Murray's Musings

THE IMPORTANCE OF THE OIL SERVICE INDUSTRY

The energy sector weighting of the S&P 500 at the time of this writing is 5.04%. Some two years ago, it was in the vicinity of 2.5%.

Almost one-third of that 5.04% is accounted for by Exxon Mobil Corp. (XOM), with a 1.35% weight. Chevron Corporation (CVX) accounts for 92 basis points. The ConocoPhillips (COP) weight is 47 basis points.

The largest energy service company weighting in the S&P 500 index is Schlumberger Ltd. (SLB) at 19 basis points. The next oil service company to make an appearance is Haliburton Co. (HAL), which comprises 9 basis points. It is the 255th largest company in the S&P 500. Baker Hughes Co. (BKR) is an 8-basis-point position. This group is the extent of the S&P 500 exposure to oil service. In total it amounts to 36 basis points.

The oil service industry obviously can be ignored as a purely statistical factor in the S&P 500 Index. However, without the seismic fracking and well construction services offered by these companies, oil could not be extracted, and the oil extraction companies *are* important in the index. The oil service industry, as a generalization, has earned very poor returns on capital since 1981. From 2013 until very recently, it was in crisis, with numerous bankruptcies and substantial losses by virtually all industry participants.

Schlumberger, by example, had $39 billion plus of shareholders' equity in 2003, whereas by the end of 2020, it had dropped to modestly in excess of $12 billion. By year-end 2021, book value was slightly in excess of $15 billion. As to fixed assets less accumulated depreciation, generally understood to be plant, property and equipment, this amounted to $15.096 billion at the close of 2013. By the end of 2021, this figure had declined to $6.429 billion. It was even lower at the end of June 2022: $6.386 billion.

In the first six months of 2022, Schlumberger produced a 17.9% annualized return on shareholders' equity. Nevertheless, the company's $664 million of capital expenditures in the first six months of 2022 is only 62.4% of the $1.065 billion of depreciation and amortization recorded in this period, which means the balance sheet value of PP&E is still declining at a rapid rate. Schlumberger is not investing in itself even though it is the leading oil service company, with services that are critical to the global extraction of oil and natural gas.

The figures for Haliburton are similarly profound. It had $15.581 billion of shareholders' equity at the end of 2013, and PP&E net of accumulated depreciation was $11.322 billion. At the end of 2021, shareholders' equity had declined to $6.713 billion, and net PP&E had declined to $4.326 billion. By June, this last measure had declined to $4.165 billion. The annualized return on shareholders' equity thus far in 2022 is 10.69%. Nevertheless, despite

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its profitability, Haliburton is making capital expenditures of only about 85% of depreciation expense. This is exclusive of the fact that the company actually sold $116 million of equipment, and it also excludes yet another $366 million of impairments in the first half of 2022.

In other words, Haliburton is also disinclined to invest in its business. All of this is quite understandable in the context of Haliburton history. At the end of 2013, the company had debt of $7.816 billion against shareholders' equity of $13.581 billion. At the end of 2021, long term debt was a higher $9.12 billion against half as much shareholders' equity of $6.713 billion. At the end of June 2022, debt had declined to $8.525 billion against shareholders' equity of $7.12 billion. Haliburton is still a leveraged company, although it should be noted that net current assets amount to $5.496 billion.

Schlumberger stock trades at more or less the price reached in the summer of 2005. The same can be said for Haliburton, even though its shares had a slightly better outcome for the time period in question.

It might be argued that modern oil rigs are more productive than the oil rigs of the past, so that fewer rigs are needed to produce a given quantity of hydrocarbons. The U.S. Energy Information Administration (EIA) calculates drilling rig productivity over time using "new well oil production per rig" as the key metric. The data is contained in a drilling productivity report per region. The data is not so clear on this question.

