GUINNESS FUNDS

The return of returns

The Guinness Global Energy Team, June 2014

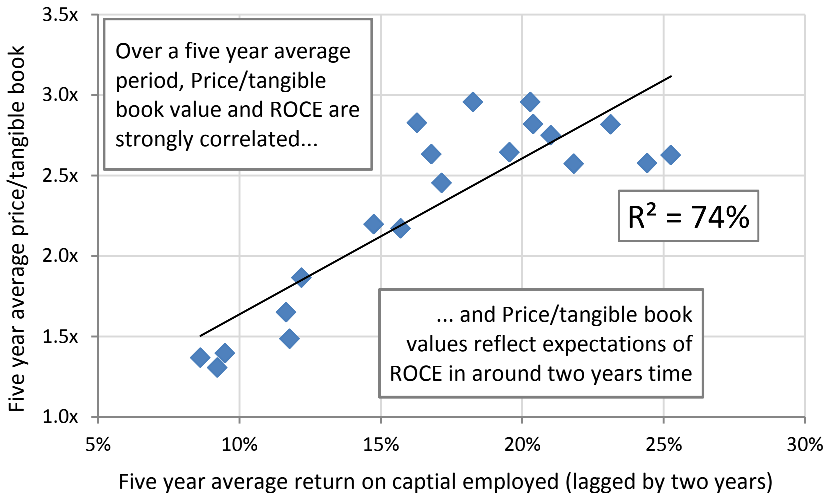
Return on capital employed in the oil and gas sector has fallen in recent years, despite Brent oil prices remaining around $100 per barrel. This is primarily the result of new project developments and cost inflation. The sector has consequently de-rated.

New 'value over volume' strategies from many oil and gas companies give us confidence that both issues will be overturned and sector ROCE could increase to around 17% from the current level of 12% (assuming a flat oil price environment). We believe that sector valuation could improve by 30-35% as a result of this 'return of returns'.

Oil and gas sector valuation driven by return on capital employed

The oil and gas sector is a capital-intensive sector, and oil and gas companies benefit from higher stock market valuation when they make higher returns on their capital. To illustrate the point, we have focussed on the performance of the Super Majors (BP, Chevron, ExxonMobil, RD/Shell and TOTAL) as a proxy for the broader oil and gas sector. On a rolling five-year-average basis between 1994 and 2013, the Price/Tangible Book (P/TB) valuation multiple for the Super Majors was 74% correlated with the group's five year average rolling return on capital employed (ROCE). As ROCE increased, so did the asset base valuation, with the P/TB multiple increasing by approximately 0.10x for every 1% point of increase in ROCE. There was an 'anticipatory' effect in the relationship too; the market was willing to pay a higher P/TB multiple around two years ahead of the delivery of higher ROCE.

Five year average Return on Capital Employed vs five year average Price/Tangible Book Value for the Super Majors (1994-2013)

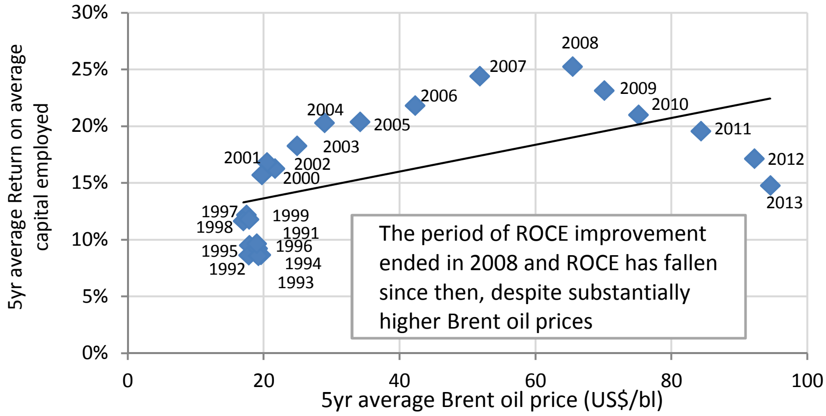


Source: Bloomberg, Guinness Asset Management estimates

ROCE defined as net income plus post-tax interest payments divided by capital employed

Forecasting ROCE is therefore an important part of forecasting expected future valuation metrics for the oil and gas sector. Over the last twenty years, there has been a clear positive correlation between Brent oil prices and oil and gas sector ROCE; as oil prices steadily increased, so did ROCE. This held true until around 2008, since when sector ROCE has steadily declined despite high and relatively stable Brent oil prices.

