

The Impact and Sustainability of Today's Higher Oil Prices

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Executive Summary

The sharp spike in oil prices is difficult to ignore. As of March 11, 2011, oil prices have increased 23.5% or \$20 per barrel since a young Tunisian man sparked unrest throughout the Middle East by setting himself on fire on December 17th.

The rising price of oil is likely to slow economic activity as consumer purchasing power declines. Softer economic activity will probably bring oil prices down later in the year. Before the crisis, the demand and supply for oil were very well balanced, and inventories were more than adequate. Moreover, there appears to be sufficient capacity to offset any supply shortfalls, particularly if the unrest does not spread to Saudi Arabia. Hedgers are in an overall net short position, and oil companies show no signs of price gouging.

Given these generally positive fundamentals, why are oil prices rising? The recent decline in the U.S. dollar is responsible for some of the increase. But market psychology can also help set the price of a commodity. Currently, the fear factor is driving oil prices higher – the fear of supply disruptions, the fear of regime change and its implications, and the fear of further declines in the U.S. dollar. In addition, there are concerns over rising demand as the global economy grows

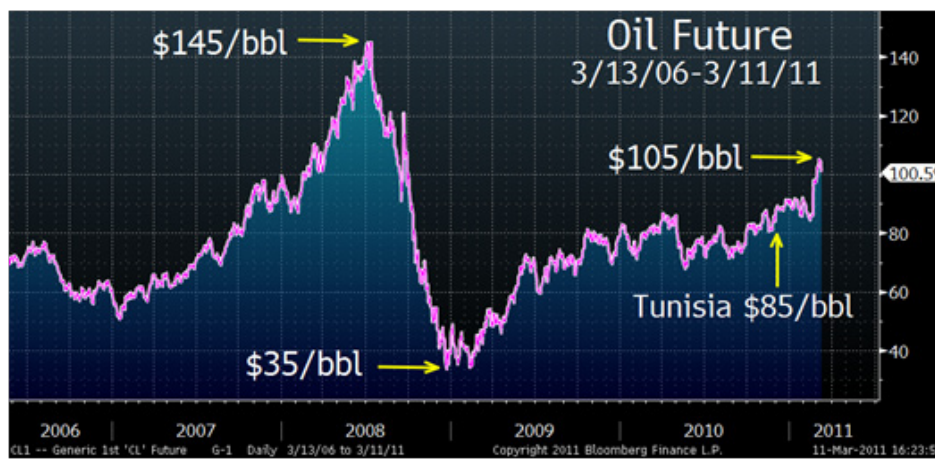
and expands. Once the current revolutionary fervor in the Middle East settles down and the Libyan crisis is resolved, oil prices are likely to drift back to the \$80 to \$85 per barrel level.

In the long run, more energy will be needed, particularly in developing countries as they strive to boost living standards toward western levels. Theoretically, there is an ample long-term supply of fossil fuels. The U.S. has substantial proven and technically recoverable reserves of oil, coal and natural gas. However, the debate over energy security and environmental concerns has slowed their development. Alternative sources are being heavily promoted, but remain cost inefficient and have technical hurdles to overcome. These “renewables” will likely remain a small but growing part of our energy consumption over the next twenty-five years. Looking forward, the development of both fossil fuels and renewable alternatives could help secure our energy independence for a long time in the future.

Oil Prices Are Rising

Oil prices have been rising since a 26 year-old, unemployed, college educated Tunisian man set himself on fire on December 17, 2010. Mohamed Bouazaii was attempting to commit suicide after the police confiscated his fruit and vegetable stand and then allegedly abused him because he lacked a permit to operate his business. His desperate act lit the fuse that toppled the regime of President Ben Ali of Tunisia and led to the ouster of Hosni Mubarak in Egypt and civil war in Libya. Throughout the Middle East, young adult unemployment is high and rising, food prices are surging, and government corruption remains endemic. This dangerous mix has created an environment ripe for revolution.

