INVESTMENT POLICY MEMO

September 16, 2010

Addiction

Corrupt regulatory oversight, cutting corners to save costs, plus citizens and politicians chanting "Drill, baby, drill"-- is the BP Deepwater Horizon catastrophe really any surprise? The spill in the Gulf of Mexico, the worst man-made environmental disaster in the U.S., is a consequence of our addiction to oil. Like an addict resorting to riskier and riskier behavior to get a "fix", we have adopted riskier and more desperate measures to feed our addiction to oil such as drilling in deeper water and extracting oil from sand. Some of us have the luxury of saying we weren't completely aware of the effect of our lifestyles on the environment; certainly prior to the BP spill we could hop into our cars and drive to the store and buy cheap goods and eat strawberries during a snowstorm without seeing the images of the impact of our collective actions. In fact, it is only fairly recently that we have irrefutable data that shows the environmental and health impacts from smog, carbon dioxide and other byproducts of our oil consumption. While BP project managers who cut corners and regulators who didn't do their job are directly to blame for this spill, our collective hands are not clean. It is our addiction to oil that led to an environment in which this spill could happen.

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Talk is cheap

In a June speech President Obama paid lip service to reducing our dependence on oil. Starting with Richard Nixon, U.S. Presidents have talked about the need to reduce our reliance on oil. The most effective way to curb our appetite for oil would be to cut the subsidies to oil companies and implement a carbon tax which would more accurately reflect the cost to society of the "collateral damage" associated with oil production. In addition, politicians should materially increase subsidies to alternative energy, and make these subsidies reliable and consistent without short term expiration and renewal concerns. Taking these steps has always been difficult because of massive vested interests in the economic *status quo*. Critics of alternative energy subsidies complain that alternative energy will never be as cheap as coal, oil and natural gas, however, in the United States, no source of energy was developed without subsidies; between 1973 and 2003, the Federal government spent $74 billion subsidizing nuclear power

and fossil fuels, during this same time frame renewable energy and spending on energy efficiency research received $26 billion from the Federal government.

It is easy to point the finger at politicians, to say they have not done enough to help us conquer our addiction to oil, and certainly they haven't. Politicians have acted as enablers, allowing us to continue our addiction, and making it cheaper and easier to do so. Watching Al Gore's movie, An Inconvenient Truth, reading about ground water contamination from natural gas drilling, or looking at pictures of oil spills; it's easy to get angry and point fingers at the deepwater oil drillers, the natural gas drillers, or the executives at car companies that pushed SUVs. However, if Americans are asked to drive less, buy smaller cars, or turn down their thermostats, few are willing to do so.

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The roots of our addiction are deep

Over 150 million years ago, marine plants blanketed the sea floor and sedimentation created sufficient pressure to convert the unoxidized carbon into oil. Over the past 150 years oil products have fueled the fastest growth in material wellbeing in human history. Especially with the invention of the gasoline fueled car in 1901 and the incredible mobility it provided, oil became our drug of choice. The cost of our addiction has escalated, driving us literally to the ends of the earth to uncover more.

Estimating the economic cost of our addiction is difficult; direct subsidies to oil and oil using systems are often complex and artfully concealed but estimates calculate the subsidy at around $20 per barrel of oil; but what "cost" should we add for a child who develops asthma from breathing in smog? What percent of the hundreds of billions of dollars we spend on defense is indirectly or directly a result of our oil addiction? What is the cost of the environmental damage from the BP spill and from the thousands of spills prior? We do not need to come up with an absolute number to know that the true cost of the gas we fill our tanks with is much, much higher than the $3 per gallon we pay at the pump.

How do we finally break this addiction?

The first step for addicts going through a recovery program is to admit that they are powerless over the substance they are addicted to and their lives have become unmanageable as a result of their addiction. We can talk objectively about the problems we face as a result of our oil addiction but without the realization that our lives have become unmanageable we cannot begin the process of recovery. We are engaged in a counter-productive war in Iraq whose real purpose is apparently to control more oil, we are facing increasing global warming, and we are assaulted by an immense environmental disaster with far reaching ecological implications. Our lives have become unmanageable.

After this first step we need to begin to take concrete action to break our addiction. There is no shortage of energy in the world beyond oil, gas and coal. From the sun and the wind to biomass, geothermal and ocean currents, energy and the means to capture it exist; what we lack is the infrastructure and scale to support the economics of alternatives. We need to demand change. Auto makers made SUVs because consumers wanted them. Ask for (and buy) hybrid cars, electric cars and fuel efficient vehicles and the auto industry will make them. Conserve energy. Realize the implications of driving a few blocks and change ingrained habits. Speak up — tell lawmakers you do not want cheap gas, you want money spent on viable alternatives and efficiency improvements. The BP spill is no longer front page news and now we are left with a choice: move this disaster to the back of our minds and continue on as before, albeit slightly wiser about the negative consequences of our addiction, or choose to let the BP spill be the proverbial "hitting bottom" that propels us to finally break our addiction to oil.

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Investment Implications

From an investment perspective we recognize the need to balance a longer term outlook for energy with near term realities. We expect alternative energy systems and infrastructure to experience strong growth over the next five to ten years but the stock market is likely to trade on more short-term expectations. Tight credit markets and debt-constrained governments have had a negative impact on investments in alternative energy and our outlook for the next 12 months suggests this will continue. Alternative energy subsidy cuts in Europe and the lack of a comprehensive energy bill in the U.S. have led to uncertainty about near-term market growth in these regions.

China has been a bright spot, doubling its wind power capacity every year for the past 5 years. We seek to invest in companies that will benefit from China's strong continuing investments in alternative energy. We are more interested in wind power than solar power given the favorable economics of wind energy which, according to some studies, is currently in-line with the cost of electricity generated from coal or natural gas in the United States. The cost of solar power has decreased 30% in the past 10 years yet photovoltaic solar remains two to three times more expensive than coal on an unsubsidized basis. We believe the solar market will continue to grow and costs will continue to fall. However, given the uncertainty of the subsidy environment, we are reluctant to invest in solar companies now. In both the solar and wind industries we want to own companies with sustainable cost advantages due to superior technology. Biomass, geothermal and several emerging alternative energy companies are areas in which we expect to add new holdings, in addition to companies focused on energy conservation, some of which are already in portfolios we manage.

Market Outlook

We expect to send a new memo on the global economic and investment outlook in the next two or three weeks. In the meantime, here is a short summary of our views. It seems increasingly likely that the economies of the United States, Europe and Japan are all destined to continue growing at the very slow average pace (2% or less per year) that they have already experienced for the past ten years or longer. All will continue to have relatively high levels of unemployment and extremely low inflation and interest rates. In all likelihood the rich will continue to get richer and the poor poorer. And, as always, this environment would be positive for the stock market. However, for many reasons, including the aging of the populations of all wealthy countries and the continued effects of working off the overhang of debt, stock returns are probably going to average 5% to 6% a year or less and bond returns will be close to the same. Short of a major increase in military expenditures, there is little chance of a sharp rebound in economic activity. But, at the same time, the possibility of a renewed recession or depression has become very remote at least for the next year or two.

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