

THE BARBOUR PARTNERSHIP LLP

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By – e-mail

5th January 2016

Dear Sir,

Scottish Parliament – review of Energy Supply Inquiry

My colleague, Professor John Barbour, recently read an article on the BBC website that the Scottish Parliament is considering a review of the Scotland's Energy Supply. After making further enquiries it was suggested that we contact you directly.

A section on our background is set out below but our work has been used by Phillip Lee MP of the Energy and Climate Change Select Committee and following a number of interactions with senior politicians from across the political spectrum, we were asked to submit a summary of our work to Competition and Markets Authority. In due course, the Chairman, Mr. Roger Witcomb, commended our submission.

In addition, we were also invited to present our work to the European Commission.

Accordingly please find set out below a summary of our position and naturally if your investigation requires further explanation then, as a matter of course, we would happily provide.

Our background

We (Professor John Barbour and Roger Bell) are a specialist-consulting firm that has significant experience of helping the CEOs and management teams of major, successful companies to deliver superior performance for shareholders over time. We are proud of our clients; and a list of them is detailed at the end of this piece.

Our principal contribution is to bring the discipline of the capital markets inside the business – frequently a challenging experience for management teams. We do this to align strategy, finance, organization, and people with driving returns to shareholders over time.

Initially what began as a favour to an existing client reviewing the reward package of the Centrica CEO, we subsequently extended our analysis to include a “value-based” (see later) assessment of The Big Six European Energy Companies; Centrica, SSE plc, RWE nPower, Iberdrola, E.On and EDF.

We believe that our work demonstrates that the Big 6 European energy companies are almost inevitably heading for a crisis brought on by an increasingly complex market

environment and in some instances, management teams without the skill or will to understand the basic economics of the industry.

The current debates on energy are deeply flawed and counter-productive

Over the past 18-24 months, we have watched the debate and on-going criticism of the “Big Six,” from politicians and large sections of the media with a combination of concern and frustration. Sadly, accusations of “excessive profits” and exploitation of the UK consumer have dominated the dialogue and this, in turn, has moved the discussion away from the very pressing and urgent challenges facing the industry.

All too often the discussion, particularly in the media, has been based entirely on the stated accounting-based “operating profits” of the Big Six. For example, the media has repeatedly claimed that “*the Big 6 make excessive profits,*” with reported PBIT (Profit before interest and tax) of around £21bn in 2012/13 and £16.5bn in 2014/15.

But operating profits are precisely the wrong measure to use in this analysis because they exclude all kinds of costs related to the capital that must be incurred in order to sustain the business. They give a deeply flawed view both of the financial performance and the health of the business particularly with capital-intensive propositions like the Big Six Energy Companies.

To put it another way, the problem with using metrics like earnings per share, EBITDA and earnings before interest and tax is that it is possible to purchase or buy progress in those metrics whilst at the same bringing value destruction to the organisation – where the incremental benefits are exceeded by costs which due to accounting conventions are not reflected within Annual Reports; typically the cost of additional equity capital.

For instance if a sustainable £10 increase in earnings per share can be obtained by investing £50 per share then in all likelihood that is probably a value accretive transaction for shareholders. However, if the same £10 per share is obtained by investing £200 per share then it is almost certainly a value destructive undertaking. In either of the above scenarios the accounting EBIT and the consequent “margin” would be the same and we recognize from interactions with clients over many years, that there is a deep-rooted misunderstanding regarding the relationship between accounting earnings and value creation more generally.

