Central and Eastern Europe: An El Dorado for Telecom Investors?

Karim Taga and Leopold Glanz

Strong growth, increased liberalisation and new trends in technology have contributed to making the Central and Eastern European telecommunications markets very attractive for investors. In countries like the Czech Republic mobile phone penetration has reached a staggering 105 percent. In this article Taga and Glanz take a close look at the telecommunications bonanza in Central and Eastern Europe. They also scrutinise in detail two striking markets: the Czech Republic and Serbia.

The telecommunications industry in Central and Eastern Europe (CEE) is growing spectacularly. Growth in both revenues and numbers of customers remains consistently higher than in Western markets, and in 2004 the total telecom revenue in CEE increased at an average rate of approximately 8 percent, compared to just 3 percent in the original 15 EU countries (EU-15). Growth rates in the mobile communications industry are particularly impressive: mobile operators in CEE increased their customer base by 36 percent and revenues by 17 percent in 2004, compared to 9 percent and 5 percent respectively for mobile operators in the EU-15.

No wonder, therefore, that hungry investors are eyeing the CEE market with a mix of fascination and trepidation, raising questions about its longer term growth prospects and concomitant risks. Above all, they realise that CEE is a heterogenous mix of countries, and that a successful investment strategy should take these country differences into account. In this article, we will look at the factors that drive the development of the telecommunications markets in CEE, and provide guidelines for investors.

The entry into the EU of eight Central and Eastern European countries in 2004, as well as preparations for the admission of Croatia, Romania and Bulgaria, are important drivers for the region's telecoms sector, due to the corresponding acceleration of liberalisation. Aid money from EU structural funds is tied to the implementation of restructuring measures and thus encourages the removal of barriers to competition and the overall development of local telecommunications infrastructure. In the more developed CEE countries of the Czech Republic, Hungary and Poland, the liberalisation process is largely finished, while in the less developed markets it is currently being initiated.

New trends in technology, such as the entry of mobile virtual network operators (MVNOs) and the offer of broadband wireless access (BWA), provide further opportunities. MVNOs are mobile phone operators that do not have their own network, but rather buy conversation minutes from network operators and pursue a clear brand strategy with slim product portfolios. BWA is a broadband data connection, with transmission rates of between 384 Kbps and 1.5 Mbps, that allows customers to move freely over wide areas while remaining connected to the service at all times.

However, while Central and Eastern Europe is a very attractive telecommunications market for foreign investors, the individual countries are far from homogeneous. They vary dramatically in terms of market development, size and growth.

Key Market Trends

Through innovative strategies and fast network coverage, mobile operators succeeded in taking the lead in CEE. The implementation of next-generation technologies such as 3G and BWA indicates that they may well maintain it. Increasing data traffic is above all the main growth opportunity for fixed operators in CEE, but also opens the door for companies following a wireless strategy through BWA. There are six key characteristics of the CEE telecommunications market:

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- Strong growth combined with innovative strategies leads to success;
- Mobile industry continues to dominate;
- Increasing competition in third-generation technology;
- Data traffic as the last chance for fixed-line operators;
- Transition into the broadband era;
- Investment opportunities are not limited to EU accession countries.

Growth plus innovation equal success

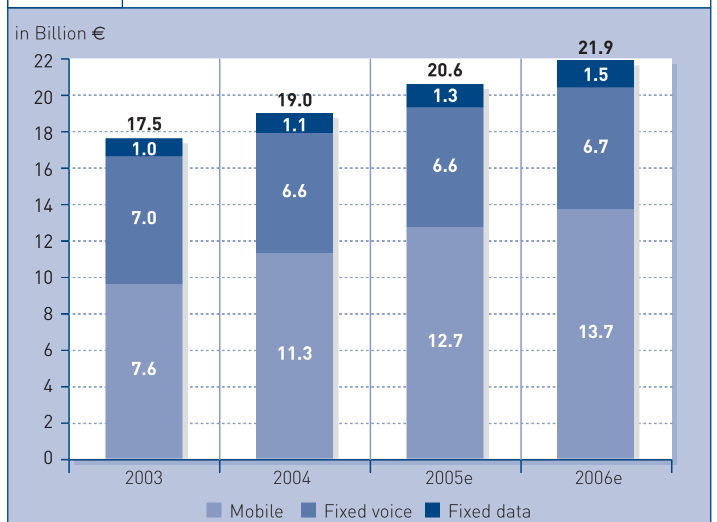
High growth rates in both GDP and telecommunications revenue, and the relatively small size of the markets compared to Western European countries, which indicates further growth potential, make Central and Eastern Europe a very attractive market. Companies that have used their knowledge of the individual markets to launch innovative strategies have been the most successful to date.

