

Arthur A. Micheletti, CFA
Chief Economist and Investment Strategist

Oil Mania

“Manias can persist even though many smart people suspect a bubble, because no one of them has the firepower to successfully attack it.” *The Wall Street Journal*

May 27, 2008

Bailard

INVESTING. REDEFINED.®

Bailard

Introduction

Just as the economy and financial markets appeared to be skirting the credit crisis, the escalation in oil prices has sent investor expectations reeling. Instead of a mild recession, the increase in oil and commodity prices has raised the spectre of one of the most dreaded of all economic conditions, “stagflation.” Stagflation is the lethal combination of economic stagnation and inflation. The last time the U.S. experienced stagflation was in the 1970’s and early 1980’s. It could prove to be far more disastrous to the economy and financial markets than the housing recession and credit crunch.

Why is stagflation bad?

Stagflation puts global central banks between a rock and a hard place. Do they conduct monetary policy to fight inflation, or do they fight recession and trigger more inflation? Even worse, popular pressures push politicians to seek expedient solutions to ease the economic pain. Governments often resort to such economic policies as price controls, windfall profit taxes, increased regulation, trade restrictions and currency manipulation to protect their citizens from rising price pressures. Historically, these “fixes” have aggravated and prolonged the problems. Stagflation would put at risk 25 years of unprecedented global growth, improved standards of living and wealth creation.

Introduction con't

Just another bubble

Fortunately, we don't believe the global economy is as vulnerable and impotent as many of the pessimists suggest. The present oil and commodity boom, like other bubbles, should deflate on its own before pulling the economy into stagflation. Many agriculture and industrial commodity prices have already fallen sharply from their recent peaks. The Goldman Sachs Agricultural Index is down 20% from its highs, while the Goldman Sachs Raw Industrial Metals Index is down 15%. Oil is one of the few commodities that is currently defying gravity.

The pessimists would say that oil prices are being driven upward by emerging country demand for raw materials and that shortages are becoming more prevalent as demand outstrips supply. This, combined with what many analysts suggest is a peaking in oil reserves and continued weakness in the dollar, are expected to push prices higher. Some analysts see oil prices soon rising to \$150 to \$200 per barrel. These "fundamentals," if true, seem overwhelming. However, to see the fallacy of the pessimists' arguments, all one needs to do is ask the question, "what has happened to the fundamentals over the last twelve months to cause oil prices to double?"

Introduction con't

We cannot find any significant change in the fundamentals that can rationalize the doubling in prices or a 35% increase in oil prices in 2008 year to date. In fact, global demand for oil has been declining as economic activity has slowed. Over the last five years, there has only been a modest increase in overall global demand despite increased demand in emerging economies. There also has been no shortage of supply. Despite many fears about supply disruptions, oil remains well supplied. Crude inventories in the U.S. are above normal for this time of year and have been stable over the last five years at around 30 days' supply. According to recent reports, the Persian Gulf is crammed with a huge floating inventory of supertankers loaded with crude. This is oil searching for buyers, and the backing up in oil supply is one of the reasons OPEC keeps insisting that there is ample supply of crude.

Why did prices spike?

If demand is slowing, supplies are ample and inventories are bulging, why have oil prices been rising over the last five years and spiking recently? Part of the increase is due to weakness in the dollar. Part of it is due to concerns about the stability of supply given geopolitical risks and the lack of a coherent energy policy in the U.S. All these factors have created an environment ripe for speculation. All bubbles start rationally and then explode well beyond reason as speculators drive prices higher.

Introduction con't

With bond yields near historic lows and investors wary about stocks and real estate in a slowing economy, commodities have become increasingly attractive to investors. The explosion of new investment vehicles such as commodity futures and options, hedge funds and exchange traded funds has made it extremely easy for investors to play the commodity markets. There is currently no shortage of buyers of financial paper linked to the price of crude, and this increased liquidity is driving prices higher. Like all bubbles, this bubble will end and oil prices should fall to more rational levels; the only question is “when?”

