



Economic Views

US and European equity markets:

Performance and valuations at the end of 2009

PRICEWATERHOUSECOOPERS 

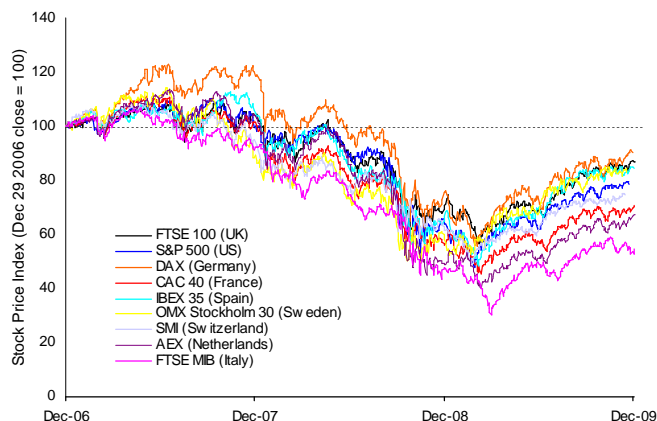
Executive summary

- Stock markets have rallied in the US and Europe over the past nine months, in anticipation of the world economy climbing out of recession and as investor confidence has returned to markets.
- The UK's FTSE 100 has rebounded from an exceptionally poor 2008, gaining over 22% in 2009. This pattern was replicated on all the other European indices analysed here, with the smallest gain occurring on the Swiss Market Index (18.3%) and the largest on the Swedish OMX Stockholm 30 Index (43.7%).
- The S&P 500, the large-cap US equity price index, recovered in 2009 to post a yearly gain of over 23%. These encouraging figures, however, should not lead to an underestimation of the lasting impact of the financial crisis. By the end of 2009 the S&P 500 was still 21% down on its level at the start of 2007 and none of the nine indices analysed here have yet returned to their January 2007 levels
- In the UK, the big winners were the mining and metals companies with operations focused in emerging markets. The stock that recorded the largest percentage fall in the FTSE 100 was the still troubled Royal Bank of Scotland (RBS), the part nationalised bank's share price falling over 40% in 2009.
- Results from analysis using the Dividend Growth Model (DGM) suggest there could be some potential overvaluation in equity markets at the end of 2009. This is most notably in Germany and the Netherlands, where stocks could be as overvalued as 70% and 57% respectively.
- The US stock market represents 57% of total capitalisation of the countries studied, and is the most important equity market globally. The headline figure for overvaluation in the US is 45%. The UK, the second biggest stock market analysed, does not appear to be overvalued.
- On balance, equity markets appear to be potentially overvalued at the end of 2009. The findings do not, however, present evidence of a significant bubble forming in US and European equities at present.
- The path for equity markets in 2010 is far from certain. Modest growth should continue in the coming months, but stock prices are unlikely to rise at the pace they have achieved in the last 9 months. The second half of the year may see increased risk of stock prices falling again, if the markets react to the unwinding of the emergency fiscal and monetary measures put in place during the recession.

Introduction

Global equity markets rallied since March 2009, as the economic outlook brightened up and monetary conditions stayed loose. That being said, the damage reeked by the financial collapse of 2008 is still evident in the leading European and US indices as none of them have yet managed to return to their January 2007 levels.

Chart 1- Recent equity market performance



Source: Dow Jones Factiva

A year of strong performance in equity markets

A year ago equity markets were in tatters, with record price falls being announced across global stock markets. This collapse in share prices continued during the first quarter of 2009 with the FTSE 100 finally bottoming out on 3rd of March. This was a turning point for the FTSE 100, which subsequently gained nearly 54% in the remainder of 2009. This huge increase in a country's leading stock market index, albeit from a low starting point, was not confined to the UK (see Chart 1). The US S&P 500 closed 2009 at 1115, not only a 23.5% increase for the year, but a 65% rise on the year's low of 676. The other European indices studied here have all increased over the course of 2009 with the Swedish OMX Stockholm 30 registering the biggest gain of nearly 44% during 2009.

If the timeframe is adjusted to cover the financial crisis, however, the best performing stock market index was the German DAX, which by the end of 2009 was only 9.7% down on its level at the start of 2007. In contrast, the Italian FTSE MIB dropped the most and was down by 43.9% over the same period.

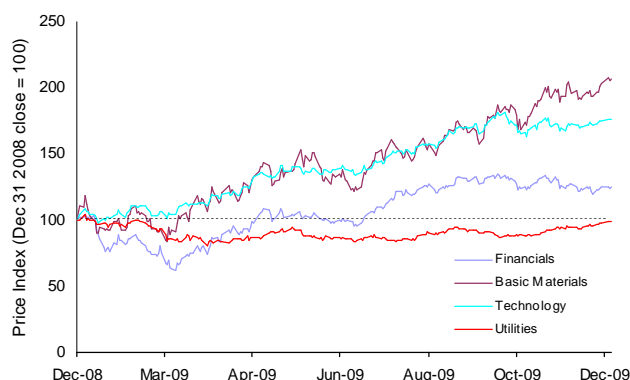
The emergence of the world economy from recession has been largely driven by emerging markets. Equity markets in China and India have rebounded strongly in 2009, outstripping the gains seen in the developed world. The leading market indices in China and India gained 80% and 75.8% respectively over 2009. These stock market indices have followed the overall direction of equity markets in the US and Europe in the last two years, but have seen much more pronounced price changes.

