increasing its rural network coverage. At the end of 2005, a total of 46,764 villages were connected to TCI's fixed-line infrastructure. The MICT claimed that this figure had risen to 50,173 by December 2006, and 52,522 by December 2007. In December 2008, the figure stood at 53,845. According to the ministry, at the time of the Islamic Revolution in 1978, just 312 of Iran's 100,000 villages had telecoms services.

As well as purchasing capacity on four international submarine cables (FOG, FLAG, SEA-Me-We and ITUR), TCI has also issued a tender for SDH equipment on all main national routes. By the end of 2008, TCI's national backbone comprised 121,000km of fibre-optic cable, of which 44,000km had been installed during the course of the year. A further 6,000km were installed in the first nine months of 2009, raising the total amount of optical fibre to 127,000km. The TAE (Asia-Europe) cable system was just one of the projects completed during 2007, connecting Iran to Asia and Europe through a 2,200km optical fibre cable. Other accomplishments in 2007 included the construction of a 150km fibre-optic cable connecting Iran and Afghanistan.

Broadband Network

TCI began offering ADSL-based broadband internet access services early in 2004, but deployment has so far been confined to the larger cities and business centres. By the end of 2005, a total of 514 cities had been covered with a total of 14,270 leased access ports. By the end of September 2009, the number of cities covered had risen to 1,223. There were a total of 60,718 national data access ports at the end of September 2009, supporting a data transmission capacity of 26,728Mbps.

Iran's internet market suffered from poor connectivity during 2006, which led to loss of service occurring on average once a month. This was blamed by some in the industry on a failure to provide back-up capacity, which supports network traffic when the main fibre network fails. While technologically advanced countries have several optical fibre networks around which traffic is directed, in Iran's case, incumbent operator TCI is left to compensate for the failings across other ISP networks. Further, in October 2006, the

Ministry of Telecommunications announced that high-speed internet access would no longer be made available to residential users, in an attempt to curb Western media influences, which led to the banning of websites such as the BBC's Persian-language site.

Mobile Network

In April 2008 MCI's chairman, Vahid Sadoughi, reportedly announced that the company planned to increase the capacity of its intelligent network (IN) to double its prepaid SIM card network capacity. Sadoughi is reported as saying that, once the operator's network capacity had been expanded, MCI's prepaid customer base was expected to increase to 10mn by the end of April. Lack of network capacity was reported to have caused a delay in the delivery of prepaid SIM cards and resulted in widespread disapproval among 2.558mn waiting applicants.

According to a May 2011 report by the Fars News Agency, which cites comments from MCI's managing director, Vahid Sadouqi, MCI provides services to all of Iran's cities and 57% of the country's villages. The operator's network also covers 97% of all main roads in the country and 68% of secondary roads. It also provides rural roaming services in 35,000 villages in 20 provinces. There were reports in February 2014 that MCI was interested in offering 4G services for the first time in Iran.

Financial Data

- Revenue (YE March 2008): IRR33.2mn
- Net income (YE March 2008): IRR8.7mn

Operational Data

Fixed lines

- December 2010: 26.849mn (e)
- December 2011: 27.767mn (e)
- December 2012: 28.759 (e)
- December 2013: 29.308mn (e)

Mobile subscribers

- December 2010: 36.937mn (e)
- December 2011: 40.843mn (e)
- December 2012: 43.501mn (e)
- December 2013: 44.305mn (e)

Company Details

- Telecommunications Company Of Iran (TCI)
- Shariati Avenue
Tehran

Iran
- www.tci.ir

MTN Irancell

Strengths

- Iran's second largest mobile operator, with an estimated market share of 48% and growing.
- Has a major strategic backer in the form of South Africa's MTN Group.
- First to market with GPRS and MMS services.

Weaknesses

- Subscriber base is understood to be highly dependent on prepaid customers.
- MMS business faces government censoring and filtering.
- Lacks presence in the wireline sector for converged services.
- US embargo puts limits on potential network equipment partners.

Opportunities

- Despite the lack of 3G services, smartphone adoption was strong in 2013, with penetration reaching almost 25% in MTN's subscription base.
- Iran's relatively low mobile penetration rate means that customer growth should remain strong over the next few years.
- Although in the early stages, the market for mobile value-added and data services is expected to see strong growth; the youthful orientation of Iran's population should help to underpin future growth.
- Continuing network roll-out programme will have a positive effect on future growth.
- 3G licences become available in 2014.

Threats

- The privatisation of TCI could raise the level of competition for MTN Irancell.
- Underdeveloped legal and judicial environment could pose challenges.

Company Overview

In November 2003, the Ministry of Communications (now the MICT) issued a notice of its intention to issue a second GSM licence. In February 2004, Turkish operator Turkcell

announced it won the tender, at a cost of USD385mn, over its closest rival South Africa's MTN Group. The Turkcell network was expected to launch within a year of licence issue, but by September 2004 the licence had yet to be formally awarded. The ongoing licence issue culminated in Iranian authorities limiting foreign ownership in Irancell to 49%. Talks between Turkcell and the government eventually fell apart, leading the MICT to award the licence to MTN on November 21 2005. The remaining 51% stake is held by the Iran Electronic Development Company (IEDC). Irancell is currently managed through a shareholder agreement setting out operational management including key positions nominated by respective shareholders IEDC (chairman and managing director) and MTN (chief operating officer and chief financial officer).

