

Four Key Drivers of Equity Sector Performance



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Equity portfolio managers face many risk management challenges. In addition to the company-specific risks inherent in their stock selection, they can also be exposed to tracking risk versus their benchmark stemming from holding cash, biases towards value or growth stocks, as well as being overweight or underweight different industry sectors. The risks from being sector overweight or underweight have been particularly dramatic during the past 12 months (Figure 1). Industrial stocks, which are the sector with the least tracking risk versus the S&P 500® during the past two years, have had a tracking risk of 6.8% between June 1, 2015 and June 1, 2016. Utilities and energy stocks have had a tracking risk of 16.8% and 19.7%, respectively, which are higher than the outright volatility of holding the S&P 500® measured over the same period of time.

This paper uses a simple regression model based on the past one year's worth of daily data to identify and evaluate market related factors that best explain the divergence between the S&P 500® and the nine individual sectors for which there are E-mini Select Sector futures.

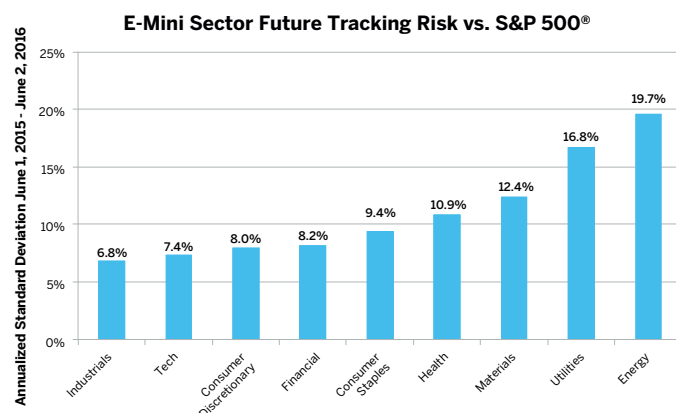
The four factors are:

- Crude oil: the daily change in the 1st nearby West Texas Intermediate Crude Oil contract.
- U.S. short-term rates: daily change in Fed Funds Future dated six months forward.
- U.S. Dollar: daily change in the Bloomberg Dollar Spot Index.
- Copper: daily change in High Grade Copper futures.

Four sectors appear to be relatively immune to changes in the value of oil, copper, interest rates and the U.S. dollar: technology, consumer discretionary, industrials, and health stocks. The other five sectors show much higher sensitivity to these commodity-related and macroeconomic factors.

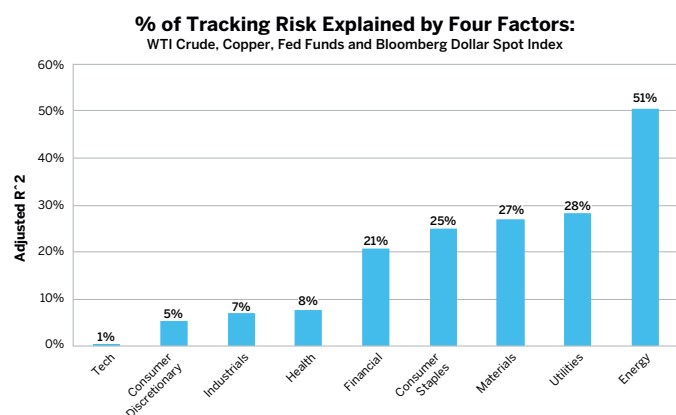
Let's examine the impact of these factors in more detail, beginning with energy.

Figure 1: Tracking Risk Versus the Index June 1, 2015 to June 2, 2016, Annualized.



Source: Bloomberg Professional (ES1, IX1, IXT1, IXY1, IXA1, IXS1, IXC1, IXD1, IXS1, IXP1), CME Group Economics Research Calculations, Daily Data June 1, 2015-June 2, 2016.

Figure 2: The % of a Given Sector's Tracking Risk Can Be Attributed to Our Four Factors.



