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Schroders
Talking Point

Emerging markets and GDP growth

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The argument is often made that emerging markets' expected superior economic growth to developed markets will result in better stockmarket performance. Investors certainly spend a lot of time talking to economists trying to work out what GDP growth around the world is. But does it actually matter? Arguments have also been made that over the very long term, GDP growth is not actually much of a factor in stockmarket growth. This paper looks at what the historic evidence is for the case of emerging markets, and hence whether there is any point in investors paying any attention to economists.

Should GDP drive markets?

The traditional linkage between nominal GDP growth and stockmarket returns is usually thought to be via earnings. In other words, strong economic growth leads to strong earnings which leads to strong stockmarkets. In fact, we find that there is just a 24% correlation between GDP growth and earnings growth in emerging markets. In part, this may be because the stockmarket does not represent the balance of the economy. There is also 'leakage' in the system. In a closed economy, it is simply a matter of how much return goes to capital and how much to labour – i.e. a question of labour laws, government involvement in the stockmarket, etc. In a more open economy, there is also the possibility that money 'leaks' out to external suppliers of business inputs, such as commodity producers.

After we have got from economic growth to earnings, we still have a further step to get to market returns. At different times investors are prepared to pay different amounts for the same earnings stream as interest rates and equity risk premium go up and down. In other words, valuation matters.

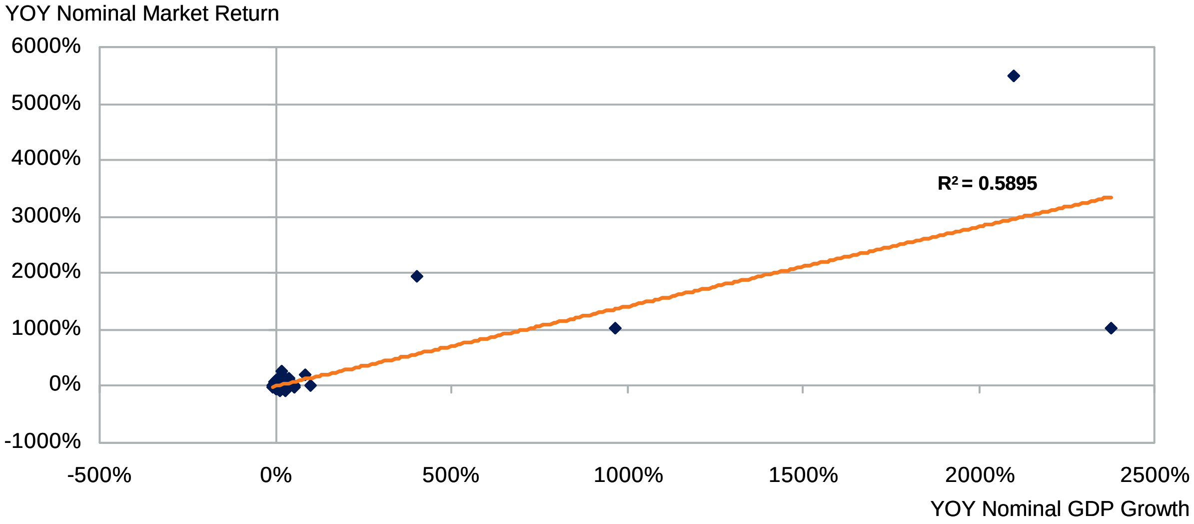
So we have three steps to take to translate nominal GDP growth to equity market return:

1. How far does the stockmarket reflect the economy?
2. Returns to labour and external suppliers may be higher than those to capital.
3. The amount that people will pay for a stream of earnings varies over time.

Given all this noise, we should not expect to find that GDP is the sole driver of market returns. It clearly has some input, but the question is whether it is drowned out by the other factors.

Nominal GDP

The first thing to test is nominal GDP versus nominal market returns[1]. Below is a scatterplot of year-on-year market returns against GDP.

