



The Long-Term Outlook for Energy

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Executive Summary

Since our late 2010 update, the world has experienced a wave of political demonstrations, a natural disaster in Japan, and additional financial strain. In the midst of this backdrop, an always evolving energy business continues to make strides in delivering new sources of supply to a growing number of global consumers. Remarkable changes are underway in North America that could meaningfully alter the balance of trade and political relationships. Globally, the scramble for energy security remains one of the most significant issues to follow in a world that will continue to face political upheaval. The 2012 edition of our Long-Term Outlook for Energy addresses these issues within the industry framework we have outlined in previous years.

Energy remains an attractive and critical industry from a secular perspective. The challenges of discovering, developing and delivering various sources of energy to end users continue to grow in complexity across geographic, geologic and geopolitical landscapes. We believe that the vital issues for investors to understand include:

- 1) Energy consumption will rise with population growth and living standards
- 2) Access, technology and capital are the key drivers of the energy industry
- 3) The existing production base faces accelerating decline rates
- 4) Alternatives do not have the scale to replace hydrocarbons in the intermediate term
- 5) Global energy is underrepresented in the equity markets and could gain share within the typical diversified portfolio

As the global population and standard of living continue to rise, energy consumption will increase significantly in the coming decades. Despite substantial efficiency gains, the U.S. accounts for one-fifth of the world's global energy demand despite having just 310 million of the world's 7.0 billion population. The other 96% of the world, developing nations in particular, are reaching levels of GDP per capita where historically energy consumption has sharply risen.

The basic fundamentals of the energy industry are driven by access to the resource base, new technology and free flowing capital. Where all three tenets are present, such as U.S. natural gas, significant breakthroughs have occurred. In contrast, only 15% of the world's oil reserves are accessible outside of OPEC and the Former Soviet Union. Complicating matters, policy makers have favored cleaner burning natural gas and alternative forms of energy over crude oil, coal and nuclear energy.

Not FDIC-Insured. Not Bank-Guaranteed. May Lose Value.

First Quarter 2012



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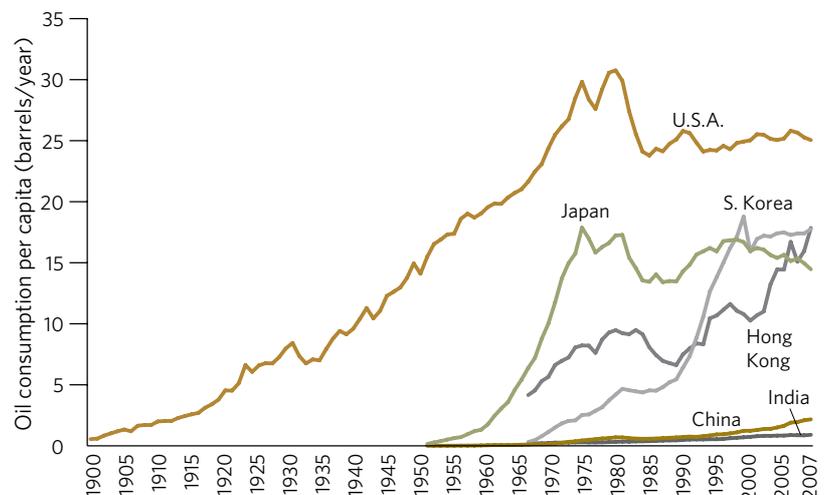
The challenge of scale also remains formidable. We do not believe that the last six years of spending in an inflationary environment have corrected two decades of lackluster investment across many key areas of the energy value chain. The International Energy Agency (IEA) has suggested \$38 trillion or \$1.5 trillion of real annual spending will be needed between 2011 and 2035 to meet global energy requirements. Alternatives like wind and solar will contribute but are unlikely to become more than a low percentage of global energy demand in the decades ahead. We expect spare capacity of global energy resources to remain thin, with more frequent and more volatile cyclical imbalances underpinning a bullish secular trend for the industry.