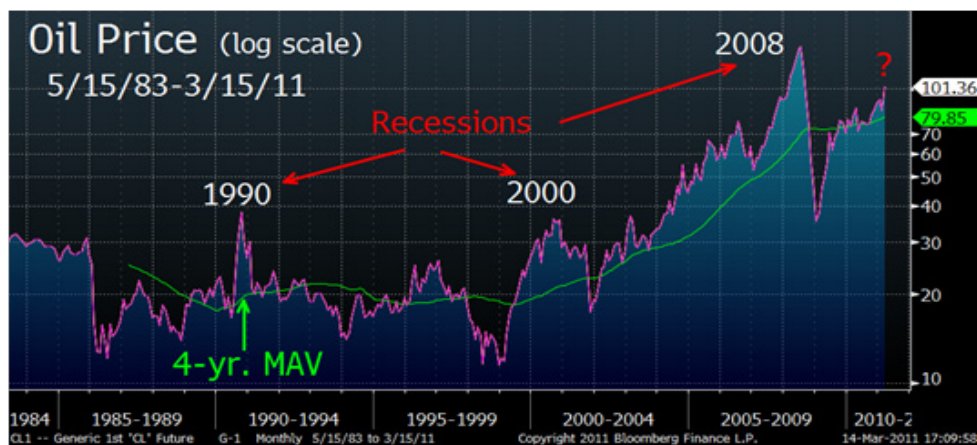
The following chart shows the recent 23.5% hike in oil prices from \$85 per barrel on December 17th to \$105 per barrel on March 11th. This increase is raising concerns that oil prices are starting a parabolic upswing as they did in 2007 to 2008, when the price of oil rose 190% from \$50 per barrel to \$145 per barrel.



Source: Bloomberg, LP

Higher Oil Prices Threaten Economic Activity

Rising oil prices act as a tax on energy users and tend to be followed by serious slowdowns or outright recessions. Every significant rise (defined as at least one standard deviation above the four-year moving average) in the price of oil since 1972 has been followed by a recession in the U.S. fifteen months later. From 1983 to 2000, the U.S. benefited from lower oil prices, which created a tailwind for the economy. We are now facing a significant headwind from oil prices for the second time in three years.



Source: Bloomberg, LP

Oil Supply, Demand and Inventories Are Well Balanced

If it weren't for the Middle East, it is unlikely that oil prices would be rising. The supply and demand for oil were very well balanced at the end of last year, and inventories were at normal levels (see tables below). Over the last five years, the global demand for oil declined -1.63% annualized in the OECD countries and increased 3.49% annualized in non-OECD countries. The supply of oil managed to keep pace with this demand.

Global Demand for Oil +0.58% annualized over the last 5-yrs.

Global Demand	1995	2000	2005	2006	2007	2008	2009	2010	Growth 5-yr.
United States	17.71	19.70	20.80	20.69	20.68	19.50	18.77	19.13	-1.65%
Total OECD*	44.90	47.96	49.87	49.54	49.32	47.56	45.42	45.92	-1.63%
Total Non-OECD	25.17	28.81	34.24	35.71	36.98	38.20	38.91	40.65	3.49%
Total World Demand	70.07	76.77	84.10	85.26	86.30	85.76	84.33	86.57	0.58%

Global Supply of Oil up +0.42% annualized over the last 5-yrs.

Global Supply	1995	2000	2005	2006	2007	2008	2009	2010	Growth 5-yr.
United States	9.38	9.06	8.32	8.33	8.46	8.51	9.14	9.62	2.94%
Total OECD*	22.34	23.24	21.89	21.60	21.47	20.94	21.06	21.14	-0.69%
Total OPEC Oil Supply	27.37	27.86	34.95	34.72	34.37	35.71	33.87	34.88	-0.07%
Total Non-OECD	47.92	54.52	62.70	63.06	63.07	64.57	63.27	65.26	0.80%
Total World Supply	70.26	77.77	84.60	84.66	84.54	85.51	84.33	86.40	0.42%

Global inventories have been around a 30-day supply over the last 5-yrs.