Licence Conditions

Under MTN Group's licensing terms, the operator has a 15-year fixed term, followed by an option to renew its licence for an additional five years, which is allowed twice. Fees incurred by the operator, aside from the EUR300mn licence fee already paid to the Iranian authorities, include an annual fee set at 28.1% of the revenue share, based on gross revenue minus handset sales and net interconnection, with connection fees limited to USD150. Moreover, the operator must also pay a universal service fee of 3% of revenue. Other fees, such as numbering, frequency and regulation fees, are applicable, but altogether will not exceed 5% of revenue. In its 2011 annual report, MTN Irancell said it maintained 'active engagement' with the Iranian authorities as it seeks to clarify whether its licence permits the rollout of 3G services.

Strategy

MTN Irancell aims to drive mobile penetration and market share through the deployment of innovative products and services. It continues to emphasise the development of segmented prepaid and postpaid packages. The operator also aims to improve the level of customer service that is currently offered; the introduction of online registration and activation within 15 minutes was designed to further this goal. A central part of MTN Irancell's strategy is the implementation of a network that supports 3G services and, over the next five years, a network that covers more than 1,000 cities and comprises almost 6,000 BTSs. The operator aims to provide network coverage to 85.0% of the population by October 2020.

Financial Results

In 2013, MTN Irancell recorded revenue of IRR49.544trn, up 11% from 2012, but growth was stronger at 18.3% if the negative impact of hyperinflation is taken into account. MTN's revenue growth was driven by growth in data revenue, which increased 72.7% y-o-y, with SMS revenue up 18% and data 60.2%. Increased adoption of smartphones, which accounted for almost 25% of users at the end of 2013, has driven data revenues. Meanwhile, MTN's EBITDA margin declined 1.4pps to 42.8% in 2014, largely as a result of foreign currency denominated costs following rial depreciation. Finally, capex

increased, rising to ZAR758mn. Investment for the period included an additional 746 2G sites and 415km of fibre.

**Operational
Developments**

Irancell launched its network in October 2006, with sales and network coverage initially limited to the cities of Tehran, Mashhad and Tabriz. Further coverage was provided by means of interconnection agreements with Iran's other mobile operators. By February 2007, Irancell was offering network coverage in Tehran, Tabriz, Mash'had, Karaj, Sari, Oroumiyeh, Maraqeh and Qom, with a further two cities to be added: Meshkinshahr and Kermanshah. At the time, reports by Fars news agency suggested that the network was incomplete in parts of Tehran and Karaj - although Irancell stated that it had managed to raise coverage in the capital to 90%. The slow roll-out of its network in the early stages was attributed to the lack of cooperation from municipalities and objections from some of the population to the installation of base stations.

By the end of 2007, 3,356km of the roads in Iran had been put under Irancell network coverage.

In February 2007, Irancell launched Iran's first GPRS services, available to prepaid and postpaid subscribers. At the time of launch, Irancell announced that the service would be free for all subscribers until the end of March 2007.

In January 2011, MTN introduced a new location-based service which can be used in several major cities, including Tehran, Karaj, Tabriz, Esfahan, Shiraz and Mashhad. The new service can be used for identifying the geographical location of a friend and informing them of a subscriber's whereabouts. The friends' location is notified to the subscriber through SMS or MMS.

According to a report by Iran Daily in October 2011, the number of cities covered by MTN was 1,874 by 23 September 2011. This would mean that the telco's network covered 80% of the country's population by that date. MTN's network coverage also includes 22,000 villages and over 20,000km of roads. This exceeds the operator's previously-stated target of 9,000km. In June 2012, MTN revealed it had deployed a total of 7,889 2G and WiMAX sites in the country.

During the second half of the 2013 MTN Irancell begun the roll-out of a 3G network with LTE-capable frequency, following approval by the Communications Regulatory Authority. During the period it invested ZAR 1.818 billion, representing 100 percent of the operation, and deployed 274 new 2G sites.

Financial Data

Revenue

- 2010: IRR26.294trn
- 2011: IRR33.352trn
- 2012: IRR41.980trn
- 2013: IRR49.544trn

Capital expenditure

- 2010: ZAR1.661bn
- 2011: ZAR1.168bn
- 2012: ZAR1.122mn
- 2013: ZAR1.758mn

All financial data reflect MTN's 49% stake in MTN Irancell

Operational Data Mobile subscribers

- December 2010: 29.743mn
- December 2011: 34.681mn
- December 2012: 40.502mn
- December 2013: 41.4mn
- March 2014: 41.783mn
- June 2014: 42.697mn

- Company Details**
- MTN Irancell
 - 12 Anahita Alley
Africa St
Tehran
Iran
 - www.irancell.ir

