

PwC Valuation Index

Connecting investment
to returns in telecoms

August 2013



A cautious confidence has returned to the equity markets ...

Market P/E ratios reached their highest level for two years in the past few months. Share prices have continued to trend upwards at a time when current profits are relatively flat. The market appears to be reflecting improved prospects for longer term profit growth. We see this confidence reflected in improvements in indicators such as the PMI indices¹, unemployment rates² and increased marketing budgets³. Furthermore, the UK's growth forecast was one of only two G7 countries recently upgraded by the IMF⁴.

We can also see this phenomenon in our Valuation Index, which has fallen from 121 to 106 since December (in other words, share values are now more in line with values based on improved economic fundamentals). In our previous edition, we saw that market prices implied a level of growth in excess of that seen in the fundamentals for the economy. It now looks like these fundamentals have caught up with the share market.

... but choppy waters lie ahead

Volatility in share markets is currently low. However, this may be the calm before the storm.

In May, investors had a foretaste of the sort of turbulence that may be expected when QE is unwound. There was a sharp correction as the markets reacted to the Fed's release of minutes hinting at the start of a potential wind-down of QE in 2014.

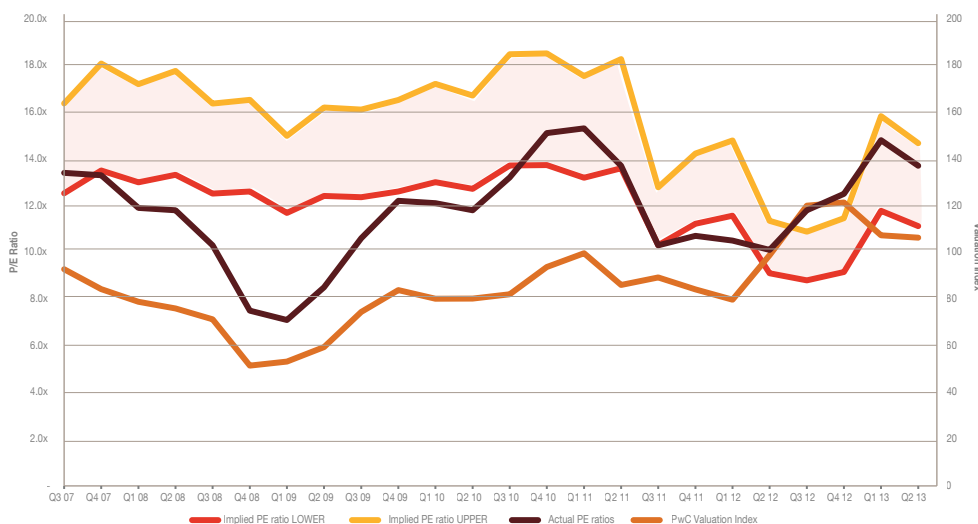
It is clear that one of the major factors affecting share prices in the short-to-medium term will be the timing and the mechanism by which QE is unwound, notwithstanding any shocks such as an escalation of the Eurozone crisis or an outbreak of conflict in the Middle East. Increased volatility in the market would further complicate asset pricing and benchmarking, and the process of making investment decisions.



How would you navigate through these turbulent times?

Look through any short to medium term volatility, and focus on the longer term investment case. The key is to understand (both in terms of geography and sector) where those growth prospects lie and where they will fit into your business strategy. The value of the deal will ultimately be based on whether the growth story underpinning any investment plan you have to make is sustainable and credible.

Figure 1: Implied versus Actual P/E ratios



Note on methodology used in the calculation of the Index

The Index uses a dividend growth model ('DGM') to analyse equity markets. So that we can estimate what future dividends will be, we calculate an 'equilibrium' dividend yield based on the average of long-term independent economic forecasts of real GDP growth (made at the end of each time period). Once we have derived an equilibrium dividend yield, we convert this into a price-earnings ratio ('P/E ratio') which we then compare to actual P/E ratios.

Our Index is then calculated by dividing the actual P/E ratio by the P/E ratio implied by fundamentals. This shows in a single measure how much equity prices at a given point in time differ from the value implied by fundamentals.

¹ Chartered Institute of Purchasing and Supply (CIPS) Purchasing Managers' Index, July 2013

² Office of National Statistics (ONS), July 2013

³ IPA Bellwether report, July 2013

⁴ IMF World Economic Outlook Update (July 2013)

Who is reaping the rewards in telecoms?