We believe that the road to solving the world's energy challenges is a long one. The dynamics of the energy business remain poorly understood by the general public and many investors. In equity markets, the business is not well represented due to the fact that much of the value chain is held by governments around the world. Domestic equity indices also fail to capture the global nature of the business and exclude more than \$1 trillion of market value in a handful of large foreign energy companies that invest within our borders. In our view, energy will remain an attractive investment opportunity within a diversified portfolio for many years to come.

Energy Demand Growth Will Be Fueled by the Next Billion Consumers

Despite significant improvements in energy efficiency over the last three decades, the 4% of the world that lives in the United States consumes about 18% of all energy or roughly five times the per capita consumption of the rest of the world. Today, many developing countries, notably China and India, are reaching levels of per capita GDP that have historically led to dramatic increases in oil consumption. Approximately 80% of the world's population is located in non-OECD nations (i.e., developing nations) that are responsible for just 20% of the world's economic output. Of the world's 7.0 billion people, about 1.3 billion do not have electricity.

Exhibit 1: Oil Consumption per Capita Has Followed Similar Patterns in Developing Nations



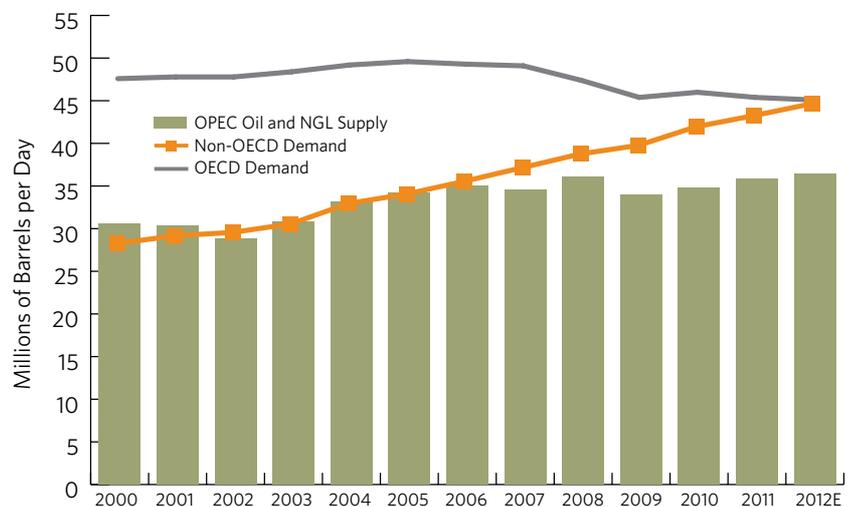
Source: EIA, BP, U.S. Census; the lower two lines are EIA's high growth case for China and India.

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We believe competition for oil resources will be a key economic and geopolitical issue in the next two decades. As opposed to prior cycles, the current rise in crude prices has been primarily demand-driven. Prices increased for seven consecutive years and spending rose four-fold in the 2000-2007 period, but demand growth outpaced supply growth. Over the decade ending 2007, demand grew 13 million barrels per day (MMB/d) against production growth of just 7 MMB/d, pushing OPEC capacity utilization from as low as 82% to as high as 96%. As capacity utilization pushed its upper limits, oil prices spiked to all-time highs ahead of the 2008-2009 recession. Remarkably, capacity utilization likely remained above 90% through the U.S. recession. Today, capacity utilization remains at elevated levels susceptible to geopolitical interruptions.

There is perhaps no more important single statistic than the fact that non-OECD demand of 43 MMB/d now exceeds the cumulative liquids output of OPEC nations at 36 MMB/d. In 2011, the combination of Brazil, Russia, India and China accounted for roughly 19 MMB/d of demand, up from 2008 pre-recession levels of 16 MMB/d and 2003 levels near 13 MMB/d. While Brazil and Russia are largely self-supplied, China and India represent two billion people with a growing need for foreign oil imports. In the Mideast and Africa, countries as large as Egypt are losing oil exporter status as domestic demand overtakes oil production volumes. Middle East nations dependent on oil exports for revenues need increasingly higher prices to subsidize exploding populations that consume more domestic oil.