Regional Overview

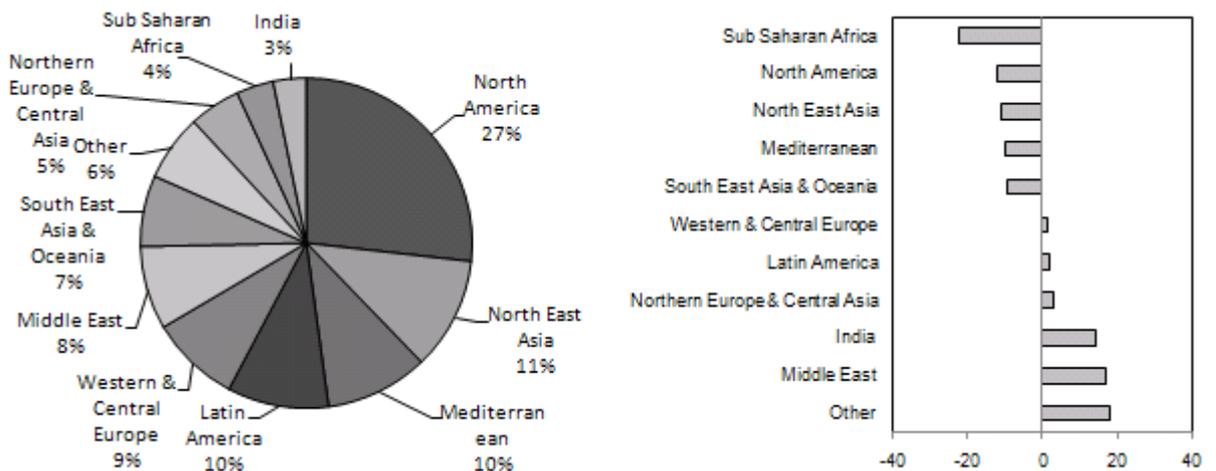
BMI View: Ericsson's long standing relationships with many of the region's telecoms operators have helped it secure multiple network upgrade and managed services contracts, to make the Middle East its fastest growing region globally. Ericsson's efforts to increase its IT services portfolio will enable it to benefit from continued demand for network and IT solutions in the region over the five years to 2018.

Financial Performance And Growth Drivers

Ericsson breaks down its revenues by region and into three main segments: networks, global services and support solutions. The networks segment covers network roll-out operations, while global services focuses on improving efficiency and quality of service on existing networks, often through managed services contracts. The support solutions segment includes software-based solutions for operations and business support systems, media solutions and m-commerce. Ericsson's revenue growth in the Middle East region has been primarily driven by rising demand for global services and networks, while, as in other regions, its support solutions business remains the smallest segment of its business in the Middle East. The latter accounted for sales of SEK200mn (USD27.8mn) in Q214, compared to global services sales of SEK1.8bn (USD250.3mn) and networks sales of SEK2.5bn (USD347.6mn) during the same period.

Middle East A Key Growth Region

Ericsson Regional Revenue Contribution, % (LHS) And Y-o-Y Change In Revenue, % (RHS), H114



Note: 'Other' includes revenues from licensing, sales of cables, broadcast services, etc. across all regions. Source: Ericsson

BMI believes the strong performance in the network roll-out segment has been supported by Ericsson's contracts in North Africa, where regulatory developments and improving economic outlooks have catalysed investment in network deployment. In Algeria, for example, following the allocation of 3G licences in late 2013, Ericsson secured contracts to deploy incumbent wireline operator **Algérie Télécom**'s LTE network as well as parts of state-owned mobile operator **Mobilis**' 3G network.

Meanwhile, as mobile operators in Egypt gear up for increased competition upon the entry of **Telecom Egypt** into the mobile market through MVNO services, **Vodafone Egypt** signed a three year managed services agreement with Ericsson. Under the agreement, Vodafone will hand over management and maintenance of its network to Ericsson in order to improve quality of service and efficiency. Ericsson also signed a similar contract with **Etisalat Misr** in Egypt to monitor and optimise mobile broadband capacity on its network. As well as intensifying competition, operators are preparing for increasing demand for mobile data services on their networks, as a result of an improving economic climate in Egypt and a resulting rise in consumer spending power.

That said, the GCC remains key to Ericsson's strong performance in the Middle East. Most recently, in October 2014, Ericsson signed or renewed contracts with **STC** in Saudi Arabia, Etisalat in the UAE and **Batelco** in Bahrain, all incumbent, leading operators in their domestic markets. These contracts are all for some of Ericsson's most advanced mobile network solutions, which the operators will rely on to prime their networks for exponential rise in mobile data traffic as an increasing number of subscribers take-up 4G services and want to watch videos and stream music on the go. In the UAE, the agreement with Etisalat also includes the implementation of Ericsson's ecology management services, which ensure highly efficient disposal of e-waste, in line with European Union standards.