There are three factors that contribute to the attractiveness of CEE telecommunications markets. The first is GDP growth. While GDP in 2004 increased on average by only 2.4 percent in the EU-15 countries, in the CEE markets it grew on average by 5.3 percent. The Ukraine, Belarus, Latvia and Romania saw the highest increase in the region, all growing by more than 8 percent in 2004.

There are three factors that contribute to the attractiveness of CEE telecommunications markets: GDS growth, the enormous growth of the telecommunications markets, and overall market potential.

The second factor is the enormous growth of the telecommunication markets in the CEE region. Between 2002 and 2004, the CEE telecommunications markets grew by approximately 9.4 percent p.a., while the EU-15 grew by only 3 percent. The strongest telecommunications growth was seen in Romania (15 percent annual growth), followed by Lithuania (14 percent p.a.), Estonia (13 percent p.a.) and Bulgaria (12 percent p.a.).

Exhibit 1 Telecom Market Size in CEE



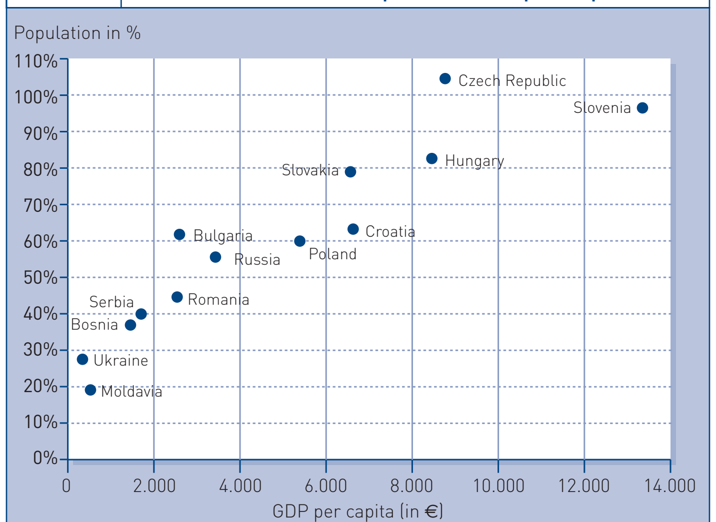
Source: EITO 2005, Arthur D. Little analysis

Knowledge about local conditions within each market remains an essential factor for successful investment.

Although the markets are growing quickly in the CEE region, total market volume remains behind that in Western Europe. The telecommunication market in the entire CEE had a market volume of € 19 billion in 2004 and is expected to increase to approximately € 22 billion by 2006 (exhibit 1). In comparison, telecommunications market volume in the EU-15 countries was € 237 billion in 2004. According to a study by Arthur D. Little, the average annual telecommunications revenue per capita in CEE reached € 255 in 2004, while in the EU-15, it was € 769 on average. Estonia and Slovenia had the highest revenue per capita with more than € 400, followed by Hungary, the Czech Republic and Croatia with more than € 300. These figures indicate a clear potential for further growth.

The countries in the Central and Eastern region are far from homogeneous, and this is particularly true in telecommunications. One reason for the variation in market development among the countries in the region is a difference in their economic growth. For example, in markets with a relatively high gross national product per capita, such as the Czech Republic and Slovenia, mobile penetration tends to be higher (exhibit 2). Economic growth appears to be a decisive driver for growth in the mobile telecommunication market.