In the UK, mining equities saw impressive gains, whilst utilities shares languished

Mining and financial services industries were particularly hard hit by the crisis, but it was a very different year in 2009. The FTSE All Share Index, which represents 98-99% of UK market capitalisation, can be broken down into sectors. In 2009 the

sector that saw the biggest gains was basic materials, within which mining companies were the real driving force. The FTSE All Share Basic Materials Index shot up 106.3% over the course of 2009 and went from the worst performing sector in 2008 to the best performing in 2009. The second highest index increase was in technology stocks, which increased nearly 76%, although this is the smallest sector in the FTSE All Share. The only sector closing the year lower than its opening position was utilities, falling 0.7% in 2009 (See chart 2 below).

Chart 2- FTSE All Share sector performance



Source: Dow Jones Factiva

The three companies that saw the largest increase in stock price over 2009 within the FTSE 100 index were all mining and metals companies with operations centred in the developing world. This is in stark contrast to 2008, when global commodity prices tumbled and Kazakhmys, 2009's best performing stock, was the third worst performing stock in the FTSE 100. According to JP Morgan Cazenove, a portfolio comprising an equally weighted basket of the 10 biggest fallers of 2008 rose in value by 130% in 2009, outperforming the wider market in excess of 100%. The financial sector had a disastrous 2008, but recovered strongly, with the FTSE All Share Financials Index gaining 25% over 2009. This is not to say all financial services companies flourished, RBS lost a further 40.9% in 2009, making it the worst performer in the FTSE 100.

Spotlight: FTSE 100 top five best and worst performers of 2009

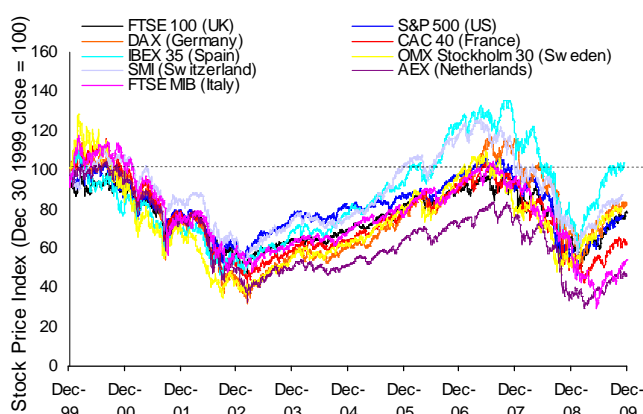
Company	Sector	Price change over 2009
Best performers		
Kazakhmys Plc	Mining & Metals	474.9%
Vedanta Resources Plc	Mining & Metals	327.0%
Fresnillo PLC	Precious Metals & Minerals	244.3%
Xstrata Plc	Mining & Metals	209.4%
Petrofac	Engineering & Construction	201.4%
Worst performers		
Royal Bank of Scotland	Financial Services	- 40.9%
Segro	Financials - REIT	- 22.3%
Wolseley	Construction - Supplies & Fixtures	- 22.1%
United Utilities	Utilities	- 20.9%
Resolution	Financials - Investment Trusts	- 19.5%

Source: Thomson Reuters

The longer term view

When considering equity market valuations it pays to look at a longer time period. The leading stock market indices from the US and Europe over the past ten years have been subject to two massive collapses; the bursting of the dot-com bubble in 2000 and the financial crisis of 2007-2008 (see Chart 3 below). Global indices have strongly rebounded after both crashes, but this is often not backed up by similar improvements in the earnings of firms, which has led some to question whether the latest stock market rally can be explained by fundamentals. It is useful for investors to know whether stocks are materially overvalued, as it could help them avoid painful market corrections.

Chart 3- Equity market performance over past ten years



Dividend Growth Model

Our preferred forward looking method to assess equity market valuations is the Dividend Growth Model (DGM). At the heart of this approach is the view that the current share price should equal the discounted present value of expected future dividends per share. As discussed in an earlier report¹, assuming constant real dividend growth, the DGM implies that an 'equilibrium' dividend yield can be estimated as:

$$D/P = r + e - g$$

Where:

D/P = prospective dividend yield

r = real risk free interest rate

e = equity risk premium

g = expected dividend growth rate

Using the DGM methodology current equity market valuations can be assessed by inputting alternative plausible assumptions on the three key variables (r, e and g) in order to produce estimates for the 'equilibrium' dividend yield. These can then be converted to 'equilibrium' P/E ratios and compared to actual P/E ratios at the valuation date².

¹ See European Economic Outlook, September 2001

² For a more thorough explanation of our methodology and assumptions, see Equity Market Valuations at the End of 2006, May 2007.