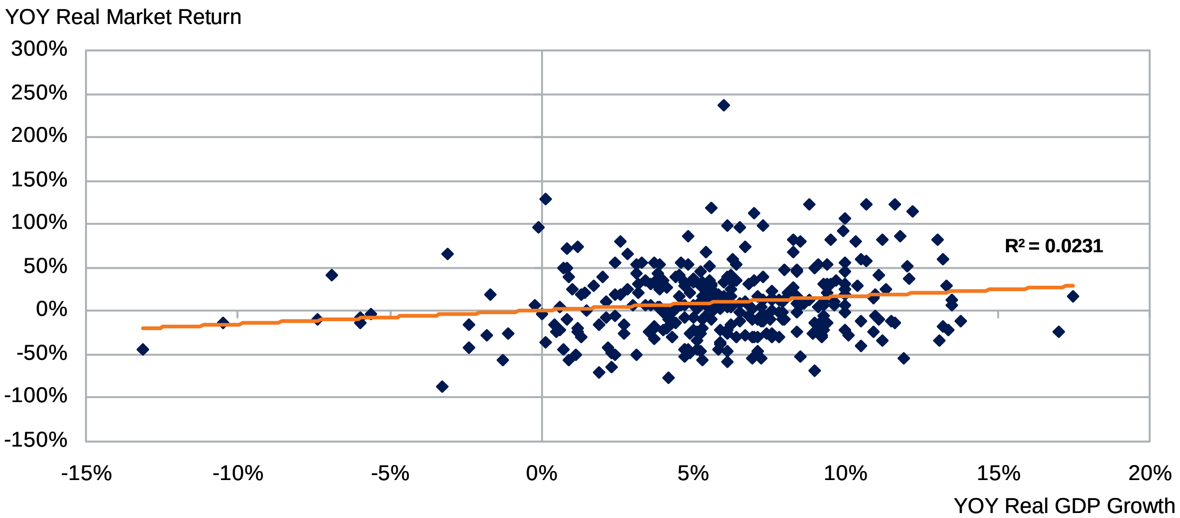


Source: Schroders. Datastream. March 2010.

At first glance there is an amazingly good relationship – the R-squared on the regression is nearly 60%. But this is almost entirely created by the extremal points. Note the year where one country had market returns of over 5,000% against GDP growth of over 2,000%. Both variables reflect an underlying common factor more than anything else – inflation. There are two ways round this. The first is to use US dollar GDP and market returns. The problem with this is that, to some degree, both variables will still reflect an underlying common factor – the exchange rate, which is another market variable. So the only way to deal with the inflation problem is to take away the GDP deflator from both market and nominal GDP numbers, to produce a real analysis. The problem here is that this is not strictly how the relationship between GDP and the market should work. But it is the best we can do[2].

The real analysis

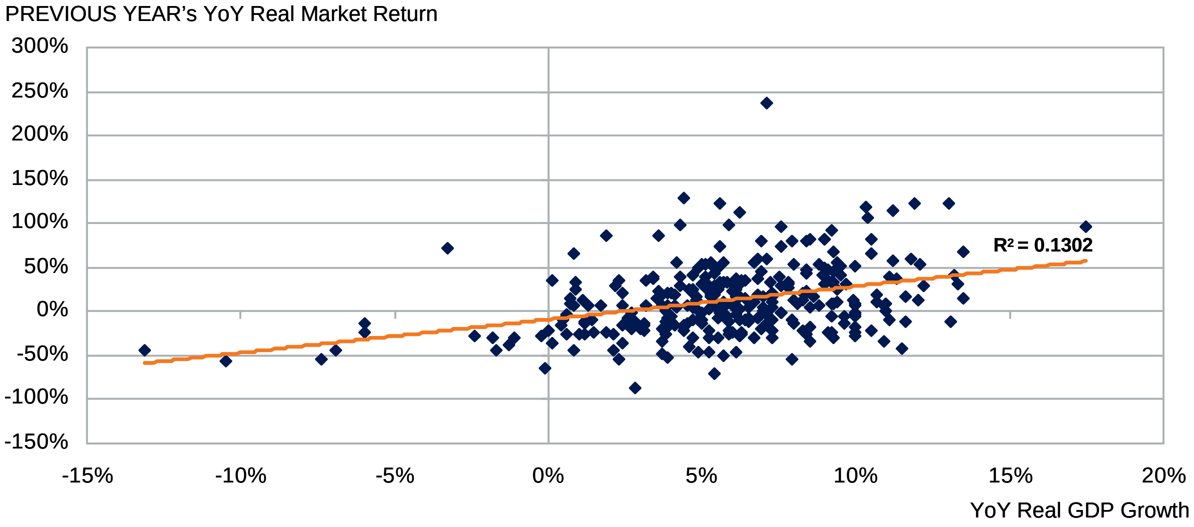
So let's take year-on-year real GDP and year-on-year real local market returns and regress them.