Network operators are not getting a big slice of the returns and hence value in the wider infocomms market – we look at the reasons why

The communications sector has evolved tremendously over the last decade. In particular, the smartphone has rapidly accelerated the convergence of computing and telephony and democratised consumer access to content. It has also stimulated a wave of innovation in applications and services which are available at increasingly affordable prices; in turn this has triggered a dramatic increase in data consumption on telecom networks.

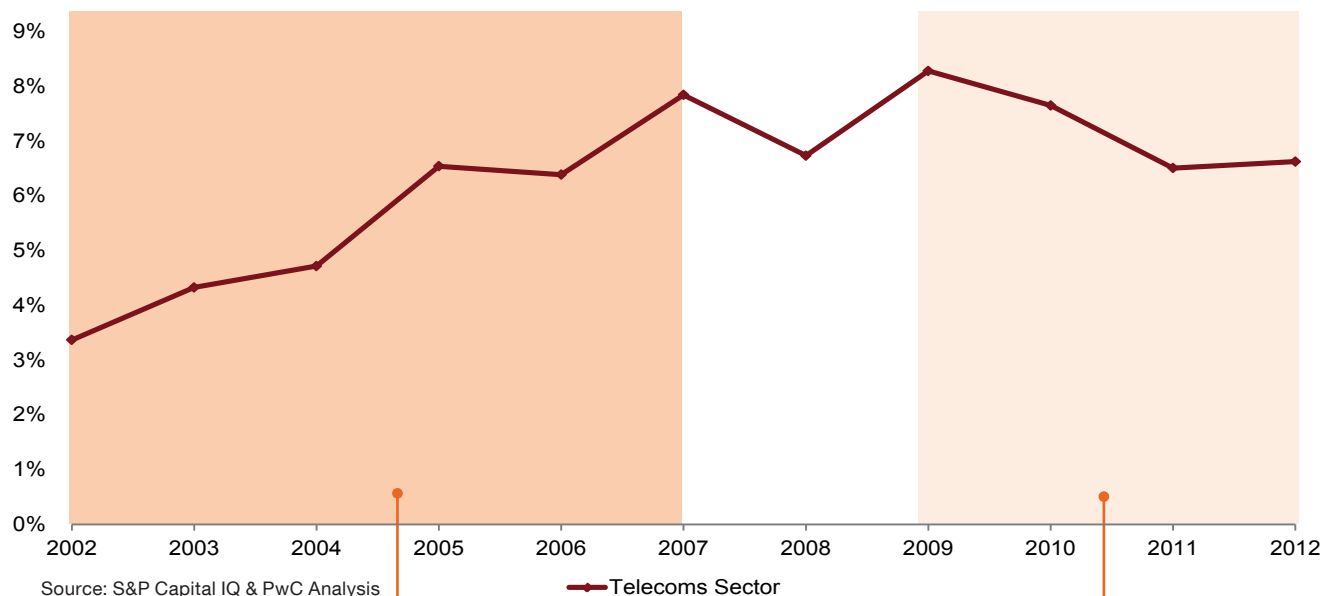
Returns generated by network operators appear to be lower than their cost of capital

Whilst network operators continue to provide the infrastructure to support the increased levels of data being consumed, their returns lag behind others in the sector, such as handset manufacturers and content providers. The Return on Invested Capital (ROIC) generated by telecom operators has decreased over the last three years (Figure 2).

We estimate a post-tax cost of capital for a typical operator in Europe to be around 8%-9%; to create shareholder value, returns generated need to exceed the cost of financing and at a high level it appears this has not been the case. Major drivers for this include heavy levels of regulation and competition faced by operators in the markets in which they operate.



