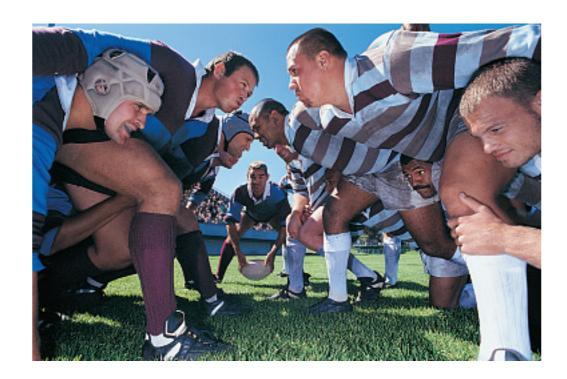
February 2006

Telecom operators

Facing off on convergence



- Fixed-mobile convergence to begin in 2006
- A plethora of strategic options
- More competition and less growth
- Fixed vs mobile vs integrated: reshuffling market positions?



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Executive summary

Fixed-mobile convergent market: less growth ...

Fixed-mobile convergence will begin in 2006. In the fifth edition of the Arthur D Little—Exane BNP Paribas report, we will look at the impact of this major change on the sector. Our core scenario is based on:

- further rate cuts on mobile services, driven by the imminent arrival of mobile-WiFi hybrid offers and, ultimately, of future broadband mobile technologies;
- ongoing mobile traffic growth (fixed-mobile substitution) boosted by these rate cuts.
 Thus, fixed revenues will continue to fall, but ultimately mobile voice revenues will also follow this trend;
- accelerated development of mobile broadband sustaining growth in the overall mobile market, but with a higher level of value-sharing with internet services specialists and content providers.

In 2005, the telecoms services market represented EUR245bn in our sample of eight European countries^{1,} i.e. average revenues per capita of EUR50 per month, of which EUR22/month for fixed-line (corresponding to EUR57 per fixed line) and EUR28/month for mobile. In a voice/data split, the figure was EUR39/month on voice (fixed and mobile) and EUR11/month on data (fixed internet, mobile data, fixed-line and mobile content).

In the 2005-2010 period, we expect average growth in the European telecom services market to fall to 0.8% pa, of which +3.1% pa on mobile and -1.3% on fixed-line. These trends—globally in line with the expectations of sector players—correspond to a slowdown versus current mobile growth (+8% pa in 2002-2005) and sector growth (3% in 2002-05), and to a slight deterioration in fixed (flat in 2002-05). Thus, the share of household spending on telecom services will shrink slightly.

We have established best case and worst case scenarios based on 1) the speed of mobile price drops and elasticity, 2) the potential for acceleration of mobile data and 3) the share of revenue captured by internet services specialists and content providers. The scenarios that cumulate the best or the worst of each parameter show an average annual growth rate for the global market within a range of +2% to -1%.

... and stiffer competition point to a decline in EBITDA and ROCE

Convergence creates new opportunities in services and customer loyalty. However, it also fuels stiffer competition, not so much because of the arrival of lower cost technology, but because of the gradual disappearance of the barriers between fixed and mobile.

At present, the European mobile markets count between three and five network operators and the broadband fixed-line markets between five and nine significant players. Excluding the possible entry of some media groups or internet services specialists, the average number of potential players on the "convergent" fixed-mobile market is between eight or nine.

The trend towards a convergent market should therefore result in greater market share fragmentation, and thus less profitable operators.

Taking into account this competitive pressure, we expect sector EBITDA to drop 1% pa in 2005-2010, and sector ROCE to decline to under 15% in 2010, vs over 20% currently in the mobile segment and 15% in fixed for incumbents.

Our extreme scenarios show sector EBITDA 2005-2010 CAGR of between +1% and -4%.





¹ Belgium, France, Germany, Italy, the Netherlands, Portugal, Spain, and the UK.

Convergence: reshuffling market positions

Fixed-line operators have strong negative exposure to fixed-mobile substitution, but have a real opportunity to develop in mobility. The best-positioned are the small alternative operators positioned on broadband, which have little to lose on fixed voice and much to gain in investing in mobile (broadband and voice).

Internet service specialists like Yahoo! and Google are also poised to gain from convergence. They have no telecommunications services revenues to protect, are network agnostic and therefore naturally convergent.

Integrated incumbents theoretically have the most to lose, with cannibalisation risk on both fixed and mobile. They are seizing convergence in order to create greater customer loyalty and counting on: 1) their control over fixed and mobile access networks and 2) their high mobile market share allowing them to offer attractive tariffs (the on-net traffic advantage). However, their ability to develop convergent offers could be hampered by operational and regulatory roadblocks.

Pressure on pure mobile operators is mounting, but they still have many cards to play in terms of fixed-mobile substitution. 3G networks will remain the most efficient for voice, with 3G/HSDPA providing a sterling opportunity in mobile broadband. However, for both offensive and defensive reasons, mobile operators will need to broaden their strategies (investment or partnerships in WiFi and new broadband mobile technologies, such as WiMax, F-OFDM, etc.). And mobile operators now seem ready to do so.

Convergence of services vs convergence of access networks

The simplest form of convergence consists in the commercial bundling of fixed and mobile offers. It has existed for several years and will continue to develop. In our view, this form of convergence creates little value.

Apart from this, convergence will occur in two other very different ways.

- Convergence of services. It will now be possible to access the same service, such as email, instant messaging (IM) but also music and television, from various handsets connected to different types of networks (e.g. a PC at home and a mobile handset outside).
- Convergence of access networks. This is the gradual disappearance of traditional borders between fixed-line and mobile networks thanks to technological links between networks (e.g. hybrid handsets that connect both to GSM mobile networks and to WiFi via ADSL) or new technologies that allow for fixed, nomadic and mobile services at the same time (e.g. WiMax).