Exhibit 2: Demand in Developing Nations Now Meaningfully Exceeds OPEC Supply and Rivals Demand in the Developed World



Source: IEA Oil Market Report.
 OECD - Organization for Economic Co-operation and Development

The simple message is that the incremental oil production will find its way to these growing markets rather than the developed western nations. In the OECD, efficiency gains and less robust economic growth are likely to keep oil demand growth at tepid levels. In contrast, non-OECD demand growth could be 2% annually as young populations continue to reach working age and

become more prosperous. We expect the global population to grow from 7.0 billion today to 8.0 billion by 2030 and to 9.0 billion by 2040. Efficiency gains will play a major role in containing demand growth, but economic growth will likely drive global oil demand growth at almost 1% annually toward 100-110 MMB/d by 2020-2030.

Global Oil Supply Growth Is Challenged by Old and Tired Fields

In 10 years almost half of the current supply base will be depleted and must be replaced to meet a flat demand scenario.

The most significant factor that will impact oil supply is the decline rate of existing base production. The IEA estimates declines on an aging base level of production are 6.7% in spite of ongoing maintenance levels of investment. In our example below, we use 5% for the decline rate on a supply base currently near 89 MMB/d. This means that 4.4 MMB/d of productive capacity must be replaced each year to maintain flat supply. This is equivalent to bringing online 44 new 100 KB/d fields per year in a world where fields of this size are becoming more difficult to find and develop. Stated another way, in ten years almost half of the current supply base will be depleted and must be replaced to meet a flat demand scenario.

Currently, over half of the world's oil supply comes from about 800 large, giant and super-giant fields, including more than 20% from the top 20 fields. According to Simmons & Company International, the remainder is produced from 70,000 fields that produce an average of 440 barrels per day. ExxonMobil recently stated that 75% of today's oil volumes were discovered, not necessarily developed, before 1980. These giant fields are old and tired, with production in decline and few new giants to replace them.

Exhibit 3: World's Giant Fields Are Aging and in Decline

Field	Country	Location	Year of Discovery	Peak Annual Production		Latest Production
				Year	kb/d	kb/d
Ghawar	Saudi Arabia	Onshore	1948	1980	5,588	5,000
Greater Burgan	Kuwait	Onshore	1938	1972	2,415	1,200
Saertu (Daqing)	China	Onshore	1960	2008	803	800
Ahwaz	Iran	Onshore	1958	1977	1,082	800
Safaniyah	Saudi Arabia	On/off	1951	1998	2,128	800
Azeri-Chirag-Guneshli	Azerbaijan	Offshore	1985	2010	1,100	758
Samotlor	Russia	Onshore	1960	1980	3,435	750
Shaybah	Saudi Arabia	Onshore	1968	2010	750	750
Zakum	Abu Dhabi (UAE)	Offshore	1964	1998	795	705
Rumaila N&S	Iraq	Onshore	1953	1979	1,493	700
Top 10 Total					19,589	12,263
Top 20 Total					31,123	17,097

Sources: IHS, Deloitte & Touche and USGS databases; IEA estimates and analysis. IEA World Energy Outlook 2008.

Access, Technology and Capital Provide the Framework for the Energy Business

While decline rates are troubling, we still believe ready access to resources, new technology and free flowing capital can potentially add to the world's oil supply

base. During oil price spikes, the theory that the world has achieved peak oil production makes its way to the forefront. Primary evidence cited includes the lack of new giant fields and production declines in several non-OPEC countries. It is still our view that the energy business remains cyclical and the convergence of access, capital and technology can alter industry trends.

The key problem is access. 76% of today's proven reserves are in OPEC nations with another 10% found in the Former Soviet Union. Shut out from exploring much of this resource base, the search for oil continues to move towards offshore, deepwater, harsh environments and areas where geopolitical risk is very high. This requires extraordinary capital, technology and ambition. In addition, the energy industry has an aging technical workforce that must be replaced and rebuilt in the next ten years.

Technology also transforms today's uneconomic barrels into the oil supply of tomorrow. Over the past 40 years mankind has consumed nearly twice the known oil reserves in 1970. Yet today, proven oil reserves are nearly double what they were estimated to be in 1970. Significant contributors have included deepwater drilling, directional and horizontal drilling, hydraulic fracturing, and improved recovery techniques. Increased computer processing power has also led to efficiencies derived from major advances in seismic surveys, measurement tools, and core sampling in the field. Technology has also led to safety improvements in spite of an industry that is drilling deeper in greater water depths and in harsh environments.