Global supply and demand for oil remain balanced

Global Demand for Oil up 1.7% annualized over the last 5 years

Global Demand for Oil							Growth
May 2008 (millions bpd)	2003	2004	2005	2006	2007	2008(e)	5-yr. annualized
United States	20.03	20.73	20.80	20.69	20.70	20.51	0.48%
Total OECD*	48.61	49.36	49.66	49.33	48.96	48.95	0.14%
Total Non-OECD	31.01	32.97	33.99	35.44	36.39	37.66	3.96%
Total World Demand	79.61	82.33	83.65	84.62	85.40	86.61	1.70%

Global Supply of Oil up 1.7% annualized over the last 5 years

Global Supply of Oil							Growth
May 2008 (millions bpd)	2003	2004	2005	2006	2007	2008(e)	5-yr. annualized
United States	8.80	8.70	8.32	8.33	8.48	8.61	-0.44%
Total OECD*	23.25	22.81	21.88	21.59	21.42	21.12	-1.92%
Total OPEC Oil Supply	31.88	34.45	36.09	35.83	35.43	36.86	2.95%
Total Non-OECD	56.36	60.31	62.75	63.01	63.18	65.47	3.04%
Total World Supply	79.62	83.12	84.65	84.60	84.60	86.60	1.69%

*OECD: Organization for Economic Cooperation and Development. **OPEC: Organization of Petroleum Exporting Countries

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

Crude oil inventories remain well stocked

Global inventories have been around 30 days supply over the last 5 years

Global Inventory	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008(e)</u>
Total Reported Draws (millions bpd)	-0.01	-0.80	-1.00	0.02	0.80	0.01
End of period Inventory (millions)	na	2541.00	2594.00	2677.00	2574.00	2560.00
Days Supply	na	30.90	31.00	31.60	30.10	29.56

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

Energy companies are not price gouging

The profit margin of refiners is stable, while exploration and development margins have risen

Profit Margins	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	
Refining	2%	3%	5%	5%	4%	Refiners margins stable, difficult to pass on costs
Exploration and Production	20%	23%	30%	27%	25%	Risk-taker margins higher
Integrated	6.5%	8.5%	9.2%	9.8%	10.0%	Integrated margins stable
S&P 500	7.0%	7.8%	8.2%	8.5%	8.5%	S&P margins higher
Government Taxes/Gallon (California)	31%	28%	25%	21%	20%	Government still taking a big share

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

Global crude oil reserves continue to grow despite concerns about “Peak Oil”

Global growth in reserves has increased at a 1.9% annualized rate over the last 5 years

Petroleum Reserves (billions bbl)	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008(e)</u>	<u>5-yr. annualized</u>	<u>Largest Producers</u>
North America	215	216	215	213	213	211	-0.38%	Canada, Mexico, US
Central & South America	99	99	101	103	103	110	2.20%	Brazil, Venezuela
Europe	20	20	18	16	16	14	-6.18%	Norway, UK
Eurasia	78	78	78	78	99	99	4.91%	Russia, Kazakhstan
Middle East	686	727	729	743	739	748	1.76%	Saudi Arabia, Iraq, Iran, Kuwait,
Africa	77	87	101	103	114	115	8.20%	Libya, Nigeria
Asia	39	38	36	36	33	34	-2.36%	China, India, Indonesia
Total World Reserves	1,213	1,265	1,277	1,293	1,317	1,332	1.88%	

Source: Bailard Research, U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, Historical Reserves Statistics. Department of Energy

If supply and demand are in balance, there's no inventory shortage, reserves aren't depleted and energy companies aren't price gouging, then why have oil prices skyrocketed?

It is partially due to a weak dollar

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>May-08</u>	<u>5-yr annualized growth</u>
Average Oil Price/bbl. (year end)	\$31	\$42	\$57	\$67	\$96	\$125	
% Change	19%	35%	36%	18%	43%	34%	25%
Trade weighted Dollar	-13%	-9%	1%	-2%	-7%	-4%	-7%

Source: Bailard Research, Bloomberg

Futures activity has accelerated along with oil prices, indicating increased speculation

<u>Oil Futures (millions 12 month avg.)</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>May-08</u>	<u>5-yr. annualized</u>
Volume	4.1	4.8	5.3	6.2	10.2	11.1	23.1%
Open Interest	0.567	0.732	0.856	1.103	1.433	1.454	20.7%

Source: Bailard Research, Bloomberg

Why has speculation increased?