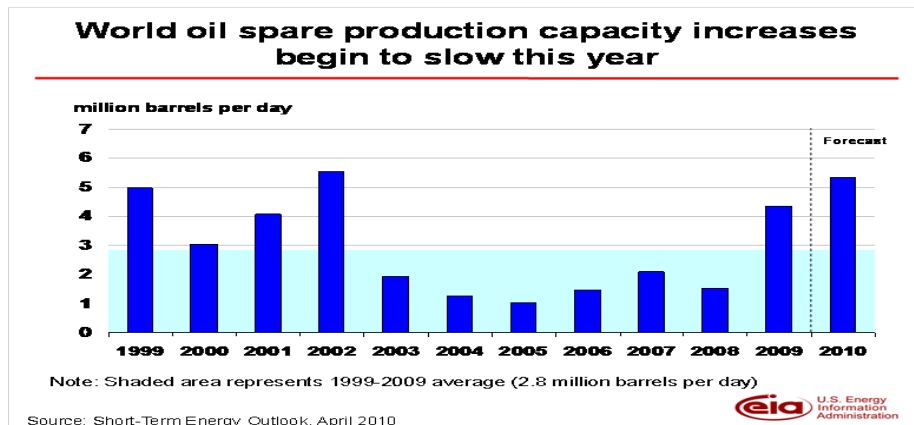
Global Inventory	1995	2000	2005	2006	2007	2008	2009	2010
Days Supply	35.90	32.90	30.70	31.25	29.75	31.36	31.47	31.35

Source: Bailard Research, Energy Information Administration www.eia.doe.gov

Abundant Spare Capacity Can Offset Supply Disruptions

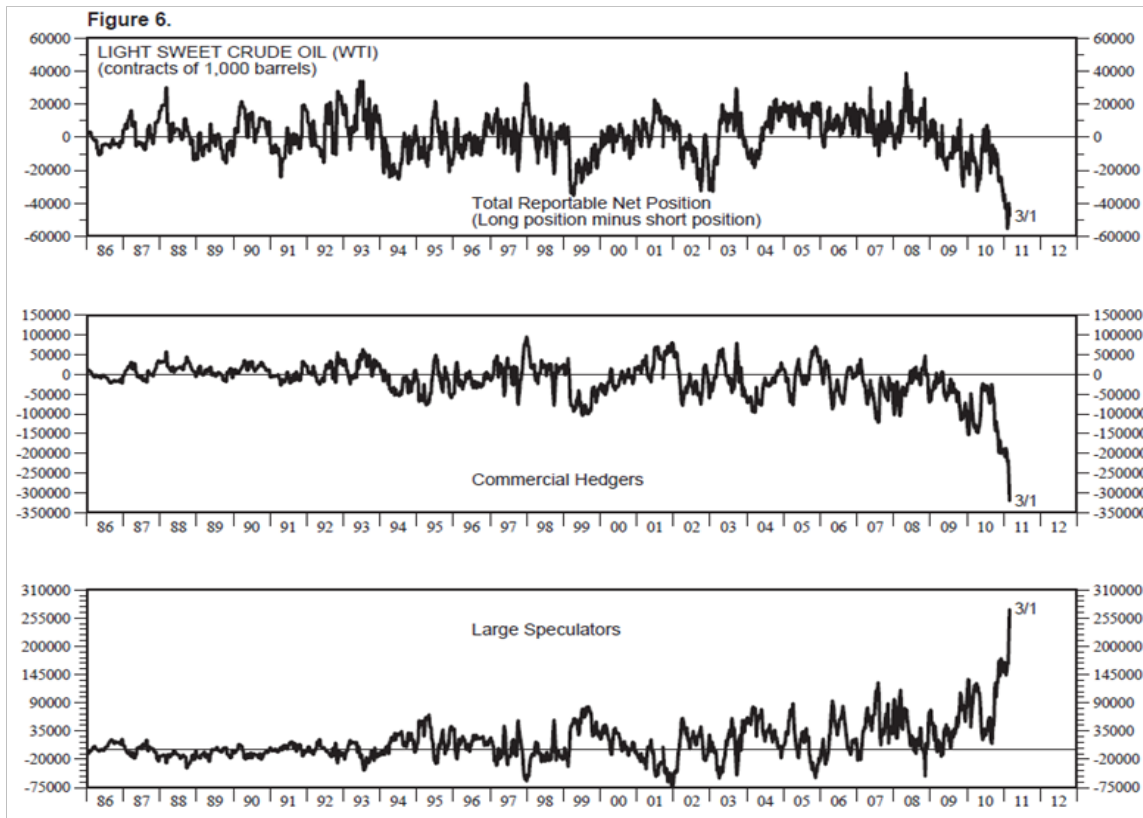
In addition, according to the Energy Information Agency ("EIA"), there is a lot more spare capacity than in 2008, making it potentially easier to offset any supply disruptions. As the following chart indicates, the EIA estimates that the world has over five million barrels per day of spare capacity. Unless these estimates are wrong, the market seems well supplied. Supply shortfalls in smaller OPEC countries can be offset by additional production from Saudi Arabia. The biggest concern would be if revolution spreads to Saudi Arabia. However, the royal family seems firmly entrenched in power.