Capital investment in the energy business requires long lead times and the confidence to invest new funds. It is now common for projects to average four to seven years from project sanction to startup. Projects funded in the 2004-2007 time frame contributed to the inevitable cyclical supply and demand mismatch we witnessed as demand declined in 2008 and 2009. With the extreme price volatility witnessed in 2008-2010, the lack of investing confidence held back many new project sanctions until late 2011. Should the economic recovery prove more robust than present expectations, the lack of investment in the 2009-2010 period could contribute to shortfalls in the 2012-2015 time frame.

Access, Capital and Technology Are Changing North America's Fortunes

The natural gas shale boom is now becoming an oil shale boom in the United States. Our previous edition highlighted the changing outlook for natural gas in North America. It is now becoming clear that horizontal drilling and hydraulic fracturing also have the potential to change our domestic oil fortunes. The natural gas boom has elevated production and lowered prices. As a result, operators have turned their attention toward oil and natural gas liquids (NGL), collectively referred to as liquids. After 40 years of declines, domestic liquids volumes are increasing from a trough near 7 MMB/d toward 10 MMB/d in the 2015-2020 time frame.

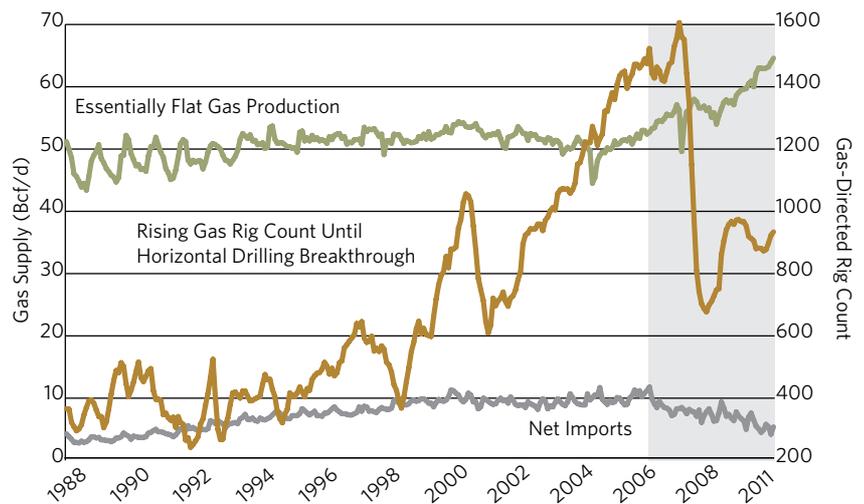
When the 2010 Macondo oil spill limited activity in the Gulf of Mexico, capital either left the U.S. or moved onshore. We expected that onshore capital would

target smaller, less expensive targets with lower geologic risk. What we did not expect was the pace at which horizontal drilling for oil and natural gas liquids would accelerate in 2010 and 2011. Horizontal liquids plays are now rapidly developing in the North Dakota Bakken, South Texas Eagle Ford, the Permian Basin, the Panhandle Granite Wash, the Oklahoma Woodford, Uinta Basin, Rockies Niobrara, Ohio Utica and in the California San Joaquin Valley.

These oil developments follow the natural gas shale boom that has increased supplies by almost 25% over five years to a 2011 exit near 65 Bcf/d. The increase has been driven by horizontal gas drilling across shale plays including the Texas Barnett, Louisiana Haynesville, Oklahoma Woodford, Fayetteville, Pennsylvania Marcellus and the British Columbia Horn River Basin. Other potential gas breakthroughs remain on the horizon in the shallow Gulf of Mexico and in the Arctic. These production increases have driven down natural gas pricing to less than \$3.00/mcf, less than one-third of the domestic prices experienced as recently as 2008. In a global context, North American consumers are paying half that of many European consumers and just one-quarter that of many Asian consumers. Rather than gas imports, the export of liquified natural gas (LNG) now appears to be a medium-term possibility.