Expanding Into New Fields

In another major regional development, Ericsson announced plans to acquire Israeli IT solutions firm **Fabrix Systems** for USD95mn in September 2014. Fabric Systems, based in Ra'anana, is a leading provider of cloud storage, computing and network delivery solutions, used for delivering video-on-demand and other digital media content. **BMI** believes Ericsson will be able to find considerable synergies between its network equipment and management services and Fabric Systems' solutions, particularly relating to delivery of video. Given that many of its agreements with telecoms operators in the region include optimising networks for heavy data traffic, **BMI** believes once Fabrix Systems' solutions are incorporated into Ericsson's portfolio, it will find significant demand for complete end-to-end equipment and software services from its existing customers in the telecoms industry.

Meanwhile, **BMI** has a bullish outlook for the region's IT market. With the GCC in particular experiencing impressive economic growth, the region's large businesses have been investing heavily in improving their customer and operations management systems, while the small and medium sized enterprise market, a key target for cloud computing, has been growing rapidly. This is also supported by telecoms operators' heavy investments in mobile and wireline broadband networks, which are now capable of handling the vast levels of data traffic created by cloud computing services.

Moreover, our positive outlook for the region's IT markets is also related to many GCC countries' efforts to diversify their economies away from the hydrocarbon sector, which has resulted in high government spending on ICT initiatives, such as smart cities and e-government services. We expect this trend to continue well beyond our forecast period to 2018, as key countries prepare to host international events, including the Dubai World Expo in 2020 and the Qatar FIFA World Cup in 2022.

Strong Growth Across The Board

IT Total Market Value Growth Forecast, 2011-2018



f = BMI forecast. Source: BMI

Table: Ericsson Major Contract Wins, Q413-2014

Date	Country	Operator	Details
14-Oct	Bahrain	Batelco	4G network upgrade contract to provide faster mobile broadband, improved voice quality and support new services.
14-Oct	UAE	Etisalat	Contract to expand Etisalat's Radio Access Network in Dubai and Al Ain, as well as deployment of Ericsson's ecology management services to dispose of replaced network equipment in an efficient, eco-friendly way.
14-Oct	Saudi Arabia	STC	Network upgrade and expansion contract to optimise performance, scalability and integration on STC's network. The agreement also includes the establishment of an experience centre, to link universities and the ICT industry, with a special focus on LTE, charging systems, service delivery and inventory software.
14-Aug	Vodafone	Egypt	Vodafone signed a three year managed services agreement with Ericsson, where the equipment vendor will maintain and manage the operator's field network and enhance quality of service.
14-Jul	Egypt	Etisalat Misr	Under a new memorandum of understanding Ericsson won a contract to monitor and optimise Etisalat's network using a combinations of macro and small cell solutions to handle increased mobile broadband traffic.
14-May	Algérie Télécom	Algeria	Algérie Télécom contracted Ericsson to supply and deploy an end-to-end LTE networks. This initial deployment will cover areas that are not currently covered by broadband networks, then will be extended to high-density locations including universities, airports and commercial districts. The network will also support voice and video calling over LTE.
14-May	UAE	Etisalat	Etisalat selected Ericsson as a preferred strategic partner for deployment of new technologies and business solutions in Dubai and Al Ain.
14-May	Pelephone	Israel	Pelephone selected Ericsson to supply and deploy its LTE network in the country, which it expected to reach hundreds of sites in the Dan Region and Jerusalem by August 2014.
14-Mar	Mobilis	Algeria	Contract to deploy Mobilis' Radio Dot System indoor mini-antenna solutions at Algiers Houari Boumediene airport. The system provides 3G and 4G connectivity and will later be deployed in other high density areas.
14-Mar	Saudi Arabia	STC	Agreement between the two companies to implement Zero Site broadcasting solutions, which can be installed within one day to increase coverage in crowded areas of urban centres.
14-Feb	Saudi Arabia	STC	Contract to expand STC's evolved packet core (EPC) network in order to support provision of LTE voice and data services; Ericsson will be responsible for full end-to-end systems integration for the expanded EPC.
14-Feb	Saudi Arabia	Mobily	Mobily signed export credit agreements of SAR2.1bn in Sweden and Finland to buy equipment from Nokia Networks and Ericsson. The Swedish Export Credits Guarantee Board signed an SAR1.05bn deal with Mobily, which has a tenor of 10 years and is to be used over an 18-month period.
13-Dec	Zain	Middle East	Zain selected Ericsson's Charging & Billing In One (CBIO) solutions to implement across its operations in Kuwait, Bahrain and Saudi Arabia. Zain signed a similar agreement with Ericsson in September 2013 for its Jordanian operations.