A lot more spare capacity than in 2008



Despite Some Speculation on Higher Prices, Hedgers Have a Net Short Position Overall

The third chart below shows the net position of large speculators. They are currently very long, suggesting that when the turmoil in the Middle East settles down, oil prices could plunge as these investors scramble to cover their long positions. However, commercial hedgers (second chart) are net short and at current prices are likely to remain so. On balance, hedgers have an overall net short position as shown in the top chart. This is unlike 2008, when there was a total net long oil futures position.



Source: Yardeni Research

There Is No Sign of Price Gouging by Oil Companies

The following table shows the profit margin of different oil sectors going back to 2006. Margins for most sectors are below normal, showing no sign of price gouging by the oil companies. Despite taking no risk, the government takes about 20% off the top of each gallon of gasoline in taxes, as well as imposing the standard tax on corporate profits.

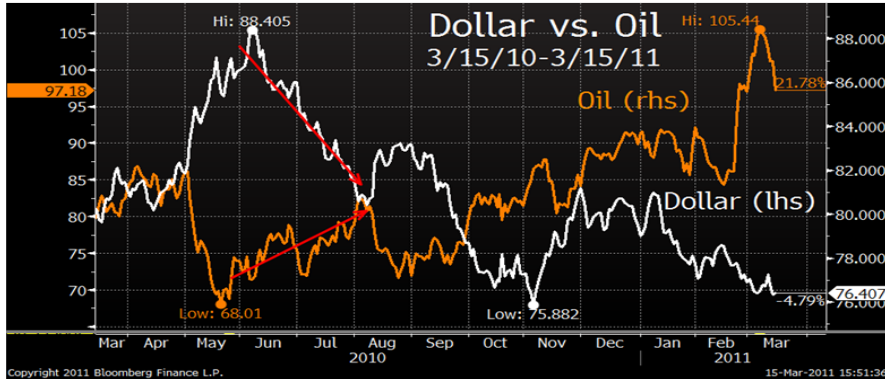
The profit margins of energy sectors are below normal. Government share remains around 20%.

Profit Margins	2006	2007	2008	2009	2010	
Refining	5%	4.5%	1.5%	0%	1%	Refiners margins low, difficult to pass on costs
Exploration and Production	30%	25%	32%	18%	18%	Risk-taker margins below normal
Integrated	9.8%	10%	9.8%	6.3%	8.0%	Integrated margins stable
S&P Industrials	8.3%	8.5%	7.8%	7.2%	8.3%	In line with S&P margins
Total Government Taxes/Gallon (Fed. + California)	2.1%	20%	18.5	21%	19%	Government taking the biggest share

Source: Bailard Research, Yardeni Research, Energy Information Administration, www.eia.doe.gov, Federal Highway Administration, www.fhwa.gov

Given These Generally Positive Fundamentals, Why Are Oil Prices Moving Higher?

The recent increase in oil prices can be partially explained by weakness in the U.S. dollar. Since the beginning of the year, the dollar is down just under 5% while the price of oil is up 15%.



The Fear Factor

However, we believe market psychology is currently the biggest factor driving oil prices higher. Events in the Middle East have raised concerns about a sustained disruption in oil supplies and the longer term implications of regime change, which are putting upward pressure on prices. Investors are also worried that an expansive monetary policy could lead to a collapse in the U.S. dollar, which would increase the nominal price of oil. Currently, there is about a \$15 to \$20 risk premium embedded in the price of oil from overseas supply risk and currency risk. This is the fear factor. Longer term, if and when the global economy gathers strength, concern will likely build regarding the ability of supply to meet demand.

The Longer Term Outlook

Looking forward, the strongest demand for oil will likely come from rebuilding in Japan and from the emerging markets as they strive to boost living standards toward Western levels. Without a credible long-term energy policy, we will likely continue to be buffeted by events beyond our control.