Five year average Return on Capital Employed vs five year average Brent oil price for the Super Majors (1992-2013)



Source: Bloomberg, Guinness Asset Management estimates

- Between 1992 and 2004, Super Major ROCE was very sensitive to changes in the Brent oil price, with ROCE increasing to over 20% in 2004 from around 10% in the mid 1990s, despite the Brent oil price increasing by only around $10 per barrel.
- In the mid 2000s, Super Major ROCE continued to increase, albeit with a lower sensitivity to the Brent oil price. In 2008, Super Major ROCE reached 25% (on a five year average basis) versus a five year average Brent oil price of $65 per barrel.
- Since 2008, the relationship has actually inverted, with Super Major ROCE declining despite Brent oil prices continuing to rise. In 2013, on a five year average basis, Brent oil averaged $95 per barrel yet ROCE was only 14.8% (a level last seen in 2000 when five year average oil prices were around $20/bl).

To highlight more precisely how ROCE has degraded in the last three or four years, ROCE for the group in 2013 was only 12% while P/TB was 1.6x and Brent oil prices averaged $109 per barrel. These data points sit well off the two trend lines presented above and show how disappointing the operational performance of the Super Majors has been (relative to the Brent crude oil price) and how extreme their valuation has become as a result.

Why has ROCE fallen while oil prices have remained stable?

There are many reasons provided by the Super Majors, and the sector as a whole, as to why ROCE has disappointed so much. We would categorise the various excuses into two buckets and will explain the main issues below:

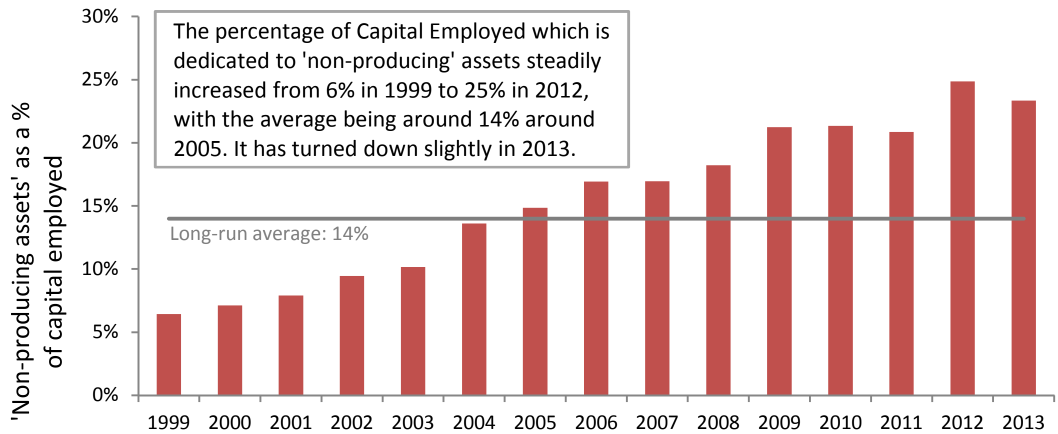
- **Capital enlargement** i.e. the build out of large, new infrastructure projects has swelled capital employed levels and depressed corporate returns;

- **Cost Inflation** i.e. unit operating and development costs have gone up causing operating margins and ROCE to compress.

First, in terms of **Capital enlargement**, the Super Majors have embarked on an unprecedented volume of new project development over the last decade, with limited positive production or cash flow generation so far. Many vast scale liquefied natural gas developments, oil sands mining projects and complex deepwater offshore developments are still in the development or early production phases. New Super Major projects like Gorgon LNG, Wheatstone LNG, PNG LNG, Kearl Lake and deep water Angola will ultimately be positive for the group by bringing long-life, strong free cash flow generation, but at the moment they are still being developed and they represent around 23% of the Super Majors' corporate capital employed. Not only is this level of unproductive capital a significant drag on corporate ROCE, the very development of the projects was a significant drag on free cash flow generation too.

This most recent development phase appears to have been particularly tough for the Super Majors as a result of higher levels of technical complexity, political risk and stretched supply chains. We highlight the development of the Kashagan field, which started construction in 2005 and is still yet to start production as a result of technical issues, despite total capital expenditure by the end of 2012 of around US$116 billion.