Source: Schroders. Datastream. March 2010.

There is a small positive relationship here. It is not a defining relationship – the R-squared is only 2%. But that is not surprising – we know GDP is not the only factor that influences returns. However, the T-stat, a measure of statistical significance, scores highly (2.8) and shows that GDP is significantly positively related to return.

This data is contemporaneous - that is to say it matches market returns with GDP at the same time. It is not a predictive relationship. We can also test whether GDP growth is related to the market growth in the following year, or vice versa. GDP growth is a very poor predictor of market growth. The R-squared drops to 0%, with a wholly insignificant T-stat. When we try the regression the other way round we get very different results. An R-squared of 13% and a T-stat of nearly seven.

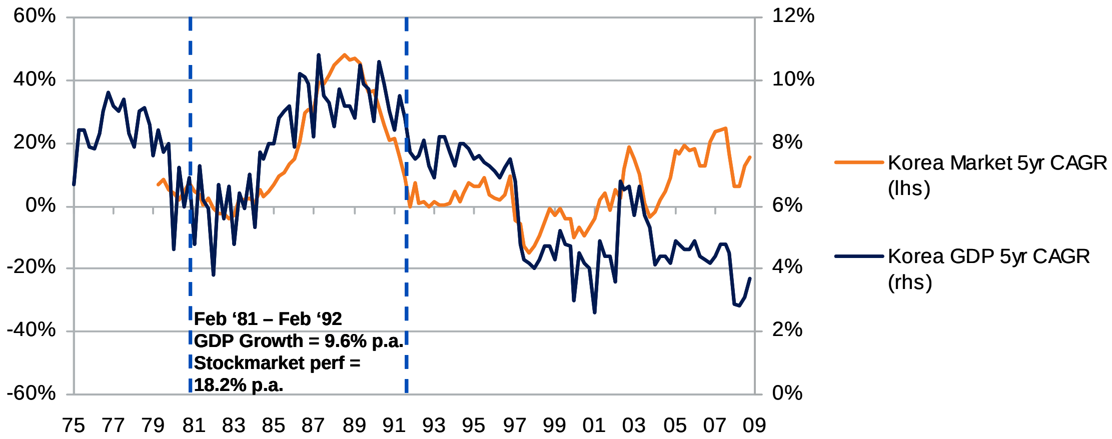


Source: Schroders. Datastream. March 2010.

So there is a strong relationship between stockmarket performance and the following year's GDP growth. If GDP growth is expected to do well next year, emerging stockmarkets will do well this year.