Exhibit 2 | Mobile Penetration Compared to GDP per Capita (2004)



Source: EIU 2005, Arthur D. Little analysis

Knowledge about local conditions within each market remains an essential factor for successful investment. The French operator, Orange, launched operations in April 2002 in Romania and has become a market leader both in terms of customer numbers and profit. The re-branding of MobilRom to Orange resulted in high brand awareness (85 percent). Both Orange pre-paid and post-paid contracts continue to grow, while fewer and fewer customers are leaving the operator. Based on intensive market research, the operator launched easy-to-understand products and services. Orange’s success is also due to the “Orange Thank You” program, under which customer loyalty is rewarded by free monthly minutes. In the dynamic Romanian market, Orange has established itself as a trustworthy brand. Market growth is expected to reach 20 percent in 2005, and current mobile penetration is 46 percent.

Mobile is king

The extension and modernisation of the fixed-line networks are more cost-intensive and time-consuming than mobile phone networks, which has been another factor contributing to the dominance of mobile operators.

The mobile industry in Central and Eastern Europe has benefited from its competitive advantages vis-à-vis fixed-line operators and its focus on aggressive marketing. At 50 percent, average mobile penetration in CEE still has room for growth, which will be further accelerated by new operators like MVNOs.

The mobile industry is very strong in the region, with its contribution to the total telecom revenue being higher than that of fixed-line operators. The mobile market in the region achieved an average annual revenue growth rate of 19 percent between 2002 and 2004, compared to 6 percent in the EU-15. Lithuania had the highest growth (36 percent p.a.), followed by Romania (30 percent p.a.) and Estonia (26 percent p.a.).

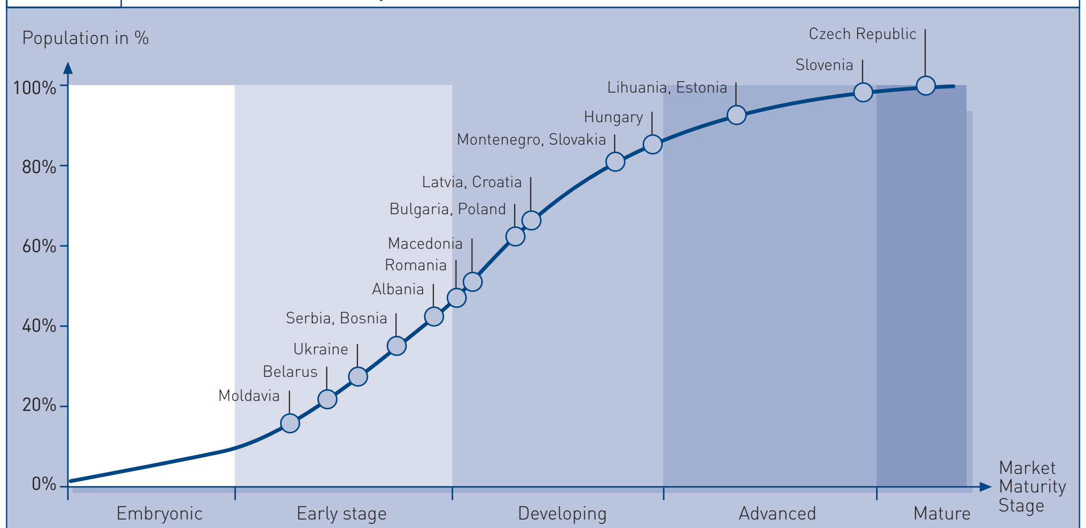
The mobile industry in the region has benefited from the fact that the fixed-line access providers have been slow to react to market demand, leading to a high fixed-to-mobile substitution (customers subscribing to mobile contracts and discontinuing their fixed-line contracts). The extension and modernisation of the fixed-line networks are more cost-intensive and time-consuming than mobile phone networks, which has been another factor con-

Source: Arthur D Little analysis

tributing to the dominance of mobile operators, whose networks are able to cover 99 percent of a country's population within just a few years.