Exhibit 4: Horizontal Drilling Fundamentally Altered the Natural Gas Outlook

Access, Technology and Capital Changed the Game in Natural Gas Beyond 2006



Sources: EIA, Baker Hughes, Bloomberg. Through October 2011.

Importantly, increased oil and natural gas volumes in North America coupled with lower demand from efficiency gains have a chance to reset trade imbalances and alter geopolitical relationships. With the flexibility to run natural gas rather than oil as inputs, low natural gas prices have transformed the U.S. chemicals and fertilizer businesses. Manufacturing also benefits. For decades, we have heard political administrations argue for reduced energy dependence on the Middle East. While new production and ongoing efficiency will need time to play out, the statement is no longer just a pie in the sky political phrase.

We believe global energy is severely underrepresented in the average investment portfolio.

New technology also brings new concerns. Although most shale production comes from the same geographic areas that have oil and gas history, some have not seen meaningful activity in fifty years. Cleaner burning natural gas is displacing coal and delaying the perceived need for more nuclear power. Low natural gas prices also make alternatives like wind and solar less economically competitive. New oil and gas production requires more infrastructure to store and move hydrocarbons. Hydraulic fracturing has caught the country's attention, particularly around water usage and wastewater safety. Carbon taxes are still on the table in Congress. Each is a genuine concern backed by powerful constituencies and will be addressed in the coming years.

Although horizontal drilling should provide decades of opportunities, we remain reticent to change our view that energy is a cyclical business. Policy shaped by short political cycles only complicates matters. For example, the 1990s also experienced cheap, clean and abundant natural gas. In Washington, our policy makers logically opted to support lower cost natural gas power plants closer to population centers. Gas power plants were overbuilt at the same time gas drilling was becoming more expensive and less efficient. In stark contrast to our current scenario, natural gas prices increased to levels that would attract foreign imports of LNG. Oil and gas shale production appears to be more durable today than prior cycles, but the industry drills the easiest and largest prospects first. Recent oil and gas discoveries are a tremendous benefit to the country, but keep an eye on drilling efficiency as we learn more about the long-term supply picture from shales.

Geopolitics, Natural Disasters & the Arab Spring

The energy business helps define complex relationships across the globe. In the last two years, we have seen governments toppled in the Mideast and North Africa, a nuclear disaster in Japan, and a financial crisis in the developed world. China's thirst for energy continues to grow, but rapidly expanding populations in the Mideast are also turning producing nations into consuming nations. We believe higher oil prices demanded by OPEC, competition for LNG resources and the spread of new technology to international markets are three key themes to follow.

Within OPEC, oil-dependent central governments have increased promises to record numbers of young, unemployed citizens in order to maintain stability. With limited access to the resource base, a lack of free flowing capital investment and lagging technology, oil volumes have struggled to move higher in Iran, Iraq, Libya, Venezuela and other major producing nations. As a result, higher oil prices are needed to continue to fund these initiatives. Deutsche Bank recently stated it views Saudi Arabia requiring \$92 per barrel to fund its budget, roughly 50% higher than we would have stated just five years ago. New multinational partnerships may be needed to increase volumes as the dynamics of higher oil prices and ongoing political and social instability continue.

In Europe, natural gas demand rivals that of the U.S. However, European gas faces geopolitical pressure from declining North Sea supplies and a

From an investment perspective, the leadership position in LNG is one of the most underappreciated aspects of the major integrated oil business model.

dependence on imports from Russia. This was recently exacerbated by Germany's decision to shut nuclear plants following the Japanese tsunami. If nuclear and coal are not long-run options, Europe must develop its own shale resources or import more natural gas. While some countries like Poland are eager to explore for shale gas, others like France and Bulgaria have banned hydraulic fracturing. This leaves some countries beholden to the higher prices required to attract imports whether from Russia or in competition with Asia for LNG.

In the East, the ability to source overseas gas on contract prices for 10-20 years from stable fiscal and political regimes is still a relatively new phenomenon. For those with increasing needs like China, Korea and India or countries that lack resources like Japan, top dollar will be paid for energy security. Consuming Asian nations are commonly taking equity stakes in LNG projects and foreign oil projects to ensure the supply is developed in a timely manner and the destination is guaranteed. Dependence on oil imports and coal production remains high and nuclear plans are still in the cards to meet future demand.