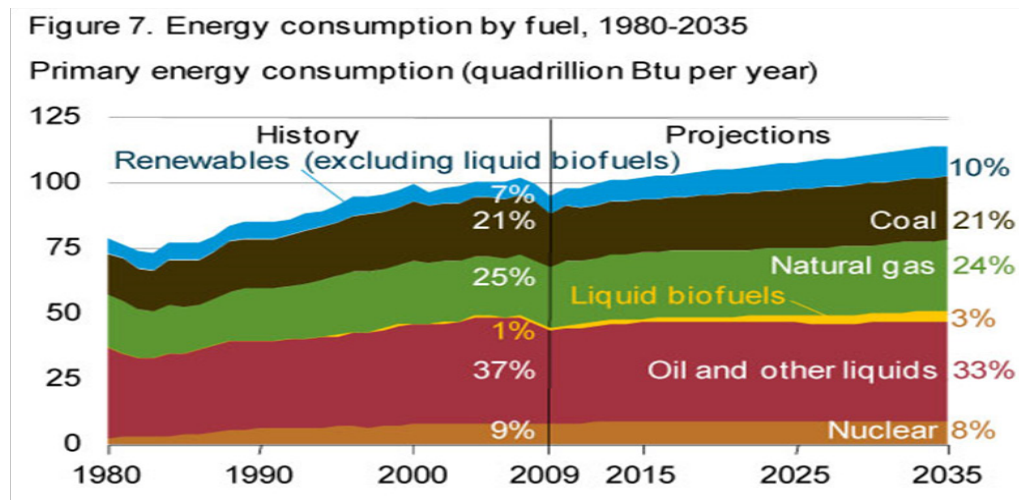
Fortunately, there appear to be ample reserves to tap. Over the last ten years, proven oil reserves have increased at a 2.9% annualized rate. Despite concerns about “peak oil”, more supplies of this energy source continue to be found. The chart below shows the proven and technically recoverable British Thermal Unit (BTU) equivalent barrels of American oil, natural gas and coal reserves. These statistics indicate that there are no shortages of fossil fuels. However, the debate over energy security and environmental impact have slowed their discovery and development.

No Shortage of Fossil Fuels 6.3 trillion BTU equivalent barrels potentially in the U.S.								
	Crude Oil		Natural Gas		Coal		Total	
	Proven Reserves	Technically Recoverable *1	Proven Reserves	Technically Recoverable *1	Proven Reserves	Technically Recoverable *2	Proven Reserves	Technically Recoverable*
	Billions of B Barrels (BBL)		BBL BTU Equivalents		BBL BTU Equivalents		BBL BTU Equivalents	
U.S. Total	22.8	175.2	42.1	333	902	5785	967	6293
Onshore	14.2	73.6	37.8	220.5	902	5773	939.8	6067
Offshore	4.4	57.5	2.2	60.2	na	na	6.6	124.3
Alaska	4.2	44.1	2.1	51.5	na	na	6.3	101.9

Source: Bailard Research, U.S. Geological Survey “Assumptions to the Annual Energy Outlook 2010” Converted to BBL BTU equivalents. Natural Gas includes conventional, shale gas and coal bed methane.

*1 Technically recoverable reserves include inferred reserves and undiscovered reserves. These reserves are estimates by the USGS that could be extractable using current technology and operating conditions. These estimates are based on favorable geological settings and are at least 50% probable. Proven Reserves are 95% probable *2 Identified Resources

While the U.S. and Western nations have become more energy efficient and have high living standards, emerging economies have relatively low living standards. In order to increase their standard of living, they will need more energy. It is unrealistic to assume all of this demand will be met solely by wind, solar and biomass energy sources. These renewable energy sources remain relatively costly at current oil price levels and still have technical problems to overcome. Despite massive subsidies since the 1970's, alternative energy sources currently make up only a small part of the world's energy supplies. As the following chart shows, the vast majority of future energy needs over the next twenty five years will likely be met primarily by oil, natural gas, coal and nuclear fuels.



Source: Energy Information Agency

As a result, we believe the development of both fossil fuels and renewable alternatives could help secure our energy independence for many years to come.

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