While on average mobile penetration in the CEE region is at 50 percent, it is already very high in some markets. At the end of 2004 in the Czech Republic there were more SIM cards in circulation than the country has inhabitants, producing mobile phone penetration of 105 percent. Slovenia, Estonia and Lithuania each have mobile penetration of more than 90 percent (exhibit 3), while on average the EU-15 countries have mobile penetration of 92 percent. Mobile virtual network operators have contributed to an increase in the intensity of competition and a decrease in prices. MVNOs use the networks of local operators, while retaining control over SIM cards, marketing, billing and customer service. MVNOs are already active in seven markets: Slovenia, Poland, Ukraine, Russia, Estonia, Latvia and Lithuania. They usually appear in markets with a high degree of maturity and drive further mobile penetration. Within a short time, they can achieve considerable market influence. Heyah, the first MVNO in Poland, started in March 2004 and had 1 million contract customers (3 percent market share) within three months. The Lithuanian MVNO E_ys reached 9 percent market share within one year.

Exhibit 3 | **Mobile Markets Development in CEE**



Source: Mobile Communication 2005, Arthur D. Little analysis

The 3G battlefield

The high distribution of mobile phones and their better position compared to fixed-line are a good basis for the introduction of 3G services in the CEE region, and growth is expected to be strong.

Mobile operators in CEE are upgrading their networks to 2.5G and 3G in order to satisfy growing demand for high-speed data from their customers. Commercial UMTS services have already been launched in six countries and will soon be available across the region.

The demand in the CEE region for mobile data services is growing rapidly. Upgrades of networks for faster data transfer are being completed in all markets, and most operators have already implemented EDGE. In Romania, Ukraine, Belarus, Moldavia, Slovenia, the Czech Republic and Latvia, operators are also offering CDMA2000 services over 450 MHz (for more discussion on these 3G-substitution products, see page 61). A delay of two to three years regarding UMTS introduction has been seen in the CEE region. 3G licences have already been auctioned in most countries, and in several countries 3G services are in the process of being launched.

UMTS pioneers in CEE are Mobitel in Slovenia, PTC Era in Poland, VIPnet in Croatia, Connex in Romania, LMT in Latvia and T-Mobile in Hungary. Their customers can use a data speed three times higher than that of EDGE users. Mobitel has offered UMTS services since December 2003 and, at March 2005, their UMTS network covered 60 percent of the Slovenian population. In Warsaw and surrounding areas, UMTS has been offered by PTC Era since November 2004 and six further Polish cities should follow in 2005. The Croatian VIPnet covered 25 percent of the population with its network at launch in January 2005, one month after the licence was awarded. Since April 2005, Connex has operated a UMTS network in eight Romanian cities. In August 2005 LMT started commercial service. T-Mobile Hungary launched at the end of August 2005 in Budapest with 75 percent city coverage.

The high distribution of mobile phones and their better position compared to fixed-line are a good basis for the introduction of 3G services in the CEE region, and growth is expected to be strong. In the end, success will depend on economic development, general regulatory conditions and the strength of operators' marketing strategies.

Is data traffic the last chance for fixed-line operators?

The former monopoly operators of fixed-line networks in CEE are still powerful institutions, but they have been aggressively attacked by mobile operators. The growing demand for data and bandwidth offers new growth potential. Triple-play packages combining voice services, TV and the internet are being launched.

For many years, conditions have been unfavourable for the fixed providers in CEE, as the popularity of the mobile phone has resulted in strong fixed-to-mobile substitution. This has been due to the high prices and poor customer orientation of the former monopolist fixed-line incumbents, as well as the aggressive marketing, strong infrastructure and low-end pricing of the mobile phone operators.