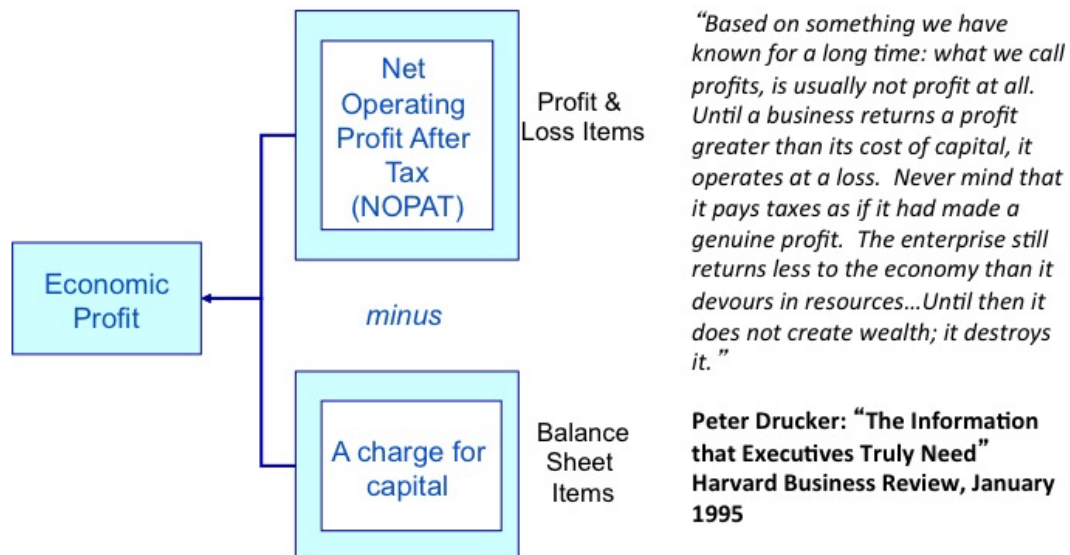
In itself, earnings growth alone is not a reliable indicator of good strategic decision-making and we believe any investigation should be cognizant of this – we would also emphasize that Warren Buffet has described the use of such metrics by analysts as “an abomination,” and we believe that the Sage of Omaha has a point. Somewhat worryingly, in a discussion with Ofgem in Dec 2014, it emerged that their senior economists are also using EBIT to analyze industry performance.

The Big Six overall are facing a financial crisis that will radically disrupt the industry

Accordingly, we have examined the performance of the Big Six from both economic and shareholder perspectives in order to get a sense of the real performance and health of the component businesses.

To do this, we have analyzed the Big Six using value-based measures, such as Total Shareholder Return and Economic Profit (Net operating profit after tax (NOPAT) less a charge for all capital used by the business) over time. Our numbers are based entirely on, and can be reconciled to, the historical, published and audited data from the Big Six – there is no financial chicanery going on here...

Economic profit includes all the costs of doing business

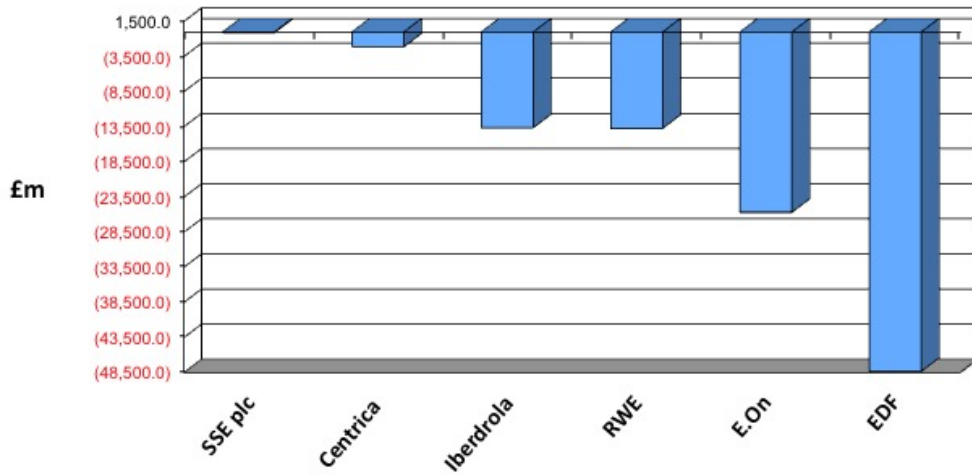


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Our findings are nothing less than shocking. The reality is that:

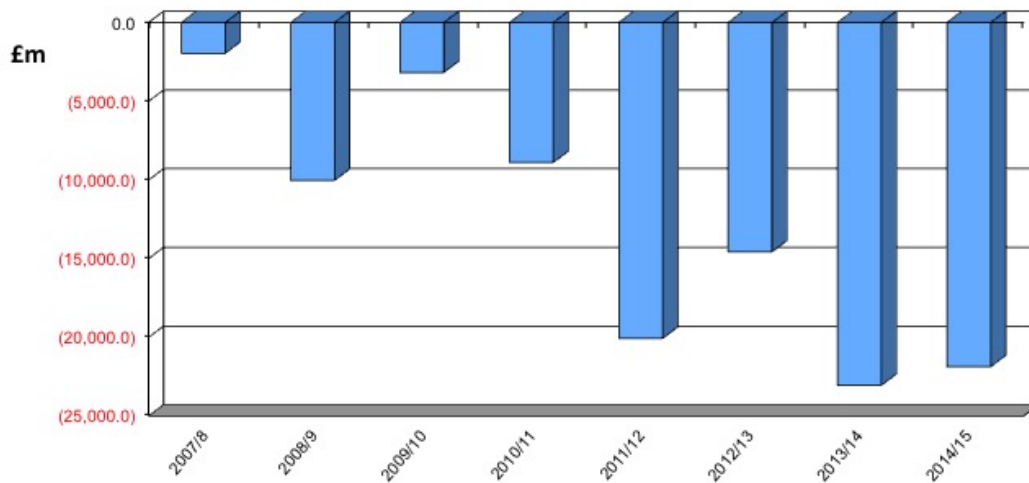
1. The Big Six in total may have made significant accounting profits recently. But when the other costs of doing business are included we find that, in total, they are actually massively unprofitable. A reported PBIT of around £21bn in 2012/13 and £16.5bn in 2013/14 turns out in reality to have been an economic loss of £15bn and £23bn respectively.
2. The cumulative value destruction - driven by returns less than the cost of capital – of the Big Six between 2007/8 and 2014/15 is of the order of £103bn.
3. Only two of the Big Six - Centrica and SSE - have delivered returns at or higher than the cost of capital in any of the past four years. EDF has been disastrously bad and in reality it will require the continued support of the French Government if it is to survive.
4. The overall performance of the Big Six continues to decline rapidly.
5. At the same time, performance for shareholders has – in general and understandably – been very poor. The Big Six have not been lining the pockets of their investors.

The cumulative economic loss over the period 2007/08 through to 2014/15 reveals an alarming picture of value destruction. The economic loss for all of the companies below totals £103.5bn



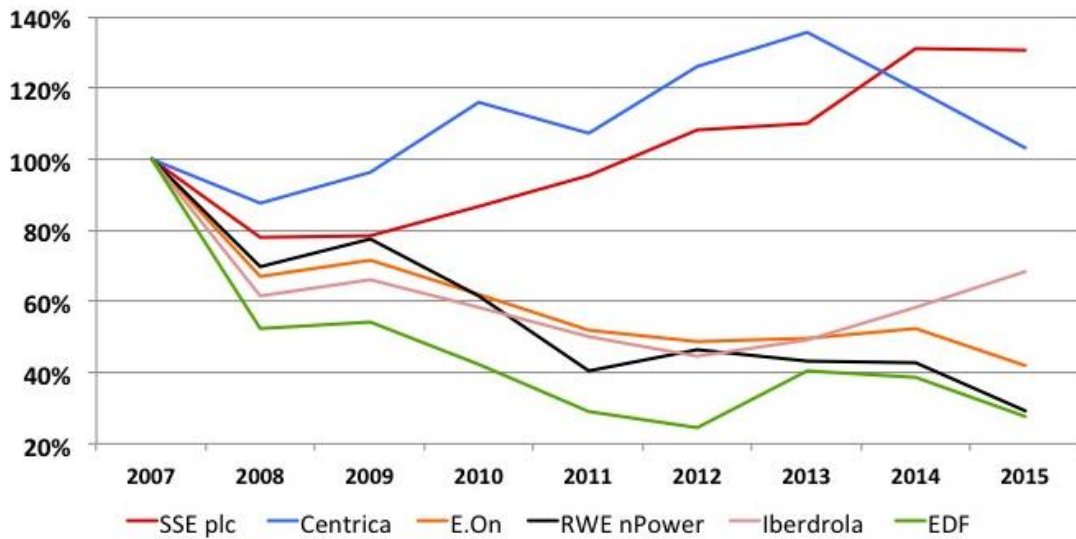
71% of the total economic loss of £103.5bn over the period 2007/8 through to 2014/15 is due to the performance of E.ON and EDF.