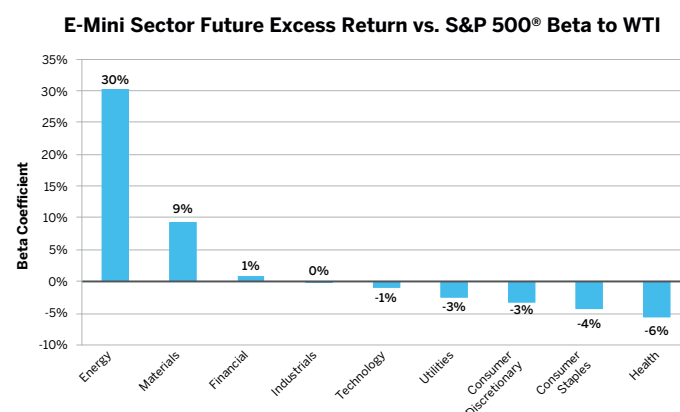
Source: Bloomberg Professional (ES1, IXT1, IXY1, IXI1, IXC1, IXA1, IXR1, IXD1, IXS1, IXP1, CL1, HG1, FF6 and BBDXY), CME Group Economics Research Calculations, Daily Data June 1, 2015-June 2, 2016.

West Texas Intermediate Crude Oil

Higher oil prices are obviously a good thing for energy companies. Generally speaking, oil producing and oil services firms benefit from higher prices and, in turn, are hurt by lower prices. As such, it comes as no surprise that energy stocks tend to outperform the S&P 500® when crude oil prices are rising and underperform when prices are falling (Figures 3 and 4). Higher energy prices have also correlated with the outperformance of materials stocks and to a lesser extent with financial stocks. The latter isn't too surprising given that many financial firms have lent a great deal of money to the energy sector. Most other sectors have a negative sensitivity with respect to oil: they tend to underperform the S&P 500® index when oil is rising and outperform when it's falling.

Consumer and health stocks appear to be especially penalized by higher energy prices. When consumers have to pay more for energy, they have less money for everything else, including consumer staples and health care.

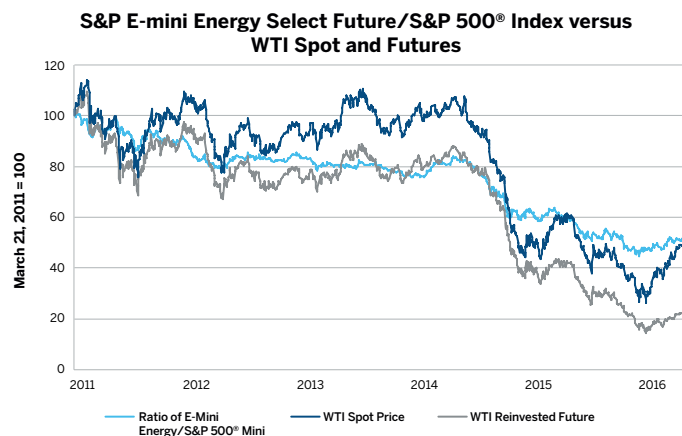
Figure 3: If Oil Prices Double, Energy Stocks Might Outperform the S&P 500 By 30%.



Source: Bloomberg Professional (CL1, ES1, IXP1, IXD1, IXA1, IXI1, IXT1, IXS1, IXY1, IXR1, IXC1), PCME Economics Research Calculations, Daily Data June 1, 2015 - June 2, 2016.

In fact, consumer staples and health care stocks are even more negatively sensitive to oil price changes than are consumer discretionary stocks. This may be because lower-income consumers spend a greater portion of their budget on energy, consumer staples, and health care than higher-income consumers. Thus, lower-income consumers have to make painful choices when oil prices rise and may have to sacrifice essentials. Higher income consumers are less impacted by oil prices as energy represents a smaller share of their budget. At the same time, higher earners are more prone to buy discretionary goods, which have shown less sensitivity to changes in energy prices than the consumer staples or health care sectors.

Figure 4: Energy Stocks Track Reinvested Futures More Closely Than Spot Prices.



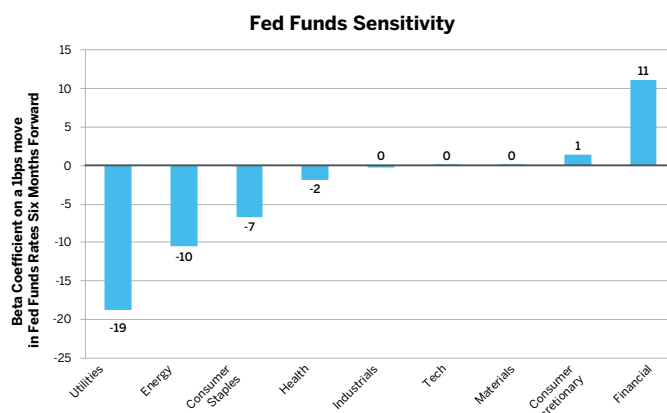
Source: Bloomberg Professional (ES1, IXP1, CL1 and USCRWTIC)