Nevertheless, fixed providers also have growth potential. Their revenues are predicted to rise in 2005 by around 3 percent to € 7.9 billion, compared to projected fixed-line revenue growth in the EU-15 of 1.8 percent. Voice revenues will increase by 0.5 percent p.a. in CEE, while it will decrease in the EU-15 by around 1.7 percent in 2006. The growth potential of the fixed-line operators, however, is primarily due to data services. In 2004 this segment grew in CEE by about 16 percent, compared to 9 percent in the EU, and is expected to continue growing by approximately 15 percent per annum until 2006.

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The fixed providers are reacting to this trend by offering product bundles with telephony and internet as well as TV - a combination known as triple play. _esk_ Telecom, T-Magyar Telekom and T-Hrvatski Telekom will offer such a service in 2005, in the hope of generating increased customer loyalty and new customer acquisitions.

Fixed-line penetration in the new EU member countries of CEE varies by country. Penetration in Slovakia at the end of 2004 reached 26 percent, in Poland 34 percent, in the Czech Republic 34 percent, in Hungary 36 percent and in Slovenia 42 percent. In Western Europe, each household has potential access to a fixed-line connection. The actual penetration rate in the EU-15 reached 55 percent in 2004.

In terms of broadband connections, CEE has good potential for catching up with Western Europe. The growth rates are enormous: the number of broadband customers increased in 2003 to 2004 by around 90 percent.

Although in the eight new EU countries the fixed-network markets are liberalised, the level of competition is much lower than in the mobile sector. The incumbents are still powerful institutions, which maintain control over most of the fixed-line infrastructure. The construction of an exhaustive infrastructure is not a viable option for alternative operators, so they are left leasing end-user connections from the incumbent operator.

In markets like Hungary, the Czech Republic or Poland, many alternative operators are active, with a total market share of about 20 percent. But in most CEE markets, alternative operators have managed to gain a total of only 5 percent of the market because they focus on specific segments, usually middle to large business customers. In addition, in many countries, such as Romania, Bulgaria, Slovenia and Croatia, deregulation of the fixed network is only being pushed slowly by the regulator. The alternative fixed-network market has remained, therefore, a niche segment with focus on business customers.

Into the broadband era

The growth rates in broadband in CEE markets are expected to remain above 40 percent on average through 2006. Broadband wireless access (BWA) will further push broadband market growth, and BWA operators will emerge across the region and attack existing operators. In addition, mobile operators are likely to complement their services with a mobile broadband offering.

Dial-up connections are currently the most common internet access technology in the CEE. In many countries, the number of dial-up users increased in 2004, while in countries where high-speed DSL and cable access is available there was a slight decrease in dial-up customers. A migration of dial-up to broadband took place in Estonia and Hungary in the “heavy-user” customer segment.

In terms of broadband connections, CEE has good potential for catching up with Western Europe. The growth rates are enormous: the number of broadband customers increased in 2003 to 2004 by around 90 percent, and by 2006 the annual growth rate is expected to be over 40 percent. The demand has come primarily from residential customers who upgrade to broadband technology. The leading broadband markets in CEE - measured by the number of household connections - are Estonia, Slovenia, Hungary, Lithuania and Poland.

Although cable operators are active in all CEE markets, they have enormous investment needs in the internet area due to out-of-date networks. Because of the increasing penetration of DSL and BWA, they are under increasing pressure and are trying to halt the customer decline through the offer of triple-play product bundles combining TV, internet and voice services. The cable operator UPC reaches 4.55 million households in its Eastern European markets, of which 1.74 million are back-direction-capable connections. At the end of 2004, UPC had 178,500 internet customers in CEE.

BWA services currently reach a very small percentage of the total market in Eastern Europe, but the potential is enormous because they enable alternative operators to bypass the end-user access of the incumbent operator.

Internet penetration in Estonia and Slovenia is already comparable with that in Western Europe (which reached 55 percent in 2004). At the end of 2004 it had reached 26 percent in Hungary, 24 percent in the Czech Republic and Poland and 23 percent in Bulgaria. In order to increase the number of internet users further, operators rely above all on innovative price models like pre-paid cards or flat rates. Pre-paid enables a customer to buy internet data packages in advance and is especially suitable for the dial-up segment. Flat-rate models meet broadband service expectations because they allow internet access without any limitation on the download volume at a set monthly price.