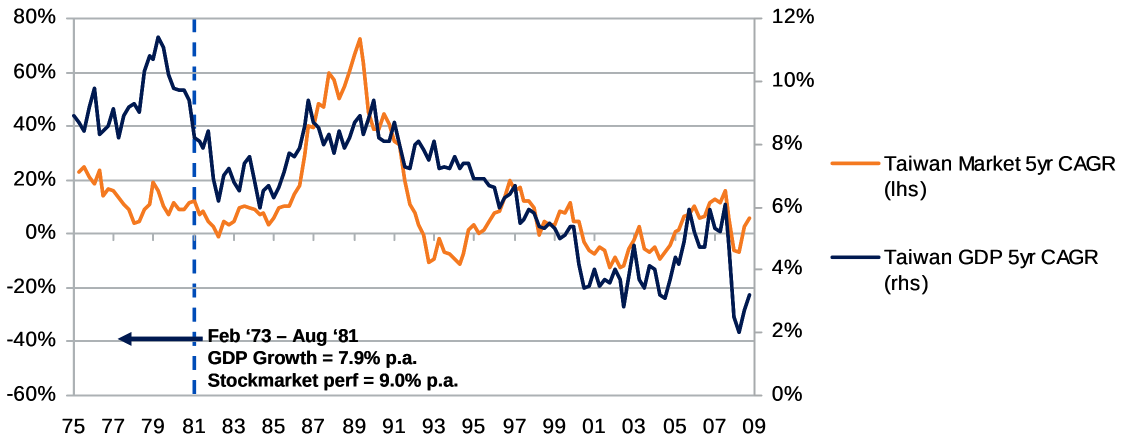
Premium growth and premium return

We've described why it is difficult to expect GDP to relate directly to economic growth over any given year. But we are also aware that a number of countries that have "emerged" over recent years have experienced strong GDP and market growth. This is usually associated with periods of intensive capital build out. Below is a chart of five year annualised GDP growth and market return for Korea.



Source: Factset, Bloomberg. February 2010.

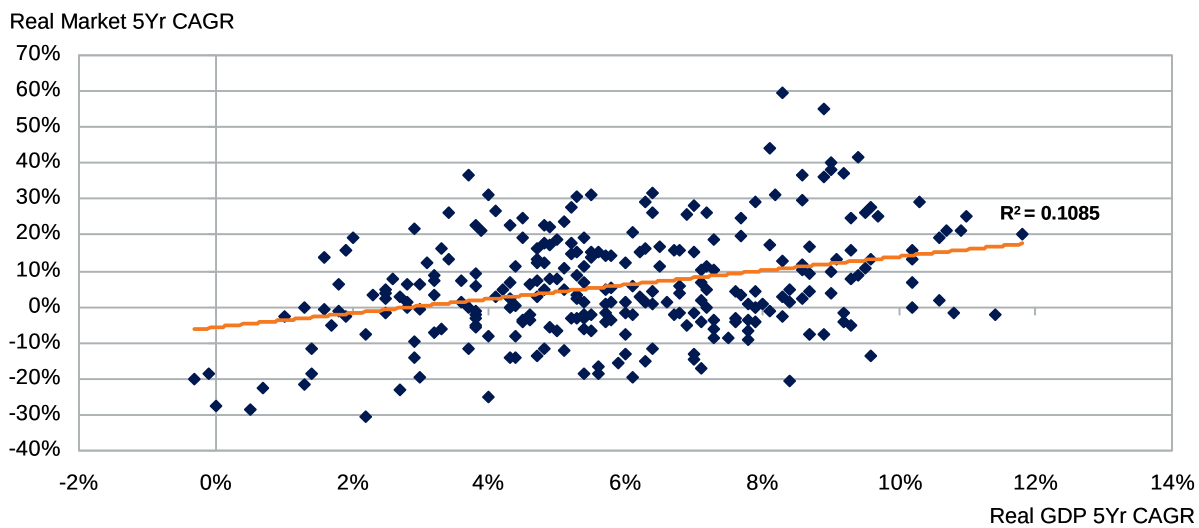
During the 1980s, when the Korean economy had annualised growth of almost 10%, markets grew at 18% per annum. We see a similar pattern in the late 1970s in Taiwan with annualised GDP growth of around 8% and market growth of 9% per annum. A further period of strong growth in the 1980s saw growth around the 8% level coinciding with a bubble in equities and over 40% annualised growth.



Source: Factset, Bloomberg. February 2010.

Of course, these are only examples. Can we test whether high persistent growth is associated with high market returns? The idea behind this is that, on a short time frame, starting valuation and margin effects muddy the waters. Perhaps over long time periods these effects average out. It is noticeable that the charts of Korea and Taiwan above, which look quite compelling, are based on five year annualised numbers. Year-on-year charts would look much less good. GDP itself could create its own momentum. Very high sustained GDP is also likely to come about from an extended capital spending cycle, which, in turn is most likely to come about when returns on capital are high – thus eliminating one of the ways GDP can leak away from stock returns.