Fed Funds Futures and Interest Rates

Expectations regarding changes in the U.S. Federal Reserve's (Fed) monetary policy have also been a major factor driving the relative performance of different sectors versus the S&P 500® as a whole. Fed Funds Futures explicitly measure the expected change in the Fed's target rate. Financial stocks tend to benefit from the possibility of higher Fed rates whereas most other sectors, notably utilities, energy and consumer staples stocks, tend to underperform (Figure 5). Investors in bank stocks appear to very eager to see the Fed move rates higher, which should help banks and asset managers become more profitable. Utility stocks, which tend to pay high dividends and compete with fixed income for investors, are the most affected. Energy stocks have also reacted negatively to the possibility of higher interest rates, in part, because many of them enjoyed cheap financing and geared up significantly during the oil boom.

Here, too, we see a difference between consumer staples and consumer discretionary stocks with respect to interest rate sensitivity. Consumer staples stocks are, on balance, negatively impacted when expectations of Fed rate hikes strengthened. This may be because consumers might have to borrow at higher rates if the Fed tightens policy. Consumer discretionary stocks tend to be big ticket items. Some of these firms include consumer finance units that may also benefit from higher rates for some of the same reasons that banks would benefit from them. Moreover, consumer discretionary items may appeal more to consumers who would pay for them with cash rather than borrowings.

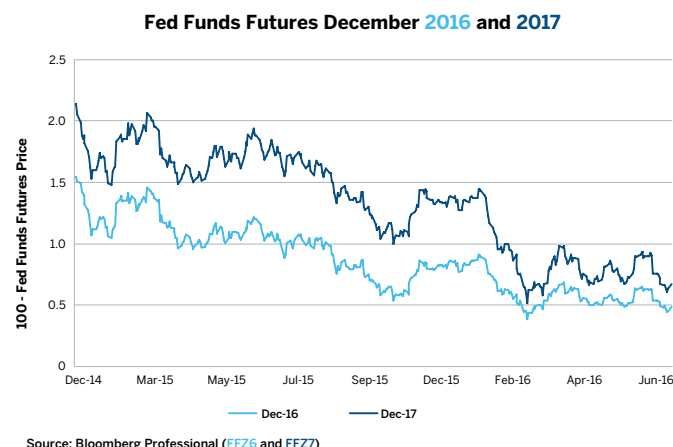
Figure 5: Financials Like Higher Rates But Not Utilities, Energy or Consumer Staples.



Source: Bloomberg Professional (FF6, ES1, IXS1, IXP1, IXR1, IXC1, IXL1, IXT1, IXD1, IXY1, IXA1), CME Group Economics Research Calculations. Daily Data June 1, 2015 - June 2, 2016.

Expectations for rate hikes have diminished a great deal over the past two years (Figure 6) as the actual pace of Fed rate hikes failed to keep pace with market expectations. As these rate-hike expectations diminished, financial stocks underperformed the S&P 500® by about 5% during the past year, whereas utilities stocks have outperformed by about 20%. On Friday, June 3rd, for example, a dismal employment report sent Fed Funds Futures rates 10 bps lower (the price 10 bps higher). That day, the S&P 500® fell 0.29% but the E-mini Financial Select Sector Future fell 1.33%, whereas the E-mini Utilities Select Future rose 1.78%, a 2.07% outperformance versus the index.

Figure 6: Rate Hike Expectations Have Diminished Greatly.

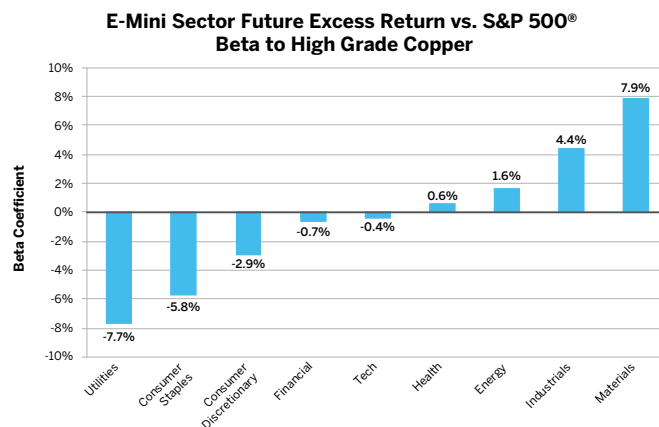


Dr. Copper and Sector Futures Excess Return Versus the S&P 500®

Copper prices have a relatively modest influence on the outperformance/underperformance of sector futures versus the S&P 500®. That said, materials and industrials stocks tend to outperform when copper prices rise, whereas utilities, consumer staples and, to a lesser extent, consumer discretionary stocks tend to underperform. The reaction of materials stocks is fairly easy to explain: higher copper prices, generally, imply higher prices for industrial metals, which should mean somewhat better margins for material goods companies.