BWA has become a much-discussed subject, which could provide tough competition to traditional broadband technologies such as DSL, CaTV and UMTS. BWA services currently reach a very small percentage of the total market in Eastern Europe, but the potential is enormous because they enable alternative operators to bypass the end-user access of the incumbent operator, making broadband offers at attractive prices possible for residential customers. Operators of BWA networks are especially successful in Poland and the Czech Republic, and in regions with high costs for local-loop rental and when no DSL access is available.

There are currently four pre-standard technologies in the BWA segment: EV-DO (CDMA), TD-CDMA (UMTS-TDD/IPW), Flash OFDM (Flarion) and WiMAX. Through BWA technologies, users can enjoy a high data transfer speed while moving freely within a large coverage area. BWA can be implemented very cost-effectively and these savings can be passed on to the customer. Profitable penetration of rural areas becomes possible without high investments, while a fast roll-out through mobile access and the additional value for mobile consumers also offer business opportunities.

In October 2005, T-Mobile Slovakia launched the world's first nationwide commercial mobile broadband service with Flash-OFDM network technology from Flarion in the 450 MHz frequency spectrum. The service is available in Bratislava and 19 other cities.

Eurotel Praha introduced a CDMA2000-1x-EV-DO product in the Czech market in August 2004. The price for the service is higher than traditional internet access technologies, but within four months 30,000 customers subscribed. The _esk_ Telecom Group distributes these services through Eurotel and in fixed-line branches, and the MBWA services of _esk_ Telecom amounted to 16 percent of total broadband market share at the end of 2004. Its competitor, T-Mobile Czech Republic, has recently responded by launching its UMTS TDD network. The "Internet 4G" service is initially available in the Prague area, with coverage to be expanded over time. Tariffs available are a 3GB package for 699 Czech koruna (US$ 28) per month and a 10GB package for CZK 999 (US$ 40) a month, with activation fees of CZK 99 (US$ 4).

In October 2005, T-Mobile Slovakia launched the world's first nationwide commercial mobile broadband service with Flash-OFDM network technology from Flarion in the 450 MHz frequency spectrum. The service is available in Bratislava and 19 other cities. Customers will experience mobile data speeds of 1 Mbps in the downlink and up to 256 Kbps in the uplink.

The construction of wireless internet access platforms (Wi-Fi) at public places began across the region in 2004. The spread of hotspots has been sped up by fixed-line and mobile operators. Hotspots were installed in cafés, hotels, conference centres, airports, petrol stations and fast-food restaurants. Other internet access technologies, such as satellite, Powerline and Metro-Ethernet are offered in CEE, but eke out a niche existence.

Opportunities beyond the EU accession countries

Investing in the Central and Eastern European telecommunication industry remains a hot topic. Although major Western operators have already moved into the region, attractive targets for investors can be found in many markets.

For the telecommunications industry, the call "Go East" is nothing new. For many years, CEE has been one of the most important topics on the leadership floors of the telecom industry. Significant investors in these markets are Deutsche Telekom, France Télécom, Telekom Austria, TeliaSonera, Telenor and Vodafone.

Most foreign investors currently prefer to invest into more established "big players", as opposed to the smaller start-ups. In May 2005, the UK's Vodafone acquired a 100 percent stake in the Czech mobile operator Oskar and a 99 percent stake in the Romanian operator Mobifon for € 2.9 billion from the Canadian TIW. Spain's Telefónica bought 51 percent of shares in _esk_ Telecom for € 2.75 billion in April 2005. Telekom Austria signed a purchase option for Bulgaria's Mobiltel in December 2004 and acquired the enterprise in July 2005 for a total value of € 1.6 billion.