Super Major 'non-producing' assets as a percentage of capital employed



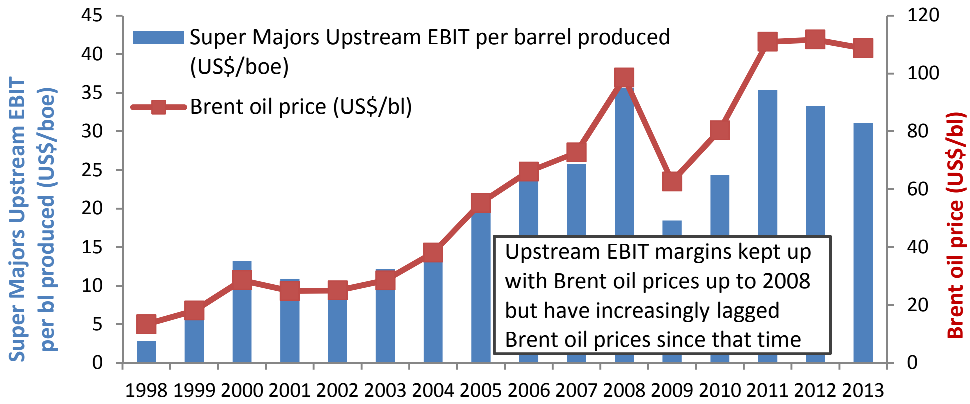
Source: Company Data, Guinness Asset Management estimates

Second, regarding **Cost Inflation**, many of the direct costs associated with producing oil and natural gas have increased in line with oil prices over the last 15 years. When we consider direct costs, we include all taxation (including royalty taxation, production taxes and special petroleum taxes) as well as the direct exploration, development, operating, transportation and processing costs of producing oil and gas.

Between 1998 and 2008, Brent oil prices and Super Major upstream Earnings before Interest and Taxation (EBIT) increased in a similar manner, with upstream EBIT increasing by just under $30 per barrel while Brent oil prices were up around $80 per barrel. However, since 2008, Brent oil prices are up a further $10 per barrel yet Super Major EBIT is down by $4.50 per barrel. Unit production margins (and therefore ROCE) have clearly come under significant pressure in recent years as a result of:

- Higher levels of activity causing wage and raw material cost inflation
- Logistical constraints (especially those happening in North America) causing wider differentials in pricing relative to Brent oil
- New projects being more complex and more expensive to develop and operate
- Increased taxation rates from governments
- Disappointing exploration success in expensive new frontier areas resulting in higher exploration expenses

Super Major upstream EBIT per barrel produced and Brent oil price (1998-2013)



Source: Bloomberg, Company Data, Guinness Asset Management estimates

So, what is the outlook for ROCE in the future?

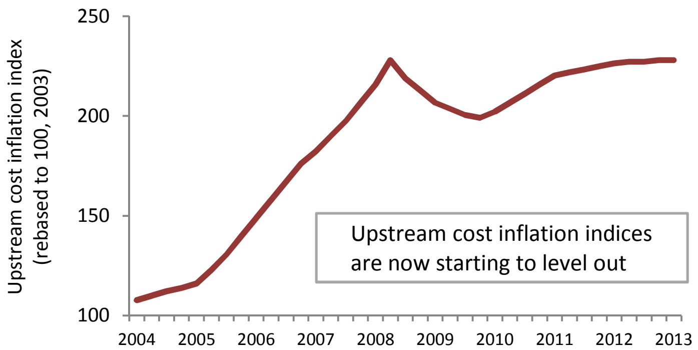
We believe that the outlook for 'Capital Enlargement' and 'Cost Inflation' is steadily improving, and that Super Major (and oil sector) ROCE could be about to stage a recovery relative to Brent oil prices.

First, in terms of **Capital Enlargement**, we note the recent change in strategy from the Super Majors (and many other integrated oil and large cap E&P companies) away from aggressive new project developments towards lower capital intensity, lower absolute capital expenditure plans, cost control and free cash generation. Many oil and gas companies are calling their new strategy a focus on 'Value over Volume', with positive implication for cash returns to shareholders. While not central to this commentary, we note that lower reinvestment rates will cause lower production levels for the Super Majors, bringing broader and potentially significant implications for the global oil supply/demand balance by the end of the decade.

Back to the point, though. Over the next two or three years, we would expect the percentage of capital employed that is dedicated to 'non-producing' projects to moderate and return back to a long-run average level of around 14%, if not lower. As this happens, the ROCE of the Super Majors will automatically increase and we expect to see an uplift of between 1.5-2.5% from recent levels. If the Super Majors took their new project development activity levels back to those seen in the early 2000s, then ROCE could increase by as much as 3.0%.

Second, in terms of **Cost Inflation**, we have seen that cost inflation indices are starting to 'level out' as the industry is starting to shrink capital expenditure budgets and focus on standardisation of equipment, supply chains and operating approaches.

