Energy hedge funds: it's all about risk/reward

Peter C. Fusaro and Dr. Gary M. Vasey, Energy Hedge Fund Center, New York

The authors' conservative estimates put the number of commodity trading hedge funds at 110 with perhaps $50 billion or more in assets under management, out of the universe of over 400 energy hedge funds. Eighteen months ago, the number of funds stood at just 10. While energy funds make up approximately only 5% of the global hedge fund market, their exponential growth and investors' continual search for better returns means the sector is attracting global attention. This article looks at the development of the sector and the unique risks involved.

Introduction

Investors are looking for better returns this year especially, and have turned to the energy patch for those financial rewards. Well, energy is a risky business. While many hedge funds concentrate mostly on price risk, there is almost unlimited risk in the physically-oriented energy business. There is operational risk, geopolitical risk, event risk, regulatory risk, weather risk, tax risk, and other risks that add multiple dimensions to the more linear and traditional thinking of hedge fund land. These externalities are also about to be overwhelmed by 'environmental risk' which is the wave beyond the current energy hedge fund euphoria.

Therefore, trying to put the traditional hedge fund financial overlay into the energy complex is really putting the proverbial square peg into the round hole. No matter how hard the quants try, it just doesn't happen that way. Why not? Because, energy is the world's largest business with over $4 trillion in annual trade, but energy is also a very immature financial market. In fact, it is probably behind agriculture, the world's second largest business, in terms of financial maturation.

Energy markets and hedge funds

The notional value of the financial energy market is $2.2 trillion according to Global Change Associates' estimates. Since commodities traditionally trade six to 20 times the physical market, we still have a long way to grow toward market maturation. Moreover, the Enron and energy merchant debacle set back natural gas and power trading a good three years. Today, the natural gas market is over $400 billion — where it was when Enron went down in December 2001. Oil trading still predominates energy trading and is the most liquid financial business.

This is a business that hedge funds really have just entered in large number during the past year and a half. Of course, it can be argued that commodity pool operators and CTAs have been around for decades, but the movement into energy trading by hedge funds has really accelerated more recently. In our Energy Hedge Fund Center (www.energyhedgefunds.com), we have counted over 110 commodity trading hedge funds with perhaps $50 billion or more in assets under management in our universe of over 400 energy hedge funds. We have also been told that we have undercounted. These numbers compare to less than 10 commodity trading hedge funds just 18 months ago.

As the energy space becomes more attractive to investors, we have also observed the entrance of energy and natural resources funds of funds. By investing in a portfolio of managers, funds of funds can expose investors to a wide range of energy opportunities across the space. We now see more than 20 funds of funds with more in formation targeting energy for returns. The problem with funds of funds, however, is once again appreciation of the risks involved in energy and the volatility of the sector in general. Manager selection has to be performed carefully with additional due diligence steps that require knowledge of energy markets.

Portfolio construction and hedge fund classification

The issue lies in portfolio construction. We have developed a new classification of hedge funds in energy simply because traditional classification models say little or nothing about energy hedge funds. We classify energy funds in terms of their style (equities long/short), commodities, diversified (equities and commodities, debt, distressed assts and alternative energy for example) and industry sector or commodity focus. While the tendency may be to look to high performing commodity-focused hedge funds, the danger is that the investments are too highly correlated and that the risk profile of the portfolio is too high. Rather, the fund of fund manager needs to seek diversified opportunities across the industry avoiding highly volatile plays in favour of a broad portfolio of less correlated opportunities. That means knowing which industry sectors and which strategies carry the most risks and avoiding them.

Blow ups

The fact is that energy is the new game in town, and is already experiencing hedge fund market maturation dynamics. That is, some funds have already blown up this year in trading oil, gas and electric power and undoubtedly, more will follow. The reason is simply price volatility. While many hedge fund managers want alpha and low price volatility, they will need to throw that rule book out the window for the energy sector. Energy traditionally has exhibited high price volatility, and today is exhibiting more than historical levels of price volatility across the complex. It can be argued that natural gas price volatility fell during this past spring, but that is a temporary phenomenon. The point is, that trying to construct an energy portfolio of 7% or 8% price volatility will leave you mostly with energy equities, but they too are starting to behave more like commodities due to the continued strength of the natural resource bull market, ie, they are now exhibiting more price volatility. Higher highs have bamboozled many financial analysts as they can't figure out that everything has changed and that the mean reverting price models of the past are dead. Things have changed in energy markets and the past is no longer a prediction of the future.