The convergence of access networks is expected to intensify competition, as it will allow fixed-line operators to provide mobile offerings and vice versa. We expect this additional competition to prompt further price cuts on fixed broadband, mobile broadband and/or mobile voice (depending on the country). This is why we forecast a global market slowdown between 2005-2010. However, we also expect strong momentum to build in the mobile broadband market.

WiFi paves the way for hybrid offers blending the benefits of a mobile offer (for voice) and of broadband wireline access (when the user is at home, the office or in a hotspot). WiFi can provide broadband services that are more powerful and less expensive than 3G and should thus be a catalyst for mobile data. On voice, WiFi could accelerate the fall in mobile rates by as much as -15% in three years.





MBWA technologies (Mobile Broadband Wireless Access: notably fixed and mobile WiMax, F-OFDM, iBurst, etc.) will, in the medium term, enable much denser coverage than WiFi, for more substantial investments. Compared with 3G, the key advantage of these technologies will be higher bandwidth, possibly at a lower cost. In our view, MBWA technologies already facilitate very competitive offers on the fixed-line dual play market (in competition with unbundling) and on nomadic broadband (in competition with data on 3G). By around 2008-2009, MBWA technologies should have progressed sufficiently (handsets and handover capability), enabling fixed-line operators to compete with mobile operators not only on broadband data but also on voice (in VoIP) – with however limited capacity to slash prices compared with the 3G/HSDPA offers that should exist by this date.

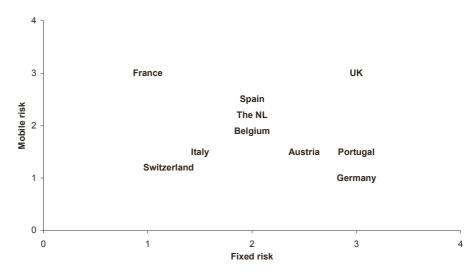
Convergence of services will create more value for the sector because it will generate new usage, particularly on mobiles. But in this market, telecom operators are like any other supplier: internet services specialists are partners, but also often rivals ahead of the operators (e.g. on email or instant messaging). As a result, the mobile data market could grow considerably, but operators will only capture part of it. Long-term, operators will have to face the risk of disintermediation on both data services and voice.

Fixed-line stands to gain in some countries, mobile in others

Based on the 72 interviews that we conducted in 11 European countries, we conclude that convergence should fuel competitive pressure in the French and UK mobile markets, and to a lesser extent in Spain, the Netherlands, Belgium and Switzerland. In Germany, fixed-mobile substitution will accelerate driven by the drop in mobile prices and home zone offers; fixed-line is also under pressure from mobile in Portugal, Austria and the UK. In Italy and Switzerland, the additional risk appears limited in our view.

In each country, the pre-existing levels of competition in fixed-line and in mobile will determine the impact of convergence, together with other factors such as the existence or absence of credible fixed-line operators who may enter the mobile market and viceversa. We have also taken into account the regulatory situation, notably in terms of MBWA licences and MVNO access.

Chart 1: Exposure of European markets to stiffer competition on the back of fixed-mobile convergence*



*Our risk rating system is explained on page 76. Source: Exane BNP Paribas, Arthur D Little



Arthur D Little – Exane BNP Paribas report, fifth edition

Below is a reminder of our January 2005 report's conclusions, *More effort required*. We have split them into two categories: our on-target projections and overestimated or underestimated topics.

On target projections

"We forecast revenue growth in the European mobile sector (in the five largest countries) at 7% in 2005e"; "operators will put more effort into growing underpenetrated customer segments, boosting fixed-mobile substitution and developing mobile multimedia". In fact, in 2005 growth was 6.7%; operators increased commercial efforts, reflected in strong SIM card growth, i.e. 10% y-o-y vs 9% in 2004 (five major European countries); outgoing mobile traffic remained very high (12% y-o-y); and customer migration towards 3G accelerated at the end of the year (eight million 3G handsets sold by Vodafone at end-2005).

"Volumes still offer an attractive opportunity, but the threat to prices per minute is increasing". The decline in the average price per minute accelerated (down 10% y-o-y in Q4 05 vs 6% in H1, as did traffic growth (up 13% vs 11%).

"Residential mobile data: no certainty on the winning model". Most operators did not see data ARPU accelerate significantly in 2005.

"The key to value creation in any one mobile market is, in our view, asymmetry in market share among players"; "asymmetry is least apparent in the UK and has recently been weakening in (..) Italy (..). Market share in France has remained steady". Market share asymmetry dropped considerably in Italy and the incumbent's response prompted downgrades to growth and profitability forecasts. The market remained very competitive in the UK. To date, in France, the stability of the mobile market has been better preserved.

"Cost-cutting: two to three margin percentage points within reach". Against the backdrop of growing pressure on prices and rising commercial costs, operators are increasingly commenting on their cost-cutting potential.

Overestimates and underestimates

"Threats to the competitive status quo should not be overestimated"; "competition in (..), Spain and Germany is unlikely to stiffen very much". In fact, Telefonica and Deutsche Telekom launched bigger-than-expected commercial drives to offset high market share losses. In Germany, the arrival of many MVNOs accelerated competitive pressure at the end of the year.

"We reiterate our scenario of generally stable margins in Europe"; "we forecast stable subscriber acquisition and retention costs over the 2005-2006 period vs 2004". Competitive pressure was greater than expected in several countries, prompting a further hike in acquisition and retention costs (150bp y-o-y as a % of revenues on average in Europe). This, in turn, depressed the European mobile sector margin by about 100bp.