Economic Loss for the six companies analysed by accounting year.



77% of the economic loss has occurred since 2011/12 – in other words the problem is accelerating – probably due to the legislative environment

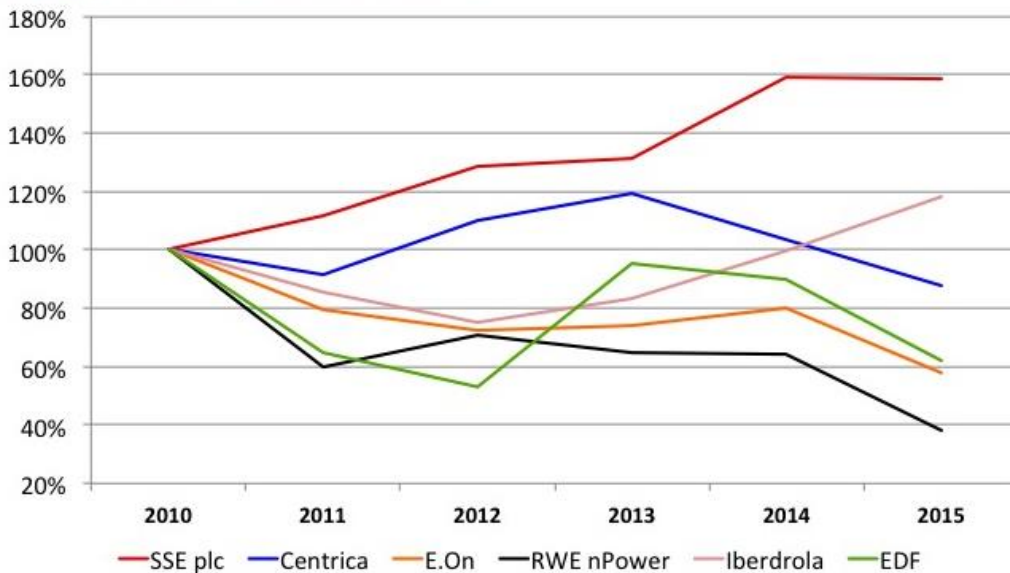
Total shareholder return (TSR) over the longer-term; rebased to 100 in Dec 2007 and running through to Dec 2015. Overall the returns are poor - only Centrica, which has been falling in recent years, and SSE are in positive territory. The performance of EDF and RWE nPower has, as at Dec 2015, produced returns amounting to less than 30% of their Dec 2007 value.



Total Shareholder Return (TSR) = Movement in share price plus dividend divided by opening price

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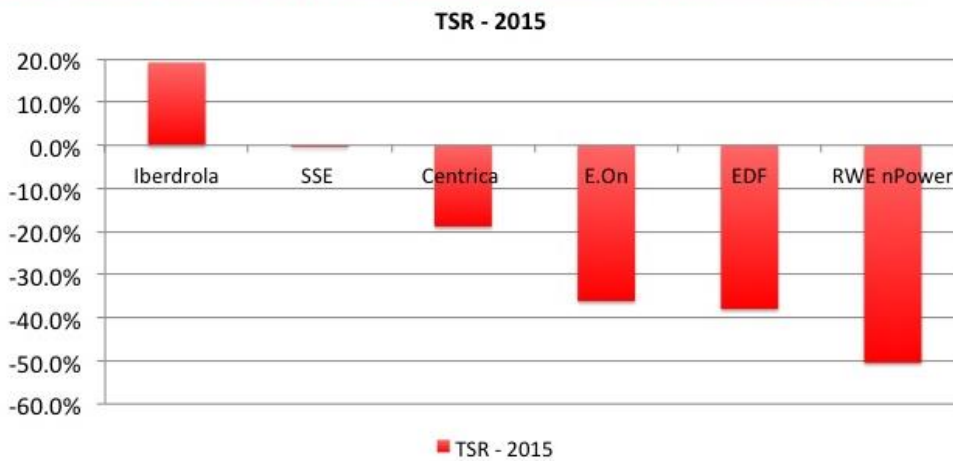
Total Shareholder Return rebased to 100 in Dec 2010. In moving the start date of the analysis to cover the last 5 years through to Dec 2015, only Iberdrola and SSE are in positive territory. Over the last two years Centrica's TSR has been a negative 29% and EDF, E.On and RWE nPower all produced sharply negative returns in 2015 – see next slide