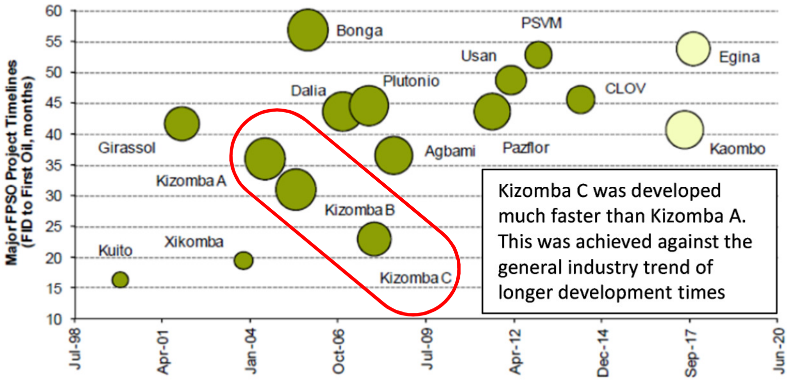
Upstream cost inflation index (rebased to 100, 2003)



Source: TOTAL, Guinness Asset Management estimates

- Many oil and gas companies have defined 2013 as being their year of 'Peak Capex', and we forecast a reduction in capex for all the Super Majors in 2014 vs 2013. The anticipated capex reduction should be sufficient to bring the Super Major group back into free cash flow positive territory and give increased confidence over the stability of dividends. Another implication is that the competition for deepwater drilling rigs, seismic vessels and subsea equipment that we witnessed in recent years will slow further, with pricing and activity implication for the Oil Services companies.

- As oil and gas developments have become more complex, so have they become less 'standardised'. In our opinion, there is significant potential cost savings from the oil and gas industry standardising developments. In recent years, ExxonMobil built three near-identical Kizomba developments offshore Angola, with the first project taking 36 months from contract award to first oil and the last taking only 23 months, as highlighted in this chart from Bernstein Research:



Source: Bernstein Research

To illustrate the impact that cost deflation could have on the Super Majors, if the differential between the Brent oil price and Super Major EBIT that opened up since 2008 is closed and Brent oil prices stay around $100 per barrel, we would expect to see an EBIT per barrel increase of around US$9 per barrel produced. For the Super Majors this would generate an increase in net income of around US$30 billion, and would increase ROCE by around 3.0%.

What would the valuation impact be if ROCE did improve as we suggest?

If our expectations for the development of **Capital enlargement** and **Cost inflation** prove to be correct, then we could foresee Super Major ROCE increasing by around 5% to reach 17% (from the current level of 12%), assuming that the Brent crude oil price remains at around current levels. Based on the relationship presented at the start of the paper between five year average ROCE and five year average Price/Tangible Book (P/TB) multiples, it would imply around a 0.5x uplift to current P/TB for the Super Majors, i.e. taking P/TB from 1.6x to around 2.1x. Such a P/TB uplift would represent an absolute increase in share prices for the Super Major group of around 30-35%. We note that this share price uplift would be supplemented by dividends, operational growth and potential upside from the macro environment.

This valuation uplift is substantial, but it would not likely all be delivered immediately! The Super Majors are large companies with long duration investment timeframes; it would take time for these strategic changes to fully impact ROCE levels and be reflected in share prices. In addition, we are assuming that the Super Majors deliver on their new 'value over volume' strategies and, while we are confident that they will, there is always a risk that the strategies are not seen through to their completion.

This analysis has referred to the Super Majors throughout, but we reiterate here that the same issues are true for many companies in the oil and gas sector, including Integrated Oil Companies (IOCs), National Oil Companies (NOCs) and Exploration & Production (E&P) companies. We have picked on the Super Majors as a group to do the analysis since we have good quality historical data for them. If Super Major ROCE could increase by 5% to 17%, we could reasonably argue that the effect for some of the smaller, more operationally-leveraged and more capital-intensive oil and gas companies could be of a similar level.

The Guinness Global Energy Fund currently holds all five Super Majors (BP, Chevron, ExxonMobil, RD/Shell and TOTAL) with a combined weighting of around 17%. As discussed above, we see these companies as offering good potential to improve their ROCE, which is not reflected in current valuation. We believe that the oil and gas sector as a whole will benefit from a turnaround in **Capital enlargement** and **Cost inflation,** and as result we hold a large number of other IOC, NOC and E&P positions in the portfolio as well.

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Co-managers, Guinness Global Energy Fund

June 2014

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