Risks, risks and more risks

From the outside looking in, activities such as power trading are attractive and bold, but power trading is particularly fraught with unexpected risks. The North American power markets are regional, immature and largely physical with day ahead financial markets being the most liquid. Power is real-time, non-storable and as a consequence, highly volatile. Power plants are complex beasts with a wide array of fuels, types and operating parameters to consider. Demand is equally difficult to predict as anyone in the load profile and forecasting business can tell you. Electric power trading is best performed with generation assets today and a detailed understanding of the market and its risks and complexity.

And that's the problem with energy for people and organisations more used to traditional financial markets. It's simply a complex physical market. Superficially, it seems straightforward enough, but the more you probe into the business transactions required to make the industry work, the more complex and risky it becomes. Even crude oil markets, which are global and fairly mature, are not as simple as supply and demand. One has to consider transportation issues, crude quality issues, storage levels, refining capabilities and so on.

A key feature of energy markets due to their underlying physicality is known as 'volume' risk. Volume risk, put simply, is related to the need to actually deliver the commodity at some point and is about the risks implicit with being unable to deliver or produce the commodity. In actuality, volume risk is intimately related with many other risk factors and it has been volume risk that has been on the mind of oil traders recently as tropical storms moved across the Gulf of Mexico, for example. How would supply be impacted? What damage might be done to the infrastructure? How long might repairs take? And so on. Volume risk serves to remind us that this is fundamentally a physical and complex industry.

In discussing the uniqueness of energy risks, we ought to mention environmental issues too. Already, environmental issues are having a bigger impact on energy that might initially be considered. It impacts project costs requiring compliance with environmental regulations, such as having to consider the removal of oil production facilities in the North Sea for example. It impacts transportation, such as the requirement to scrap single-hulled tankers and replace them with multi-hulled versions for example. It impacts refining capacity as refiners have to change set up for seasonal gasoline varieties. The environment will continue to have an ever larger impact on the energy industry.

What's on the horizon?

Today, the energy hedge fund arena is ramping up due to the need for higher returns for hedge fund investors. Energy hedge funds are still only about 5% of the hedge fund universe, but continue to grow in North America and Europe predominantly. It can be said that New York and London continue to be the twin capitals of both energy trading and energy hedge funds. Houston, Calgary, Singapore, and Switzerland play second fiddle. More hedge funds and funds of funds are in formation as the energy bull market will continue for at least two more years with rocky price spikes and collapses.

After that window closes, watch out for the surge of environmental hedge funds coming into play. A recent trip to London for a client revealed to us that every single European hedge fund that we spoke to, (and there were more than a dozen), was either re-engaged or interested in carbon emissions trading. What is being forgotten is that this is just the first stage. While carbon trading is the focus of attention, there are also markets for sulfur dioxide (SO2) which causes acid rain, nitrous oxides (NOX) which causes urban ozone, and renewable energy credit trading (as it is called in the US). The market formation is global as we recently learned of emissions credit trading for sulfur dioxide in China, which burns a lot of coal. Thus, the energy wave is superseded by a 'green wave' of environmental hedge fund trading. Its genesis is still the US, and now it is global. Watch the space expand, contract and mature.

Risk is how the funds make money. Welcome to the energy and environmental hedge fund club where risk is endemic.

Peter C. Fusaro and Dr. Gary M. Vasey*

Energy Hedge Fund Center, New York

GV: Tel: 281 681 8020
gary@energyhedgefunds.com

PF: Tel: 212 316 0223
peter@energyhedgefunds.com

The Energy Hedge Fund Center can be found at www.energyhedgefunds.com.

* *Publishers of the Energy Hedge newsletter and the Energy Hedge Fund Directory.*

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