Figure 2: Return on invested capital



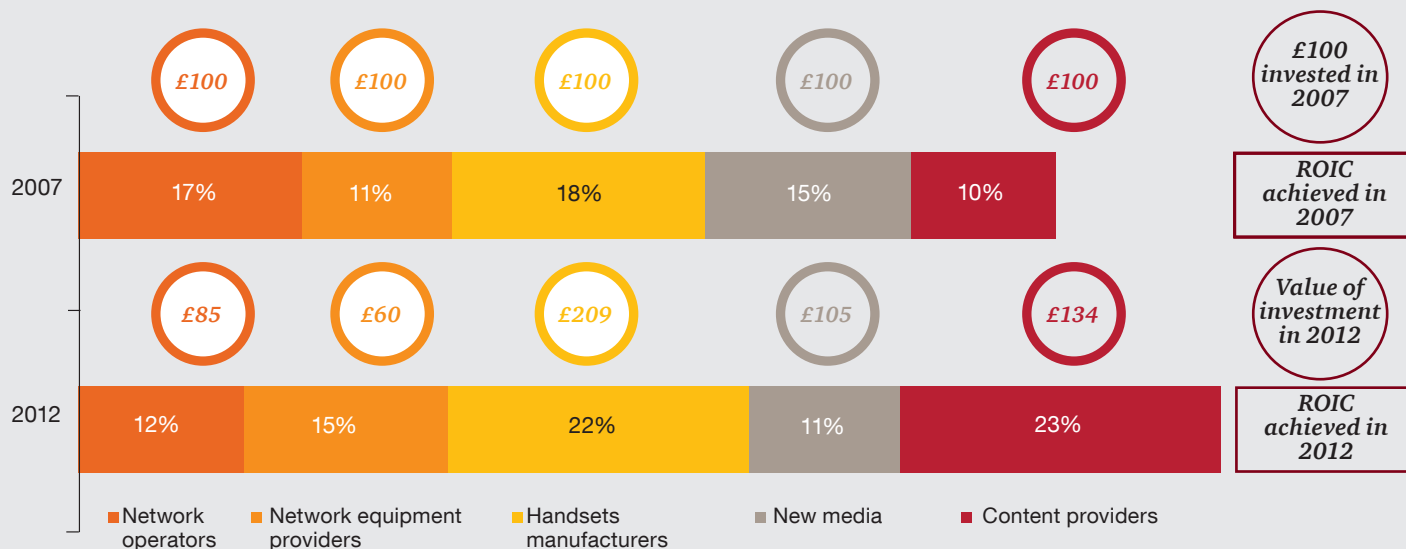
ROICs affected by write-downs taken by operators following investments in 3G licences and networks. Returns improved in subsequent periods partly as a result of increased usage.

Regulatory pressures (for example on roaming and termination charges) and price competition have contributed to margin erosion in recent years.

Returns of companies in some adjacent sectors have increased

Some companies in adjacent sectors (such as handset manufacturers, new media companies and content providers) have seen their returns grow. In Figure 3 we compare the adjusted ROICs achieved in 2012 to those in 2007; we also look at the return on a £100 investment an investor would have made over the period. In aggregate, manufacturers of handsets and content owners have significantly outperformed network operators and related equipment providers on this metric.

Figure 3: Adjusted Return on Invested Capital



Source: S&P Capital IQ & PwC Analysis.

In order to make the returns comparable, we have adjusted the ROIC to exclude goodwill and intangible assets and the associated amortisation and impairment charges. This way we can compare the returns of companies that have grown organically to companies that have grown through acquisition on a like for like basis.

The circles show the change in value of a £100 investment made in each of these sectors in 2007.

- 1** Return on capital generated by network operators has declined and this appears to be reflected in their market value. Telecom operators have voiced concerns around over-the-top players eating into their market share without having to put up corresponding levels of investment. On the other hand, some might argue that players in adjacent segments have been more innovative.
- 2** The ROIC of network equipment providers has increased over the last 5 years but the share prices have declined. The roll out of 4G networks has fuelled demand for network equipment, driving the returns higher over the last 12-18 months. On the other hand, concerns over the impact of fierce price competition from emerging players has exerted downward pressure on share prices.
- 3** Some handset manufacturers have seen a tremendous increase in share price. Within this segment, the balance of power has shifted to companies which have developed a strong market share in smartphones. Innovation is facilitating premium pricing which feeds through into higher returns.
- 4** Valuations of some new media companies have increased in anticipation of future growth. Such valuations have been volatile due to uncertainty over long-term performance and short-term returns have also been impacted by investment in innovation for longer-term payback.
- 5** Content providers have enjoyed increasing returns as there is a growing trend towards ownership of content in order to profit from new distribution models. Owning content and creatives is becoming an increasing trend across the sector.

Is there a danger of network operators being seen as utilities?

Globally, telecom operators spend in excess of \$300 billion on capital expenditure annually. Spectrum licences form a significant part of this spend – in Europe alone, operators have paid over \$20 billion to acquire 4G spectrum in recent years.