Source: BMI

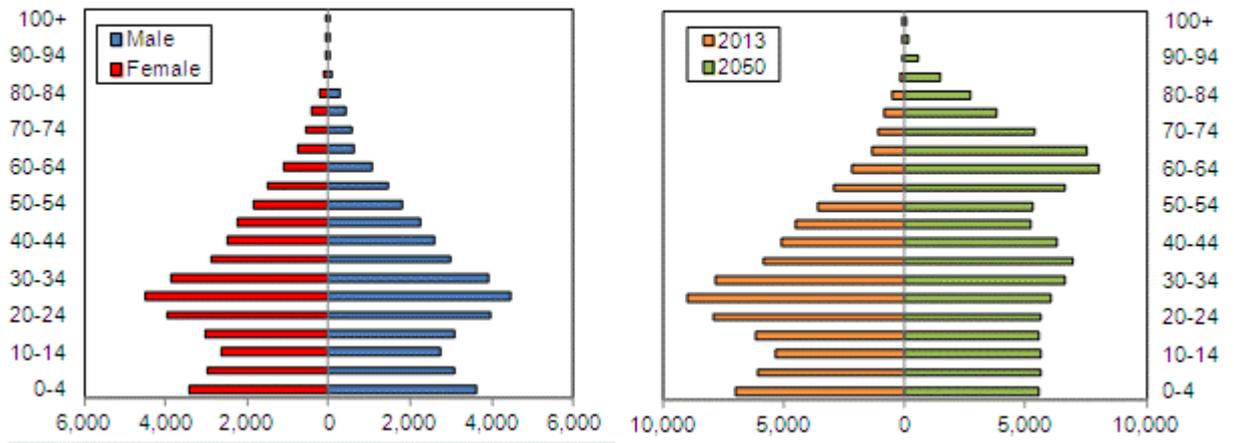
Demographic Forecast

Demographic analysis is a key pillar of **BMI's** macroeconomic and industry forecasting model. Not only is the total population of a country a key variable in consumer demand, but an understanding of the demographic profile is key to understanding issues ranging from future population trends to productivity growth and government spending requirements.

The accompanying charts detail Iran's population pyramid for 2013, the change in the structure of the population between 2013 and 2050 and the total population between 1990 and 2050, as well as life expectancy. The tables show key datapoints from all of these charts, in addition to important metrics including the dependency ratio and the urban/rural split.

Population Pyramid

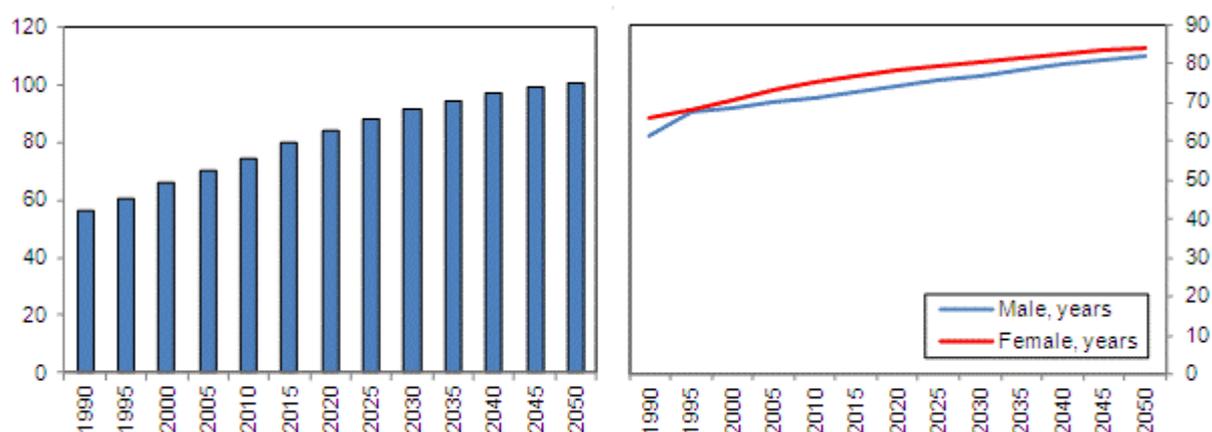
2013 (LHS) And 2013 Versus 2050 (RHS)



Source: World Bank, UN, BMI

Population Indicators

Population (mn, LHS) And Life Expectancy (years, RHS), 1990-2050



Source: World Bank, UN, BMI

Table: Iran's Population By Age Group, 1990-2020 ('000)

	1990	1995	2000	2005	2010	2013e	2015f	2020f
Total	56,362	60,468	65,911	70,152	74,462	77,447	79,476	84,149
0-4 years	9,313	7,568	6,317	5,484	6,556	7,034	7,146	6,751
5-9 years	8,906	8,983	7,552	5,477	5,416	6,046	6,507	7,117
10-14 years	7,325	8,837	8,981	7,155	5,613	5,357	5,488	6,494
15-19 years	5,823	6,885	8,801	9,248	7,216	6,124	5,644	5,467
20-24 years	4,698	5,222	6,932	9,143	8,994	7,904	7,068	5,596
25-29 years	4,054	4,429	5,316	6,859	8,705	8,978	8,727	6,998
30-34 years	3,536	3,901	4,443	5,202	6,521	7,789	8,485	8,650
35-39 years	3,031	3,393	3,886	4,693	5,210	5,858	6,497	8,410
40-44 years	2,123	2,888	3,372	4,113	4,833	5,057	5,263	6,431
45-49 years	1,621	1,956	2,857	3,421	4,033	4,495	4,758	5,193
50-54 years	1,527	1,469	1,930	2,801	3,245	3,605	3,896	4,665
55-59 years	1,393	1,396	1,431	1,767	2,638	2,933	3,110	3,788
60-64 years	1,140	1,265	1,322	1,336	1,640	2,159	2,500	2,986
65-69 years	899	995	1,146	1,258	1,279	1,379	1,551	2,340
70-74 years	507	717	826	1,056	1,130	1,129	1,143	1,369

