



MISSING LINKS IN ENERGY INVESTMENTS

A PORTFOLIO MANAGEMENT STRATEGY
TO MAKE INVESTMENTS WORK

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Confronted with tighter profit margins and greater risks, energy executives are under more pressure than ever to deliver higher returns from their business portfolios. Consider: The return on invested capital at energy companies has been nearly halved on average, from 20 percent to 11 percent, over the past decade.

In response, companies are now weighing investments aimed at improving their performance. In the first half of this year alone, energy companies announced 1,479 mergers and acquisitions worth \$218 billion, according to Dealogic.

But there is a real risk that energy companies will end up in the same predicament, if not worse off, unless they take a fundamentally different tack to evaluating investments.

Standard investment opportunity assessment tools based on hurdle rates (determined by weight-adjusted costs of capital) are proving

to be flawed for several reasons. First, non-financial risk, which often accounts for more than half of net exposure, is not captured as part of cost of capital calculations. (See Exhibit 1.) Second, there is a tendency for energy majors to make capital allocation decisions on a stand-alone basis, as opposed to examining their impact on their entire business portfolios. Third, many companies lack the capability to simulate their future corporate portfolio's performance under a range of market and strategic scenarios.

A PATH TO PROFITABILITY

We contend in this article that companies will only discover the surest path to profitability for their entire business portfolio if they address these three shortcomings in their investment analysis. A case in point is energy companies. Many appear to have grown their portfolios too quickly, inhibiting their ability to integrate new businesses and reducing their returns on invested capital.

Indeed, when we examined the risk-return profiles of energy companies that make up the Standard & Poor's 500 index over a five-year time horizon, we discovered that the companies that more actively managed their portfolios by making greater capital expenditures or divestitures did not achieve superior returns. We estimate that 95 percent of these energy companies have the potential to improve their portfolio returns by at least three percentage points without assuming additional levels of risk if they follow the four steps outlined below. (See Exhibit 2.)

These results underscore the fact that companies must do much more than identify attractive assets. They must also prepare themselves for operating and managing the risks that accompany them.

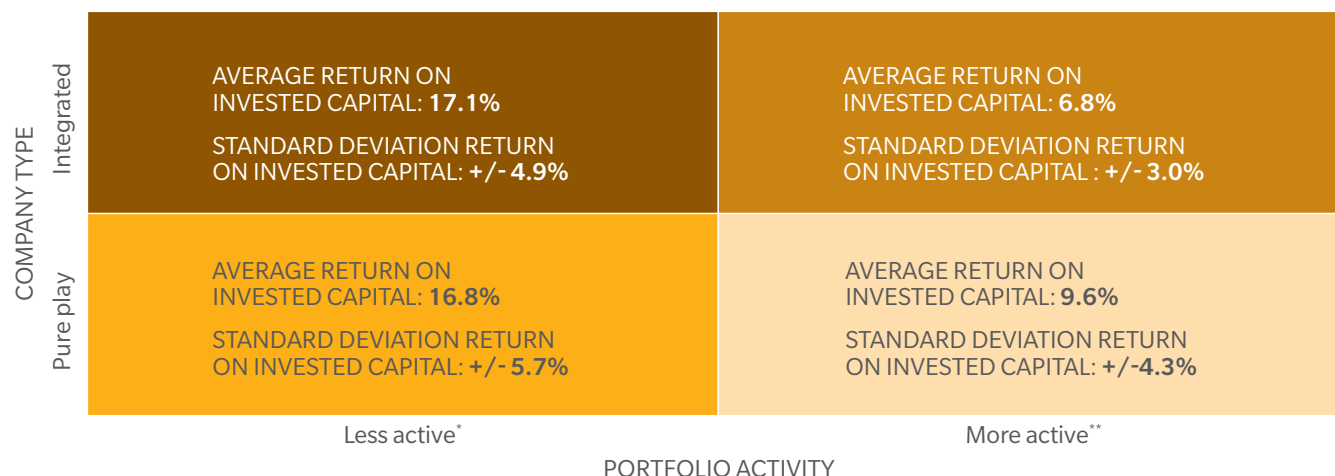
EXHIBIT 1: NET RISK EXPOSURE OF INDUSTRIAL COMPANIES



Source: Oliver Wyman analysis.
* Net exposure.