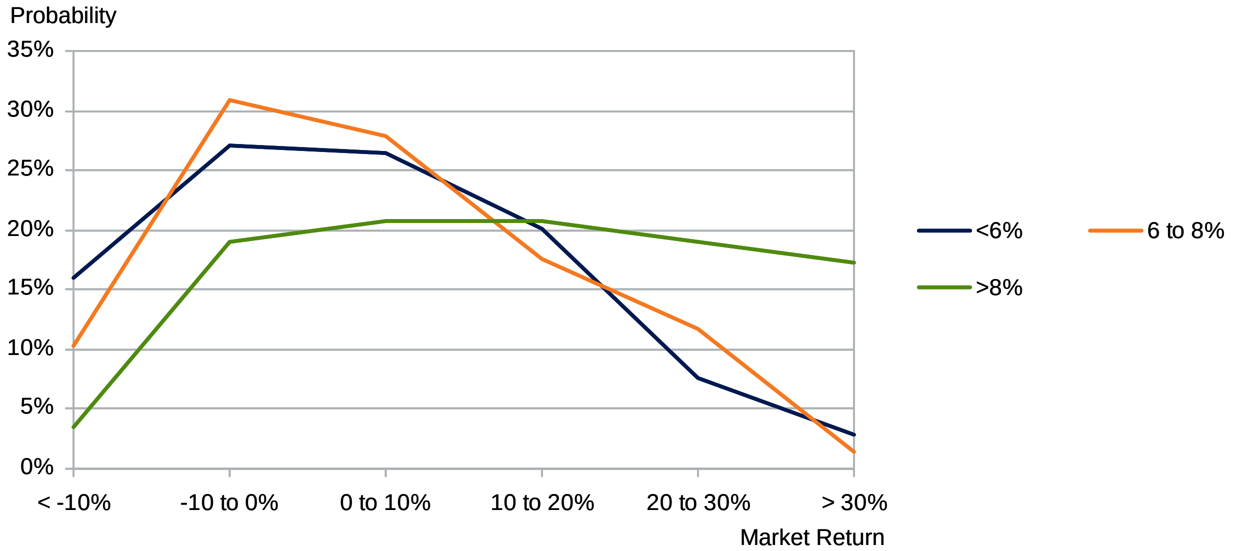
The best way to test this is simply to look at longer term data. We don't want to use too long a period, otherwise we will move too far away from a sensible investment horizon (i.e. beyond any reasonable ability for predictions to be made). In line with the charts above we will try a data set across our countries of a five year annualised return.



Source: Schroders. Datastream. March 2010.

We can see immediately that the relationship is stronger than that for year-on-year data. The T-stat is almost six. We can also see from the chart that the instances of very high market returns only occur with high GDP growth.

The following chart shows what the probability is of getting a strong five year market return (bottom axis) for a given level of GDP growth. It shows clearly that in a period of strong five year growth, the chances of getting a very strong five year return are much higher. Conversely, if growth is not very high, the chances of getting very high market returns are quite small.



Source: Schroders. Datastream. March 2010.

This is quite a strong result. History suggests that five years of strong GDP growth is much more likely to result in five years of strong returns and much less likely to result in flat or negative returns.

Conclusions

- Strong GDP growth in any one year is generally reflected in strong stockmarket returns in the preceding year.
- When GDP growth is consistently strong (the five year compound rate stays high), stockmarkets do relatively better.
- The chance of very high market returns is significantly enhanced when GDP growth is consistently strong.

[1] Data is from the last four decades. The 1970s and 1980s are dominated by Asian countries, with little data available elsewhere. The full list is Korea, Taiwan, Hong Kong, India, Indonesia, Singapore, China, Malaysia, Brazil, Mexico, Russia, South Africa, Turkey and Poland. These make up over 90% of the current MSCI Emerging Markets index. It would be preferable to have the same 40 year period available for all countries to avoid bias. But we do have 330 yearly GDP and market observations with the largest number coming from one country being only 44. So the data set is reasonably diverse.

[2] Even then, we have had to remove a handful of data points where inflation was so large (over 100%) that the GDP deflator could not adequately capture it.

Important Information:

The views and opinions contained herein are those of Nicholas Field, Emerging Market Fund Manager/Strategist and Allan Conway, Head of Emerging Market Equities, and may not necessarily represent views expressed or reflected in other Schroders communications, strategies or funds.