Iran's Population By Age Group, 1990-2020 ('000) - Continued

	1990	1995	2000	2005	2010	2013e	2015f	2020f
75-79 years	269	344	509	654	803	858	877	902
80-84 years	136	147	203	347	413	482	528	598
85-89 years	49	56	66	113	173	198	217	290
90-94 years	11	14	17	22	39	54	64	85
95-99 years	2	2	3	3	5	7	9	16
100+ years	0	0	0	0	0	1	1	1

e/f = BMI estimate/forecast. Source: World Bank, UN, BMI

Table: Iran's Population By Age Group, 1990-2020 (% of total)

	1990	1995	2000	2005	2010	2013e	2015f	2020f
0-4 years	16.52	12.52	9.58	7.82	8.80	9.08	8.99	8.02
5-9 years	15.80	14.86	11.46	7.81	7.27	7.81	8.19	8.46
10-14 years	13.00	14.61	13.63	10.20	7.54	6.92	6.90	7.72
15-19 years	10.33	11.39	13.35	13.18	9.69	7.91	7.10	6.50
20-24 years	8.34	8.64	10.52	13.03	12.08	10.21	8.89	6.65
25-29 years	7.19	7.32	8.06	9.78	11.69	11.59	10.98	8.32
30-34 years	6.27	6.45	6.74	7.42	8.76	10.06	10.68	10.28
35-39 years	5.38	5.61	5.90	6.69	7.00	7.56	8.18	9.99
40-44 years	3.77	4.78	5.12	5.86	6.49	6.53	6.62	7.64
45-49 years	2.88	3.23	4.33	4.88	5.42	5.80	5.99	6.17
50-54 years	2.71	2.43	2.93	3.99	4.36	4.65	4.90	5.54
55-59 years	2.47	2.31	2.17	2.52	3.54	3.79	3.91	4.50
60-64 years	2.02	2.09	2.01	1.90	2.20	2.79	3.15	3.55
65-69 years	1.59	1.65	1.74	1.79	1.72	1.78	1.95	2.78
70-74 years	0.90	1.19	1.25	1.50	1.52	1.46	1.44	1.63
75-79 years	0.48	0.57	0.77	0.93	1.08	1.11	1.10	1.07
80-84 years	0.24	0.24	0.31	0.50	0.55	0.62	0.66	0.71
85-89 years	0.09	0.09	0.10	0.16	0.23	0.26	0.27	0.34
90-94 years	0.02	0.02	0.03	0.03	0.05	0.07	0.08	0.10
95-99 years	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02

Iran's Population By Age Group, 1990-2020 (% of total) - Continued

	1990	1995	2000	2005	2010	2013e	2015f	2020f
100+ years	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

e/f = BMI estimate/forecast. Source: World Bank, UN, BMI

Table: Iran's Key Population Ratios, 1990-2020

	1990	1995	2000	2005	2010	2013e	2015f	2020f
Dependent ratio, % of total working age	94.7	84.3	63.6	44.4	40.4	41.1	42.1	44.6
Dependent population, total, '000	27,416	27,664	25,621	21,569	21,427	22,544	23,530	25,965
Active population, % of total	51.4	54.3	61.1	69.3	71.2	70.9	70.4	69.1
Active population, total, '000	28,946	32,805	40,290	48,583	53,035	54,903	55,946	58,184
Youth population, % of total working age	88.2	77.4	56.7	37.3	33.2	33.6	34.2	35.0
Youth population, total, '000	25,543	25,388	22,850	18,116	17,586	18,436	19,141	20,363
Pensionable population, % of total working age	6.5	6.9	6.9	7.1	7.2	7.5	7.8	9.6
Pensionable population, total, '000	1,872	2,276	2,770	3,454	3,842	4,108	4,390	5,602

e/f = BMI estimate/forecast. Source: World Bank, UN, BMI

Table: Iran's Rural And Urban Population, 1990-2020

	1990	1995	2000	2005	2010	2013e	2015f	2020f
Urban population, % of total	56.3	60.2	64.0	67.6	68.9	69.4	69.7	70.6
Rural population, % of total	43.7	39.8	36.0	32.4	31.1	30.6	30.3	29.4
Urban population, total, '000	31,749	36,424	42,211	47,394	51,333	53,726	55,362	59,374
Rural population, total, '000	24,613	24,045	23,700	22,759	23,129	23,722	24,114	24,774