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There are many investment possibilities left for investors interested in the CEE region, such as T-Magyar Telekom (41 percent free float), TP S.A. (39 percent state-owned shares) or Bulgarian Telecommunications company (35 percent free float). Further interesting possibilities are in Belarus (Velcom), Bosnia and Herzegovina (BH Mobile, Mobi's), Moldavia (Moldtelecom), Serbia (Telekom Serbia, MobTel) and the Ukraine (Wellcom). There have been recent press reports that Mobilkom Austria is preparing to invest in Serbia and Bosnia and Herzegovina. The mobile subsidiary of Telekom Austria has stated that it wants to expand into 10 CEE countries.

The most successful telecommunications companies in the region are those that have succeeded in controlling their costs, straightening their cost side to market-oriented structures, after the consolidation of market shares and revenues in the past. So far, Eastern European

telecommunication companies that offer a full service portfolio (fixed-line, mobile business and internet) have been very successful, with EBITDA margins of 47 percent for the _esk_ Telecom, 43 percent for TP S.A. and 37 percent for T-Magyar Telekom (MÁTAV). In comparison, France Télécom achieved an EBITDA margin of 19 percent, Deutsche Telekom 31 percent and Telekom Austria 39 percent. Revenue contribution and the yield on investments are also important considerations when assessing a potential investment.

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For many Western telecom groups, synergies with potential investment targets are very important. Strategic investors expect advantages like a strong brand, the transfer of management potential, the optimisation of the network and common offers of products and services, as well as savings in procurement costs. In order to take advantage of these synergies, it is important for strategic investors to own a majority of an Eastern European operator. Consequently, investors have usually undertaken a re-branding effort. Deutsche Telekom, for example, already offers a uniform product portfolio across its CEE markets.

In addition, Western telecom operators adapt their infrastructure to the increasing demand from the East. Telekom Austria, with mobile phone subsidiaries in Croatia (VIPnet), Slovenia (SiMobil) and Bulgaria (Mobiltel), operates a 3,700 km long and 320 Gbps broad optical fibre ring - the Jet2Web stream, used mostly for voice minutes and data traffic in the southeast European region. Western players also modify their service portfolios according to the regional demands of Eastern Europe. Enterprises expanding to CEE offer bundled product packages for internal data settlement.

The development of a basic regulatory structure remains one of the largest uncertainties for investors in the region. The timetable for deregulation, such as local loop unbundling, call-by-call, carrier pre-selection, is often not heeded. Similar concerns apply to the awarding of new licences. Further regulatory uncertainties concern the pricing for MVNO-roaming, Voice over IP (internet telephony) and termination tariffs, which have an essential influence on revenues and costs for the single player.

Country Examples

We provide a brief overview of the telecommunications market in two countries in Central and Eastern Europe, including the regulatory situation, and fixed-line, mobile and internet services, in order to highlight the differences among the various countries and the opportunities for investors.

Czech Republic

The Czech Republic is one of the leading telecommunications markets in the region. Liberalisation has been completed and the incumbent Czech Telecom (_eTe) was fully privatised in 2005. It has the highest mobile penetration in CEE (105 percent at the end of 2004) and _eTe/Eurotel launched a mobile wireless broadband (MBWA) product in 2004 on the 450 MHz frequency, which was a huge success.

Regulator: The Ministry for Information Technology was established at the beginning of 2003, responsible for the areas of telecommunication and carrier services. The regulator, the Czech Telecommunications Office (CTO), is said to have little execution capability.

Fixed-line: The ex-monopoly _esk_ Telecom (_eTe) has developed remarkably in the past few years. Under the influence of foreign management experience and capital, _eTe has become technologically and organisationally modernised. The company stands financially on solid ground, has seen a strong increase in its share price and has very good conditions for defending its customer base, above all in the government area and with large customers. The company was fully privatised in April 2005, with Spanish Telefónica being chosen by the government to purchase a 51 percent share. The alternative fixed-line market is well developed, with the market share of alternative fixed providers reaching 21 percent. Fixed-line penetration reached 34.4 percent at the end of 2004, around 1.4 percent lower than the preceding year.