From the LNG supply perspective, new producers have the potential to radically alter current regional dynamics. More traditional exporting nations like Qatar, Russia and parts of West Africa have been dominant early players, but new sources of LNG supply are likely to include Australia, Mozambique, Israel, Cyprus, Canada and potentially the United States. Clearly, the second and third waves of LNG supply over the next decade will bring a new set of geopolitical issues and alliances to the forefront.

From an investment perspective, the leadership position in LNG is one of the most underappreciated aspects of the major integrated oil business model. With better access to the giant gas fields, the major integrated oils became attracted to low cost, low or no production decline rate natural gas and the ability to transport that gas to the highest paying global market. High upfront capital costs rely on the strong balance sheets of many of our portfolio companies. After these projects are functional, they bring steady levels of production and large levels of free cash flow at oil-linked prices for decades.

Finally, we should note that new technologies continue to go global. The last decade has been focused offshore with improved deepwater rigs and seismic technologies opening new frontiers. While we expect offshore markets to continue to evolve, the onshore revolution in the United States is likely to expand into international markets. Argentina may be one of the first foreign oil shale developments, but regions from Europe to China to Australia will be hunting for new oil and gas producing zones. Horizontal drilling and hydraulic fracturing also offer the ability to revisit existing areas of production to recover a greater percentage of resources in place. In industry vernacular, the best place to find more oil is where it already exists.

Alternatives do not have the scale to replace hydrocarbons in the next 30 years.

Alternative Fuels Still Make a Marginal Impact

According to the Department of Energy, if we converted all energy use including transportation and electricity generation to barrels of oil equivalent per day (boe/d), the United States consumed roughly 52 million boe/d in 2011. That volume consisted of roughly 36% oil, 25% natural gas, 21% coal, 9% nuclear and 3% hydroelectric. After a remarkable period of subsidized growth, wind and solar power combined for 667,000 boe/d or 1.3% of our total energy needs. If wind and solar consumption grow at 20% annually for the next ten years, the combined amount would total about 8% of today's needs. Our view is that we need each and every form of energy to meet our challenges, but alternatives do not have the scale to replace hydrocarbons in the next 30 years.

Government subsidies accelerated growth around the world in biofuels, wind and solar before the U.S. recession in 2008-2009. Within the U.S., corn-based ethanol has become a staple in the gasoline supply, but many producers faced bankruptcy in the economic downturn. Wind grew rapidly and made the U.S. the largest producer in the world. Solar has not taken off to the same extent with significant manufacturing cost disadvantages in the U.S. highlighted by the Solyndra bankruptcy. With the financial crisis lingering in Europe, government subsidies are being reduced in Germany and Spain. China is likely to grow its wind business substantially in the future. Brazil looks poised to maintain and grow its sugar-based ethanol business. Scale remains a considerable challenge and the land required for these projects dwarfs that required for a natural gas power plant. Ultimately, we believe market share will be maintained by non-subsidized, scalable economic sources of energy that have low cost inputs, clean burning outputs, utilizing existing infrastructure and not competing with critical supply chains like food.

Where Could We Be Wrong?

Energy has been a volatile part of the macroeconomic equation for the majority of the last forty years. On the demand side, we strongly believe that growing prosperity and growing populations will result in growing energy demand. On the supply side, access, capital and technology are the most critical factors. While these drivers may have changed the outlook for North American natural gas, these drivers are just beginning to alter the outlook for crude oil and liquids. Oil faces tremendous challenges in the existing production base.

However, the market remains cyclical. Inevitably, supply tends to arrive when we need it least. After the most recent period of global economic growth, capital finally made an impact on supply just as demand was set to decline. We believe that spare capacity remains at a fairly low level that will be absorbed absent a prolonged and severe global economic downturn. Geopolitical upheaval continues to impact supply.

We believe global energy is severely underrepresented in the average investment portfolio.