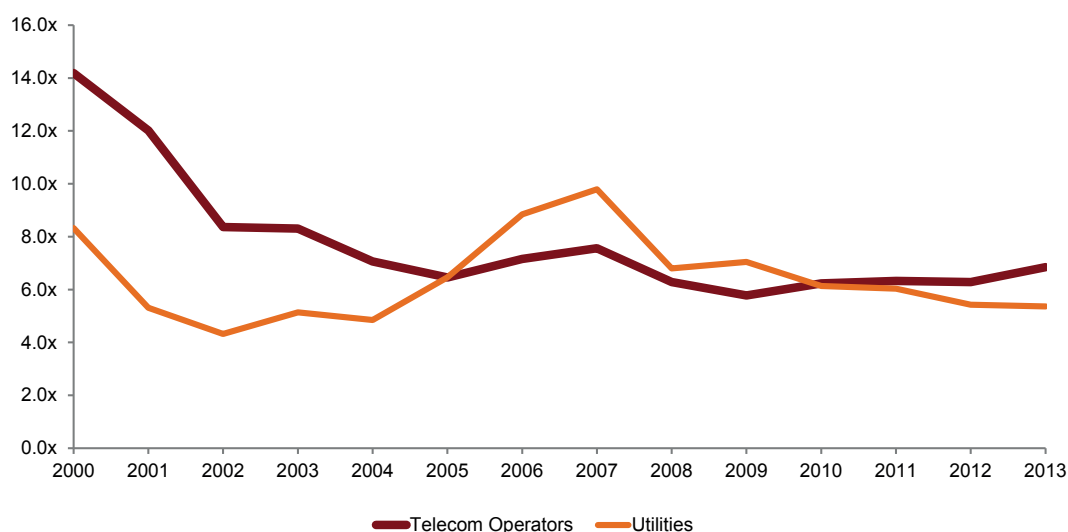
They need to make sure they generate return on this spend and more operators are implementing value-based

investment appraisal techniques to ensure capex spend is value incremental and not engineer-driven silver plating of the network.

Figure 4 provides a comparison between valuation multiples of telecom companies and utilities, which appear to be converging. The utility sector is highly regulated and is generally perceived to be less vulnerable to changing market conditions. Therefore, it provides a relatively stable level of return.

Indeed, total shareholder returns for some utilities have outperformed the market in recent years. So having some characteristics of a utility can be attractive to certain types of investors. Nonetheless, network operators are seeking to increase valuation multiples above recent levels and are looking at innovative ways to do this.

Figure 4: EV/EBITDA Multiples



* 2013 based on valuations multiples at 30 June 2013
Source: S&P Capital IQ & PwC Analysis

Network operators are innovating and looking at other markets in order to drive up the level of returns achieved

In the US market, valuation multiples of telecom operators have increased as they have been successful in increasing average revenues per user following the launch of 4G. Verizon's Retail ARPA (Average Revenue per Account) increased from \$136.57 in September 2011 to \$152.50 in June 2013. This has contributed to growth in ROIC over the last two years.

UK-based operators have led the way in innovative and sometimes complex network sharing initiatives. Companies are also starting to diversify into adjacent segments such as cable, content, mobile payments, advertising and mobile health. The operators who are picking the right expansionary strategy are driving growth and generating synergistic value. Many operators are looking to drive value by doing deals. Vodafone bolstered

its fibre proposition with the proposed purchase of KDG in Germany; Ericsson bought Red Bee, a provider of creative media services; and BT acquired ESPN and Premiership rights in the UK. Investors believe that these will contribute to growth in earnings and this has been reflected in BT's valuation – its share price increased three times faster than the rate of increase in the overall market between June 2012 and June 2013.

In some markets e.g. the US, competition and access to valuable spectrum are seen as drivers of consolidation. Given the number of operators in Europe perhaps there is scope for further consolidation in the region.

Companies often make the move into adjacent markets through acquisitions. Assessing the returns which different deals may generate, particularly when comparing across sectors, can be challenging and so deal appraisal models need to be able to cope with this complexity.

In the current economic environment creating shareholder value is no mean feat. Layer heavy regulation and strong competition on top of this and the challenge for operators is clear. Investment appraisal of core asset purchases must continue to squeeze out maximum returns in tough market conditions.

Network operators continue to invest in adjacent sectors and squeeze value from core assets. Efficient capital allocation whether through deals or organic investment will be key to success. Further consolidation is likely in the sector in order to generate synergies and drive returns up – the challenge is to pick the right investment and pay the right price.

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