Mobile: In August 2005, T-Mobile (formerly RadioMobil) became the mobile market leader in the Czech Republic with 41 percent market share, Eurotel Praha was second with 40 percent and late entrant _esk_ Mobil, operating under the brand name Oskar, had 19 percent. Vodafone acquired Oskar in April 2005, and a re-branding is planned for 2006.

The Czech mobile market is one of the most highly developed in the entire CEE region, with mobile penetration reaching 105 percent at the end of 2004. Since 2003, the market has shown clear signs of saturation. UMTS licences were awarded in 2001 to Eurotel Praha and T-Mobile, and Oskar received a UMTS licence in February 2005. With its CDMA-450-network, Eurotel Praha reached about 30,000 customers at the end of 2004. Eurotel announced its intention to launch voice and data operation via UMTS at the end of 2005, and the company will soon afterwards offer UMTS-HSDPA (High Speed Downlink Packet Access), enabling customers to reach data access speeds of up to 1.8 Mbps, gradually growing to 14.4 Mbps. T-Mobile Czech Republic has responded by recently launching its UMTS TDD network. The “Internet 4G” service is initially available in the Prague area, with coverage to be expanded over time. Tariffs available are a 3GB package for CZK 699 (US$ 28) per month and a 10GB package for CZK 999 (US$ 40) a month, with activation fees of CZK 99 (US$ 4).

Internet: The penetration rate of internet services overall is presently 24 percent, and broadband penetration 7 percent. The existence of a well developed fixed-line market has led to a large number of internet service providers on the market and, because of increased competition, prices are gradually beginning to move down.

Serbia and Montenegro

We expect liberalisation of the telecommunications sector in Serbia and Montenegro to accelerate after the establishment of the regulator at the end of 2005. While less developed than other markets in the region, there is good potential for further growth in telecommunication services, especially mobile, and there are many investment opportunities for foreign investors among fixed-line and mobile operators.

Regulator: The telecommunication law of April 2003 plans the foundation of an independent regulating authority, the Serbian Telecommunication Agency. Up until now, regulation in Serbia has not been at the level of other countries in the region. The authority, which will start working by the end of 2005, will be free and independent, and will carry out the liberalisation of the telecommunication market.

Fixed-line: With the initial liberalisation of the fixed-line network, Telekom Srbija lost its monopoly, which was legally guaranteed until June 2005. Telekom Srbija serves more than 2.7 million fixed lines and approximately 40,000 ISDN connections.

Mobile: MTS Telekom Srbija had a market share of 55 percent at the end of 2004, with its competitor MobTel Srbija having 45 percent. An Austrian consortium acquired 51 percent of MobTel in May 2005 from the Russian investor BK Trade, with the remaining 49 percent still being held by the state. The mobile phone market in Serbia is not well developed, with a penetration rate of only 36.5 percent, but the market is expected to grow quickly. According to Arthur D. Little analysis, the penetration rate at the end of 2006 will be over 50 percent. No UMTS licences have yet been awarded.

Internet: Internet penetration was only 7 percent in 2004 and more than 40 percent of users are students. ADSL is offered by alternative ISPs that lease capacity from Telekom Srbija. Broadband subscriptions are expected to reach 10,000 at the end of 2005.

Insights for Investors

- The strong growth of GDP and the telecommunications sector, combined with the relatively small overall size of the telecommunications market in Central and Eastern Europe, makes the region very attractive for foreign investors.
- Because the fixed-line incumbents have been slow to update their networks and customer service, the mobile industry dominates in the region. In some countries, penetration is already very high and MVNOs have begun to move in.
- Mobile operators across the region are further driving the market by introducing 2.56 and 3G services in order to satisfy growing customer demand for high-speed data.
- The growing demand for high-speed data services may be the primary growth potential for fixed-line operators. Triple-play packages combining voice, TV and internet are currently being launched.
- Broadband growth is expected to remain above 40 percent through 2006. MBWA services have been launched in the Czech Republic and Slovakia.
- While many of Europe's major telecommunications companies, such as Vodafone, Telekom Austria and Deutsche Telecom, are already present in the region, there are still many attractive investment opportunities available.

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