- Concern that long-term demand will outstrip supply as global economy grows
- Geopolitical risks create unstable supply: Iran, Nigeria, Venezuela, Russia, Mexico
- “Peak Oil” and dwindling reserves: U.K., Norway
- Lack of market driven energy policy in the U.S. that encourages development of all sources of energy
- Investor search for alternatives to traditional stock/bond assets. Money flows to commodities (hedge funds, exchange traded funds, commodity index funds, etc.)

What will bring oil prices down? High prices

High prices should:

- Reduce demand via conservation, better energy management and substitution
- Encourage increased exploration, development and supply
- Foster improvements in technology that allow deeper, more remote and ecologically friendly drilling
- Support technological innovation in energy management, storage technology and alternative fuels

In addition:

- The rest of the world keeps finding oil. Brazil's Tupi and Carioca fields may hold 39 billion bbls. of reserves
- OPEC can increase production
 - Saudi Arabia is now producing 9 million bpd but has the current capacity to produce 12 bpd
 - Iraq stability would add more production
 - If Nigeria can accommodate rebels, it could add 500k bpd
 - Outside technology could increase Mexican production
- Shift in U.S. energy policy and increased regulation of commodities trading could shift market sentiment and lead to speculative covering of long positions

Energy efficiency is improving, but there is plenty of room for improvement

World Energy Intensity BTU's/ \$ of GDP

<u>Country</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>
U.S.	11,312	10,082	9,113
World	13,525	12,531	12,749
Japan	4,660	4,790	4,519
UK	7,661	6,717	6,145
France	8,626	8,158	7,994
Brazil	13,025	14,246	13,917
Russia	210,745	241,237	177,202
India	32,324	28,702	24,749
China	44,167	31,428	35,766

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

Current world energy consumption

Where will future energy come from?

World Energy Consumption by Type Quadrillion BTU's*

<u>Energy Source</u>	<u>1995</u>	<u>%</u>	<u>2005</u>	<u>%</u>
Petroleum	142.4	39.1%	169.4	36.6%
Natural Gas	81.8	22.5%	107.6	23.3%
Coal	88.9	24.4%	122.6	26.5%
Hydroelectric	25.4	7.0%	28.9	6.2%
Nuclear	23.3	6.4%	27.5	5.9%
Alternatives	2.2	0.6%	4.2	0.9%
Total Primary Energy	364	100.0%	462.7	100.0%

*BTU's =British Thermal Units

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

Oil price impact on inflation: Continue to expect contained inflation

Energy accounts for 10.4% of the Consumer Price Index

- 5.4% gasoline and 5% fuels used by utilities
- Over the last year, wholesale gasoline prices were up 45% while crude oil, heating oil and coal prices were all up about 100%
- This suggests 5% upward pressure on the CPI from energy

Higher energy prices don't necessarily lead to higher overall inflation

- Buying more gasoline has a deflationary impact on other goods and services
- Corporations currently have little ability to pass on costs, which means lower profit margins
- However, unit labor costs are low and companies continue to make productivity gains, which widens margins
- Corporations can hedge their energy costs in the derivatives market
- Many industries will prosper from high oil prices (oil service, engineering and construction, capital goods, natural resource and technology sectors) They should create jobs, enhance productivity and add to GDP growth
- If monetary discipline is maintained, inflation will remain restrained

Disclaimer

This piece has been distributed for informational purposes only and is not a recommendation of, or an offer to sell or a solicitation of an offer to buy, any particular security, strategy or investment product. This piece does not take into account the particular investment objectives, financial situations or needs of individual clients. Charts and performance information portrayed in this piece are not indicative of the past or future performance of any Bailard product. Past performance is no indication of future results. This piece contains the current opinions of the author and such opinions are subject to change without notice. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed. Bailard will not offer investment advice in any jurisdiction where it is prohibited from doing so.

© 2008 BAILARD, INC. FOSTER CITY, CALIFORNIA