What is less intuitive is the negative reaction of utilities and consumer goods to increases in copper prices. Rising copper prices might indicate a global economic recovery, which could encourage the Fed to raise rates to the detriment of utility and consumer staples stocks.

Figure 7: Copper Prices are a Minor Influence Overall But Correlate Positively With Materials Stocks.



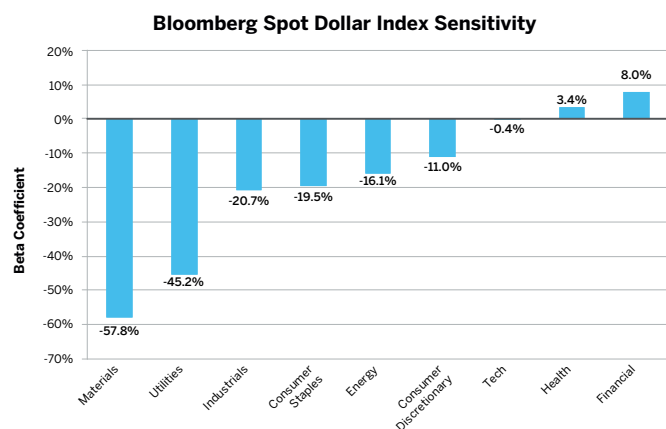
Source: Bloomberg Professional (HG1, ES1, IXS1, IXR1, IXY1, IXA1, IXT1, IXC1, IXP1, IXL1, IDX1)
PCME Group Economics Research Calculations, Daily Data June 1, 2015 - June 2, 2016.

Bloomberg Dollar Spot Index

The Bloomberg Dollar Spot Index tracks 10 currencies, namely, the Euro (31.75% weight), Japanese yen (18.45%), Canadian dollar (11.48%), Mexican peso (9.87%), British pound (9.46%), Australian dollar (6.1%), Swiss franc (4.37%), Korean won (3.43%), Chinese renminbi (3.00%) and Brazilian real (2.08%). Movements in the U.S. dollar versus this basket of currencies are a major influence on the relative performance of the various equity sectors.

Given the other factors, a stronger dollar has been a negative for most of the industry groups during the past year, especially for materials and utilities stocks. A stronger dollar has been neutral for the technology sector, and beneficial for the health care and financial services sectors (Figure 8). Combined, these latter three sectors constitute 54% of the S&P 500®'s market cap. The S&P sectors most negatively influenced by an upward move in the Bloomberg dollar spot index are comparatively small. Materials stocks constitute only 2.9% of the S&P 500®'s weight, and utilities stocks weigh in at just 3.4%.

Figure 8: Stronger U.S. Dollar Tends to Benefit Financial Stocks but Hurt Utilities, Materials Stocks.



Source: Bloomberg Professional (BBDXY, ES1, IXd1, IXS1, IXI1, IXC1, IXT1, IXd1, IXR1, IXA1), CME Group Economics Research Calculations, Daily Data June 1, 2015 - June 2, 2016.

In general, and given the other factors, stocks respond negatively to a stronger currency as it tends to put downward pressure on earnings accrued abroad, and exposes domestic producers to stronger international competition.

Bottom Line:

- During the past year, more than half of the relative performance of E-mini Energy Select Sector Future versus the S&P 500® Future can be explained by four factors: daily changes in the price of crude oil, short term U.S. interest rates, copper and the U.S. dollar.
- More than one fifth of the relative performance versus the S&P 500® of the E-mini Financial, Consumer Staples, Materials, and Utilities Select Sector Futures can be explained using these same four factors.
- Rising oil prices tend to benefit energy and materials stocks and hurt most other sectors, notably consumer goods and health care.
- Increased expectations of interest rate increases tend to benefit financial stocks but are detrimental to utility, energy and consumer staples shares.
- Financial stocks tend to benefit relative to the S&P 500® from a stronger dollar but a stronger U.S. currency is detrimental to most other sectors outside of health care and technology.
- Higher copper prices are likely to benefit materials stocks on a relative basis but have modest effects elsewhere.

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