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Interim Market Commentary

Language Corrupts Thought
Oil Service Industry

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Language Corrupts Thought

The following witticism may be found in various genres of Eastern European literature, and it has relevance to economics: “Some people are so poor that they have to fast on Mondays and Thursdays to keep from starving to death.” That saying has a bit of the absurd in it, which makes it mildly comedic, because how can you avoid starving to death by not eating? What makes it witty is the omission that the characters in question wish to avoid being hungry for long stretches of time, so they fast two days a week in order to be able to eat the other days of the week. Even then, it has an element of great imprecision, with an almost self-reference paradox to it, an element with which the field of economics is replete.

The basic term Gross Domestic Product (GDP) is commonly understood to be the sum of goods and services produced and consumed within a nation in a discrete period of time. Having a higher GDP is generally considered an indication of economic health and robustness, except when nations consume more than their capacity to produce. In that situation, when nations borrow it isn’t necessarily a sign of health and vigor, nor is it a sign of the reverse; it’s merely a condition.

In the field of economics many people use GDP as the foundation for a self-reference paradox. For example, when GDP diminishes, it usually requires a reduction in the number of people employed, which leads to less demand for goods and services from those who are unemployed, since they can no longer afford them. This situation leads to fewer transactions for goods and services which, in turn, leads to more unemployment, and so on to infinite regress.

If the above scenario were followed to its ultimate conclusion, there would be no goods and services demanded by anyone, and the economy would revert to its primordial barbaric condition, which is unlikely to happen. Nevertheless, it appears to be the logic used for the valuation of securities. The belief is that a process, once in motion, has its own self-perpetuating character. Let’s say that we made reference to the real estate bubble in the period from 2003 to 2005. The economy was very robust for reasons that are self-evident, and people were building houses they couldn’t afford. The construction of homes created employment, which in turn, created demand. In principle, it should have been self-perpetuating, but in reality it wasn’t, because at some point supply will outstrip the natural demand, the ability to afford the goods will be exhausted, and there’ll be a period of retrenchment.

The retrenchment that we see is nothing other than normal and ordinary. It doesn’t necessitate anything like the decline in equity prices that we’ve seen over the last 18 months, except for the hidden assertion that, once this system is in motion, only Herculean efforts can reverse it. I don’t think that’s required in the slightest;

nevertheless, one can find that sort of logic present in industry group after industry group. I'll call the readers' attention to one or these groups in the next section of this report.

Oil Service Industry

One of the obvious statements of fact that we can make about the oil service industry is that the price of oil has declined from a price of $147 a barrel to an amount close to $40 a barrel in less than a year. During that period of time, according to the Baker Hughes worldwide rig count, the number of rigs has declined from 3,417, recorded in February 2008, to 2,753, recorded in February 2009, which is a decline of 19.4%. Clearly, at oil prices $40 or below, it is less profitable to explore for, and extract, oil.

Ordinarily, the market well understands that these movements in rig count and oil exploration are cyclical, and they have a tendency to self-equilibrate. For example, if the rig count diminished then, in the fullness of time, the inventory and production would decline. With that reduction, the price would rise because, according to the law of supply and demand, when supply is reduced relative to demand, or if it is reduced more than demand, the price should rise. A higher price should encourage further exploration, leading to higher inventories, and so on to the infinite regress of this dynamic equilibrium as it swings from one extreme to another.

In ordinary cyclical environments, the oil service companies trade at very high multiples of cyclically depressed earnings. It's highly likely that the rig count will further diminish over the coming months and, therefore, the earnings in 2010 are likely to diminish relative to those in 2009. Table 1 (page 5) lists the P/E ratios of a diverse group of oil service stocks active in different areas of exploration. These companies were selected to illustrate what's going on in an analytical sense. Every oil service company on this list, with the exception of two companies, trades at a single- or low single-digit P/E ratio relative to the estimated earnings for 2010.