Today, we believe that excess productive oil capacity is about 4-6 MMB/d or about 5-7% of total oil demand. Therefore, in the worst recession since the end of World War II, the global petroleum complex is still operating at 93 to 95% capacity utilization. In 1985, OPEC also found itself with about 6 MMB/d of spare capacity, but worldwide demand was only 60 MMB/d. Later, new offshore oil frontiers opened and added to spare capacity. While supply increased, Soviet demand decreased from 8.6 MMB/d to 3.9 MMB/d in the 1990-1996 period. The combined result was utilization below 80% and 15 years of slack in the system not eliminated until early this decade. A similar event today would require losing one-third of demand in the United States or almost all demand in China. Whether macroeconomic demand destruction or a step-change in alternative fuels, the history of the energy industry suggests that one should expect the unexpected.

Manager Perspectives

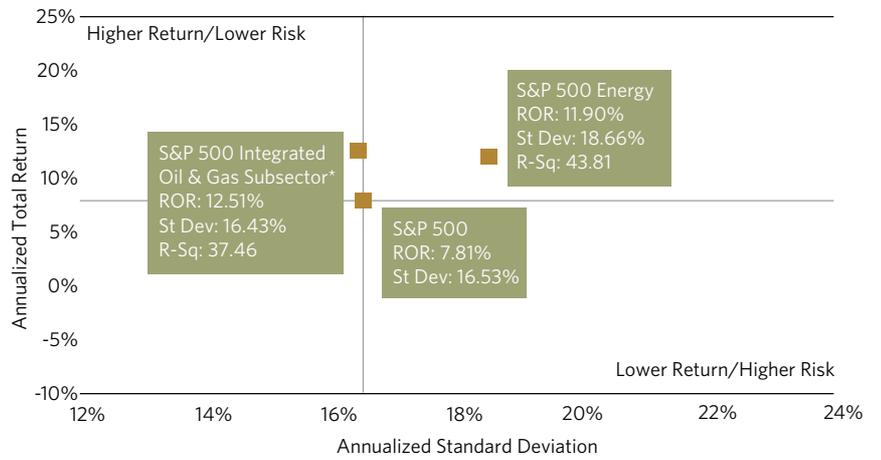
For fifty years, Fayez Sarofim & Co. has held fast to a stated investment strategy: long-term stock price appreciation is predicated upon superior earnings growth resulting from dominant market positions in attractive industries. In a marketplace where the average stock is held for just months at a time, our lower turnover approach seeks to become owners of desirable businesses that compound value to the benefit of shareholders over long periods of time. We attempt to find the future profit pools and own the leading components of that particular industry profit pool.

We believe the challenges in supplying sufficient quantities of energy, let alone clean energy, to the world's population are significant and not well understood. This lack of understanding provides an opportunity to selectively overweight the energy sector in a diversified portfolio. In addition, we believe global energy is severely underrepresented in the average investment portfolio. Much of the industry's value is held by governments and unavailable to private investors. In the U.S., most domestic indices exclude roughly \$1 trillion of market value represented by large energy companies including Shell, Total, BP, Statoil, Gazprom, Petrobras and Petrochina.

Within our portfolio, we have balanced the risk of an overweight energy position by owning large integrated oils. These companies consistently bring capital, technology and management expertise to global markets for crude oil and low-cost natural gas. These companies generally maintain conservative balance sheets and offer superior returns on capital over the cyclical ups and downs common in the energy industry. The integrated oils have invested heavily in projects that offer longer and flatter production profiles and the generation of significant free cash flow. Over long periods of time, the integrated oils have demonstrated above average returns with the benefit of a low correlation with the broader market.

Exhibit 5: Energy Has Demonstrated Above-Average Returns with the Added Benefit of a Low Correlation to the Market

Annualized Total Returns and Annualized Standard Deviation of Results
(Quarterly Intervals January 1992–Dec. 2011)



Source: FactSet

*This subsector includes XOM, CVX, COP, OXY, MRO, HES, MUR. **Past performance is no guarantee of future results.** Investors cannot invest directly in an index. The companies listed should not be considered recommendations to buy or sell a security.

Integrated oils have an excellent track record for returning cash flow to shareholders through dividends and share repurchases. As an investment manager interested in building wealth over the long run, we expect the potential for the compounding of cash distributions and capital appreciation that could be derived from an overweight energy allocation have the potential to benefit investment portfolios for many years to come.

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