Equity market valuations

This analysis relies on making some assumptions on the expected dividend growth rate and the equity risk premium. We used PwC forecasts of average real GDP growth from 2015 to 2019 to proxy for long term dividend growth. This time span was chosen as it removed the short run volatility effect of the financial crisis and mitigates potential downwards bias in the long run average growth figures. The equity risk premium measure is more subjective and we have chosen to use 5%, as it is currently the PwC's estimate of risk premia for these countries. The number is also assumed to be constant across the countries studied due to the high level of correlation between their annual equity returns. Table 1 shows our estimates using the DGM.

Table 1- Over/under valuation across countries

Country	Implied over /under (-) valuation at the end of Q4 2009
US	45%
UK	6%
Germany	70%
France	50%
Italy	49%
Netherlands	57%
Spain	16%
Switzerland	50%
Sweden	4%

Sources: PwC analysis

Our model implies that equities in all 9 countries were to some degree overvalued at the end of 2009. This suggests that the gains associated with the stock market rally of the last 9 months may not be entirely explained by fundamentals. The most overvalued were Germany and the Netherlands, with overvaluations of 70% and 57% respectively.

The two largest equity markets by market capitalisation are the US and the UK, which together account for 70% of the total capitalisation of the countries studied. The UK does not appear to be materially overvalued. The analysis suggests on the other hand that the US was 45% overvalued. This is primarily driven by its unusually high price/earnings ratio in Q4 2009 of 20.8. This is well above the historical average of 16. The UK by comparison had a much lower price earnings ratio in Q4 2009 of 12, which is much closer to its historic average of 13. This fact is also true of Germany and Netherlands, which both had Q4 2009 price earnings ratios well above historical averages. This does not however necessarily indicate a significant bubble as, for example, at the height of the dotcom bubble the price earnings ratio in the US crept above 30.

As a sensitivity check for the data we recalculated the valuation figures using a lower equity risk premium of 4% to provide a range for our estimates. This is the figure that has been used in previous analysis³, Table 2 shows the range of possible valuations using the DGM and the two alternative figures for the equity risk premium.

Table 2 - Over/under valuation range across countries

³ Same source as footnote 2.

Country	Implied over/under (-) valuation at the end of Q4 2009
US	24% to 45%
UK	-20% to 6%
Germany	62% to 70%
France	35% to 50%
Italy	38% to 49%
Netherlands	46% to 57%
Spain	-9% to 16%
Switzerland	27% to 50%
Sweden	-31% to 4%

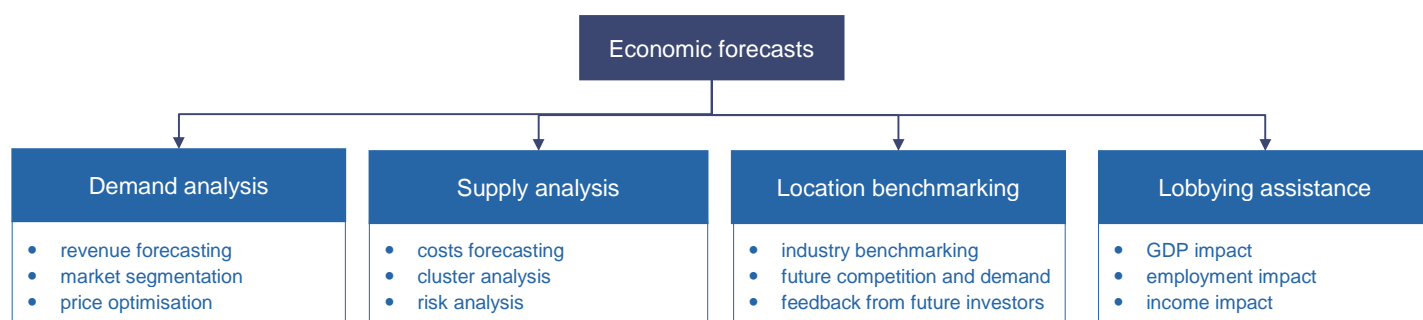
Sources: PwC analysis

These ranges show that the calculations are sensitive to the level of the equity risk premium, and the overvaluation may be less pronounced than suggested by use of the higher figure. The US figure in particular is worth noting, as the overvaluation is only 24% if a lower equity risk premium is assumed. The ranges presented in the table still suggest, however, that equities outside the UK, Spain and Sweden are potentially overvalued. This could spell trouble for the leading market indices in the US and Europe when the short term government and central bank measures that are buoying liquidity and global demand are slowly removed over the latter half of 2010.

Conclusions

There was a strong equity market performance across the main US and European indices in 2009, and as a result there is some evidence at the end of 2009 that the US and central European stock markets may be overvalued. The UK stock market by comparison shows evidence of being close to fair value. However, the DGM model used in this analysis is inherently sensitive to the assumptions made about expected dividend growth and the equity risk premium. The savvy investor was able to make substantial gains in the last 9 months, as stock markets worldwide rallied. The outlook for 2010 is highly uncertain and will depend largely on how the real economy and investor confidence bear up when faced with the inevitable winding back of emergency government and central bank measures.

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