Total Shareholder Return (TSR) = Movement in share price plus dividend divided by opening price

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Set out below is the Total Shareholder Return (TSR) for the big six European Energy Companies in 2015. Only Iberdrola, which in itself is recovering from a relatively low base, is producing a positive return. SSE's performance was heavily reliant on its dividend pay-out, which in 2015 totaled 88.4p – over the year the share price fell by 94p. RWE produced a negative 50% total shareholder return – its share price fell from 25.65 euros at the beginning of the year to 11.7 euros at the end of Dec 2015.



Total Shareholder Return (TSR) = Movement in share price plus dividend divided by opening price

Given the poor if not appalling performance outlined above, it would appear that the capital markets are not of the view that these companies are exploiting any advantageous market position. In 2015, five of the six companies posted negative returns.

GE Capital – no balance sheet big enough

All this matters because there is no balance sheet strong enough to sustain this level of performance over time. The rapid and calamitous collapse of the once-great GE in America is testament to the consequences of running a business consistently at returns less than the cost of capital. Unfortunately, that has been true of almost all of the Big 6 since 2008/9.

Therefore we believe that we are heading for a “crisis” driven by the economic performance of the big energy companies. Several of them are speeding towards corporate distress and – inevitably - significant industry restructuring. They will not be able to make the investments needed to sustain and improve the UK’s (and Scotland’s) energy infrastructure without significant intervention by Government. Worryingly, poorly informed Government policies designed to further limit the profits of these companies, combined with an increasingly complicated and uncertain market environment, are likely to accelerate and deepen the problems.

The Government and the Energy Industry appears to be indifferent

Over the past couple of years, we have spent our own time and money meeting with the EU Commission; UK MP’s; the Head of Energy UK; and the Head of Ofgem in order to present our work. Unfortunately, they all seem to:

- Struggle to understand the basic argument; or
- Are unwilling to face up to economic reality; or

- Are terrified of the political implications

Objectives of the current “Energy” policy

At one stage, we hoped that after the 2015 general election, that we could use bodies such as Energy UK to steer the debate in a more productive and sensible direction.

Hitherto we believe that too much of the debate on energy and energy policies has been naïve, political, and emotional and as such it fails to address the very real challenges that the UK (and Scotland) and our “European partners” face in the generation and distribution of timely and economic energy.

When one stands back and reviews the UK’s current energy policy, it is not entirely clear to us what is the governing or overriding objective? The immediate candidates appear to be:

1. A low carbon strategy?
2. Security of supply?
3. Cheap affordable electricity?

In this, there appears to be some agreement across the political spectrum that all of the above can be sustained simultaneously but this seems to be more wishful thinking than anything else. Furthermore such a position does not require successive governments to actually define these terms in more detail and make (painful) trade offs between them.

We hope the above has been helpful.

Kind regards

Professor John Barbour

Roger G Bell MBA

Our own consulting practice is focused on serving the CEO's and top teams of large companies who are seeking to focus on and drive shareholder value.

Our career clients have included:

Babcock International Group plc

Boots Group plc

British Aerospace plc

British Alcan plc

Cadbury Schweppes plc

CBRE UK & EMEA

Dow Chemical

Helical Bar

Philips bv

Prudential plc

Roche Pharmaceuticals

J Sainsbury plc

Sam Stott Design

Scottish Amicable

SEGRO plc