e/f = BMI estimate/forecast. Source: World Bank, UN, BMI

Glossary

Table: Glossary Of Terms

2G	second generation	GDP	gross domestic product	NGN	next generation network
3G	third generation	GPRS	global packet radio service	Mbps	megabits per second
ADSL	asymmetric digital subscriber line	GSM	global system for mobile communications	MHz	megahertz
ARPU	average revenue per user	HDSL	high-bit-rate digital subscriber line	MNP	mobile number portability
ASP	average selling price	HSDPA	high-speed downlink packet access	MoU	memorandum of understanding
BMI	Business Monitor International	HPSA	high-speed packet access	MOU	minutes of use
bn	billion	HSUPA	high-speed uplink packet access	MPLS	multiprotocol label switching
BTS	base transceiver stations	HTML	hypertext markup language	MSC	mobile switching centre
CDMA	code division multiple access	Hz	hertz	MVNO	mobile virtual network operator
CRM	customer relationship management	ICT	information and communication technology	-	not available
D-AMPS	digital-advanced mobile phone service	IDD	international direct dialling	OIBDA	operating income before depreciation and amortisation
DLD	domestic long-distance	ILD	international long-distance	POP	point of presence
DMB	digital multimedia broadcasting	IPO	initial public offering	R&D	research and development
DSL	digital subscriber line	IP	internet protocol	SaaS	software-as-a-service
DSLAM	digital subscriber line access multiplexer	IPTV	internet protocol TV	SDSL	symmetric digital subscriber line
DSU	digital subscriber unit	ISDN	integrated services digital networks	SIM	subscriber identity module
DTH	direct-to-home	ISP	internet service provider	SMS	short messaging service
DVB-H	digital video broadcasting-handheld	IT	information technology	TDMA	time division multiple access
DVB-SH	digital video broadcasting-satellite handheld	ITU	International Telecommunication Union	TD-SCDMA	time division-synchronous code division multiple access
e/f	estimate/forecast	JV	joint venture	trn	trillion
EBITDA	earnings before interest, taxes, depreciation and amortisation	Kbps	kilobits per second	UMTS	universal mobile telecommunications system
EC	European Commission	KHz	kilohertz	VOD	video on demand

Glossary Of Terms - Continued

EMEA	Europe, Middle East and Africa	km	kilometres	VoIP	voice over internet protocol
EV-DO	evolution-data optimised	LANs	local area networks	VLAN	virtual local area network
FDI	foreign direct Investment	LEC	local exchange carrier	WAP	wireless application protocol
FTTB	fibre-to-the-building	LTE	long-term evolution	W-CDMA	wideband CDMA
FTTH	fibre-to-the-home	M2M	machine-to-machine	WiBro	wireless broadband
FTP	file transfer protocol	mn	million	WiMAX	worldwide interoperability for microwave access
Gbps	gigabits per second	MEA	Middle East and Africa	WLL	wireless local loop
GPON	gigabit passive optical network	MENA	Middle East and North Africa	WTO	World Trade Organization

Source: BMI

Methodology

Industry Forecast Methodology

BMI's industry forecasts are generated using the best-practice techniques of time-series modelling and causal/econometric modelling. The precise form of model we use varies from industry to industry, in each case being determined, as per standard practice, by the prevailing features of the industry data being examined.

Common to our analysis of every industry, is the use of vector autoregressions. Vector autoregressions allow us to forecast a variable using more than the variable's own history as explanatory information. For example, when forecasting oil prices, we can include information about oil consumption, supply and capacity.

When forecasting for some of our industry sub-component variables, however, using a variable's own history is often the most desirable method of analysis. Such single-variable analysis is called univariate modelling. We use the most common and versatile form of univariate models: the autoregressive moving average model (ARMA).

In some cases, ARMA techniques are inappropriate because there is insufficient historic data or data quality is poor. In such cases, we use either traditional decomposition methods or smoothing methods as a basis for analysis and forecasting.

BMI mainly uses OLS estimators and in order to avoid relying on subjective views and encourage the use of objective views, we use a 'general-to-specific' method. We mainly use a linear model, but simple non-linear models, such as the log-linear model, are used when necessary. During periods of 'industry shock', for example poor weather conditions impeding agricultural output, dummy variables are used to determine the level of impact.

Effective forecasting depends on appropriately selected regression models. **BMI** selects the best model according to various different criteria and tests, including but not exclusive to:

- R^2 tests explanatory power; adjusted R^2 takes degree of freedom into account;
- Testing the directional movement and magnitude of coefficients;
- Hypothesis testing to ensure coefficients are significant (normally t-test and/or P-value);
- All results are assessed to alleviate issues related to auto-correlation and multi-collinearity.

We use the selected best model to perform forecasting.

It must be remembered that human intervention plays a necessary and desirable role in all our industry forecasting. Experience, expertise and knowledge of industry data and trends ensure that analysts spot structural breaks, anomalous data, turning points and seasonal features where a purely mechanical forecasting process would not.

Sector-Specific Methodology

Our Telecommunications industry forecasts are generated using a number of principal criteria, and differ from the regression and/or time-series modelling used in other industries.

▪ **Average Market Growth**

Indicator takes into consideration the historical growth patterns of the fixed-line, internet, broadband and mobile markets, providing a basis from which to forecast. Using historical data is often the most desirable method of analysis. In most cases, subscriber data are derived from individual operators and/or national regulators.