The EIA data shows that the Anadarko region of Western Oklahoma's new well oil production per rig has more or less quintupled since 2012. On the other hand, the productivity increase since 2012 in a region such as Appalachia has been minimal. This contrast might be compared to the roughly 8x productivity increase in the Bakken region of North Dakota, but with minimal increases in the Haynesville area of East Texas and Western Louisiana.

The Permian Basin is perhaps the most prolific energy producing region in North America, and new well oil production per rig has advanced approximately tenfold there since 2012. Productivity reached a peak in 2020, with significant shutdowns of producing wells in all regions. Only the most productive wells remained in operation. This phenomenon is known as high grading. Since 2020, productivity has been in decline. This is not necessarily indicative of a loss of productivity per rig; it is likely that less productive land is now being brought into production.

Both Schlumberger and Haliburton arguably have now achieved an acceptable level of profitability. This is not true for many oil service firms. Baker Hughes, for example, is profitable on an operating basis, with an operating margin of 6.68%. Unfortunately, the company still reports impairments in non-operating losses. The balance sheet has $14.88 billion of shareholders' equity against $6.625 billion of debt, and balance sheet cash amounts to $2.928 billion. However, goodwill and other intangible assets account to $5.741 billion and $4.049 billion. This total of $9.79 billion can be subtracted from shareholders' equity to

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arrive at a hard book value of $5.09 billion. Viewed in this light, Baker Hughes might still be regarded as a leveraged company, so it still displays signs of the damage caused by the long energy depression from June 2014 to June 2021.

The contraction in the number of operating offshore oil rigs has been far more extreme, and the duration of the contraction now exceeds four decades. There were 250 U.S. offshore crude oil and natural gas rotary rigs in operation at the end of 1980.[1] By the end of 2007, just before the financial crisis of the following year, the number of offshore rigs in operation had dropped to 62. In the next 24 months, this figure shrank to 37. The number of rigs in operation offshore then began a gradual increase to 58 in June 2014, on the eve of what was to become an energy depression that lasted for eight years. Data for August 2022 is the most recent, and at that time 18 oil and natural gas rotary rigs were in operation in the offshore U.S. waters.

A shortage of oil may be developing right now. The U.S. Strategic Petroleum Reserve has been used to balance supply in relative to the embargo on Russian oil. The SPR has declined to 416.4 million barrels as of September 30th, 2022, after a drawdown of 201.4 million barrels in the past 12 months. This rate of diminution is not sustainable. One possible solution is a resolution of the Ukraine conflict. That does not seem likely in the foreseeable future.

The other obvious solution is a meaningful increase in U.S. oil production, but in order to accomplish that, the remaining oil service companies must increase investment in their facilities to facilitate that production increase. The government plans, though, are still to replace hydrocarbons with other forms of renewable energy once the current crisis is resolved. Effectively, the proposition to the oil service companies is that they would need to make long term investments to solve what the government hopes is a short-term problem. If the Ukraine conflict is resolved, energy commerce might return to normal, in which case any oil service company that made investments to handle temporary U.S. oil production increases would be left with enormous amounts of redundant equipment.

The oil service companies have experienced about four decades of excess oil service supply and endured enormous losses in order to establish low break-even operating levels. Significant capital expenditure would inevitably raise break-even points for oil production levels that world governments would rather not be sustained. In fact, it is the stated intention of those governments to reduce hydrocarbon production as soon as it can be practically achieved.

The surviving oil service companies, therefore, have absolutely no incentive to increase investment in their output capacity. In fact, the entire industry continues to disinvest in their plant and equipment. It will be difficult, if not impossible, for hydrocarbon production to increase while the oil service companies are reducing their capital investments.

[1] Energy Information Administration

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This makes oil service a very interesting industry from an investment perspective. It is the only industry that is currently aligned operationally to endure a depression, simply because it has just experienced a depression. It is therefore a potential non-correlated asset in an equity portfolio. The reluctance of the industry to invest will eventually serve to greatly increase typical oil service company return on equity to very alluring levels.

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