Table 1: P/E Ratios of Selected Oil Service Companies

	P/E 2010 est.
Diamond Offshore Drilling (DO)	10.48x
Baker Hughes (BHI)	9.87x
Dawson Geophysical (DWSN)	7.28x
Halliburton (HAL)	8.85x
Lufkin Industries (LUFK)	8.87x
Atwood Oceanics (ATW)	3.44x
Ensco International (ESV)	4.34x
Parker Drilling (PKD)	5.85x
Noble Corp. (NE)	4.21x
Rowan Companies (RDC)	5.57x
Schlumberger Ltd. (SLB)	13.74x
Transocean Ltd. (RIG)	4.16x
Pride International (PDE)	6.42x
Nabors Industries (NBR)	6.00x

Unless there is an immediate and sharp increase in oil prices, it's difficult to avoid the conclusion that 2010 earnings for these companies will be anything other than reduced from the 2009 level which, in turn, will be reduced from the 2008 level. There is no recognition by analysts that the current situation is a cycle. It may well be that oil prices will decline further or, even if they don't, that the rig count could diminish much more rapidly than the analysts have accounted for in their forecasts. If that were the case, then the earnings listed in Table 1 err on the side of optimism. Even if the earnings were reduced by quantities as great as 50% or 60%, the less expensive of these companies would trade at single digit multiples.

All of these companies, as well as other oil service companies that are not included on this list, have endured and experienced their own unique and quite painful depression from 1981 to, more or less, 1998. As a result, in this industry group, one does not find companies that are leveraged, have made excessive investments or are over-staffed. In general, having recently survived a nearly two-decade depression, these companies are prepared for the resumption of yet another depression, but the market doesn't seem to appreciate that situation.

Based on the reasonable expectation that oil exploration will need to increase to satisfy demand in a world of expanding industrial production and expanding population, the oil price is probably going to rise, and oil exploration is likely to increase. Therefore, these P/E ratios reflect a reality that is not likely to endure, nor is it even likely to happen.

***Q:** Even though we talk about a rig count, what allowance, if any, should we make for the productivity of the rig count? In other words, perhaps fewer rigs could be used to discover more oil.*

A: We do know that the vast oil discoveries were made decades ago, but we can't say that the companies of the world are finding more oil. We can say that a given rig is able to extract oil from a location in which it was previously unextractable. According to the Baker Hughes rig count, 55% of the rigs operating in the world are being used in the United States and Canada. The reason for such concentration is that, during the last century, a very large proportion of the world's oil wells were dug in the United States and Canada, making them the most explored regions of the world.

Table 2: Baker Hughes Rig Count

Area	Count
United States	1,085
Canada	159
International[1]	1,020

Source: Baker Hughes website
http://investor.shareholder.com/bhi/rig_counts/rc_index.cfm

Many of those wells were abandoned years ago, because they were no longer productive using the technology available at the time. With new technology, including 3-D seismic imaging and horizontal drilling, it's possible to extract more oil from those structures. The cost of extraction is higher, because the new technology is not inexpensive, so it requires higher, not lower oil prices. What you'll find is that much of the decline in the worldwide rig count pertains to less deployment of those new technologies in the United States and Canada during the last six months, because the oil price is not high enough to support their added cost.

If you define productivity as the ability to extract oil where it previously did not exist, then the rigs are more productive. If you say that the new technology reduces the probability of a dry hole relative to the past, there's no question that the probability of dry holes is lower. If you define productivity as the ability to find ever-increasing and larger pools of

[1] The international rig count excludes rigs in the US and Canada, which are counted separately. It also excludes rigs that are drilling in Russia and onshore in China, because it's difficult to collect data for those locations.

hydrocarbons, you'd have to say it's not productive. They do find more oil, but they are smaller and more expensive pools of hydrocarbons.

What does productivity actually mean? It doesn't mean that the world's reserves of petroleum are increasing with the deployment of fewer and fewer rigs.

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