▪ **Subjective Indicators**

Indicators look at a number of factors, such as the following:

- Neighbouring/similar states. These types of markets often share similar telecoms markets. For example, Japan and South Korea are both highly developed technophile markets where growth prospects are high in 3G. Meanwhile, China and India both offer high growth in successfully emerging markets.
- Tracking growth. High growth may be more likely to be repeated in the near future, and is unlikely to turn into a significant decline in the short term, although there may be exceptions to this rule.
- Market maturity. Where markets have reached saturation, they are not likely to expand as fast as those that are less developed.
- Competition from alternative technologies, such as VoIP versus fixed-line, ADSL versus mobile broadband.
- Operator behaviour. Operators' corporate strategies and investment behaviour may dictate changes in the telecommunications market. This is similarly the case for regulatory developments, which have been accounted for in our integration of the Telecommunications Risk/Reward Index.

Sources

Sources used in telecoms reports include national ministries and media/telecoms regulatory bodies, officially released company results and figures, national and international industry organisations, such as the CTIA, the GSM Association and the International Telecommunication Union (ITU) and international and national news agencies.

Risk/Reward Index Methodology

BMI's Risk/Reward Index (RRI) provide a comparative regional ranking system evaluating the ease of doing business and the industry-specific opportunities and limitations for potential investors in a given market.

The RRI system divides into two distinct areas:

Rewards: Evaluation of sector's size and growth potential in each state, and also broader industry/state characteristics that may inhibit its development. This is further broken down into two sub categories:

- **Industry Rewards.** This is an industry specific category taking into account current industry size and growth forecasts, the openness of market to new entrants and foreign investors, to provide an overall score for potential returns for investors.
- **Country Rewards.** This is a country specific category, and the score factors in favourable political and economic conditions for the industry.

Risks: Evaluation of industry-specific dangers and those emanating from the state's political/economic profile that call into question the likelihood of anticipated returns being realised over the assessed time period. This is further broken down into two sub categories:

- **Industry Risks.** This is an industry specific category whose score covers potential operational risks to investors, regulatory issues inhibiting the industry, and the relative maturity of a market.
- **Country Risks.** This is a country specific category in which political and economic instability, unfavourable legislation and a poor overall business environment are evaluated to provide an overall score.

We take a weighted average, combining industry and country risks, or industry and country rewards. These two results in turn provide an overall Risk/Reward Index, which is used to create our regional ranking system for the risks and rewards of involvement in a specific industry in a particular country.

For each category and sub-category, each state is scored out of 100 (100 being the best), with the overall Risk/Reward Index a weighted average of the total score. Importantly, as most of the countries and

territories evaluated are considered by **BMI** to be 'emerging markets', our score is revised on a quarterly basis. This ensures that the score draws on the latest information and data across our broad range of sources, and the expertise of our analysts.

Indicators

The following indicators have been used. Overall, the index uses three subjectively measured indicators, and around 20 separate indicators/datasets.

Table: Risk/Reward Index Indicators

	Rationale
Rewards	
Industry Rewards	
- ARPU	Denotes depth of telecoms market. High-value markets score better than low-value ones.
- No. of subscribers	Denotes breadth of telecoms market. Large markets score higher than smaller ones.
- Subscriber growth, % y-o-y	Denotes sector dynamism. Scores based on annual average growth over our five-year forecast period and also take into account the penetration rate.
- No. of operators	Subjective evaluation against BMI-defined criteria. Evaluates market openness and competitiveness.
Country Rewards	
- Urban/rural split	A highly urbanised state facilitates network rollout and implies higher wealth. Predominantly rural states score lower, with overall score also affected by country size.
- Age range	Proportion of population under 24 years old. States with young populations tend to be more attractive markets.
- GDP per capita, USD	A proxy for wealth. High-income states receive better scores than low-income states.
Risks	
Industry Risks	
- Regulatory independence	Subjective evaluation against BMI-defined criteria. Evaluates predictability of operating environment.
Country Risks	
- Short-term external risk	Score from BMI's Country Risk Index(CRI). Denotes state's vulnerability to externally induced economic shock, which tend to be the principal triggers of economic crises.
- Policy continuity	From CRI. Evaluates the risk of a sharp change in the broad direction of government policy.
- Legal framework	From CRI. Denotes strength of legal institutions in each state - security of investment can be a key risk in some emerging markets.

Risk/Reward Index Indicators - Continued**Rationale**

- Corruption	From CRI. Denotes risk of additional illegal costs/possibility of opacity in tendering/business operations affecting companies' ability to compete.
--------------	---

Source: BMI

Weighting

Given the number of indicators/datasets used, it would be inappropriate to give all sub-components equal weight. Consequently, the following weighting has been adopted:

Table: Weighting Of Indicators

Component	Weighting, %
Rewards	70, of which
- Industry Rewards	65
- Country Rewards	35
Risks	30, of which
- Industry Risks	40
- Country Risks	60

Source: BMI

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.