EXHIBIT 2: MORE ACTIVE PORTFOLIO MANAGEMENT IS NOT A SUBSTITUTE FOR QUALITY INVESTMENT DECISIONS

THE 40 ENERGY COMPANIES IN THE S&P 500 THAT HAVE DEVOTED A LARGER PERCENTAGE OF REVENUES TO CAPITAL EXPENDITURES AND DIVESTITURES ARE UNDERPERFORMING THEIR PEERS...



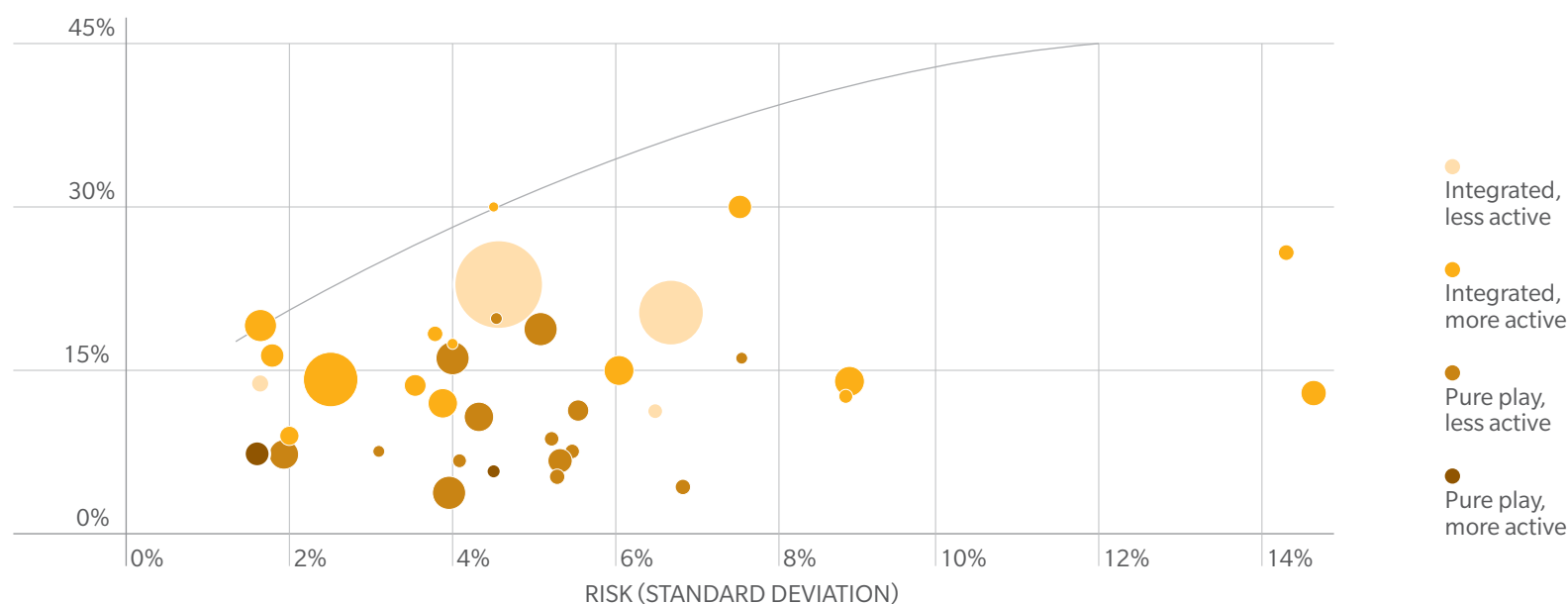
Source: Oliver Wyman market analysis of industrial companies.

* Invest (or divest) less than 30% of annual revenue.

** Investment (divestment) activity = Balancing activity = [Absolute value (capital expenditures) + absolute value (divestitures)]/Revenue return on invested capital = Earnings before interest and taxes/(Total assets - cash - accounts payable - accounts receivable).

...BUT THEY CAN IMPROVE THEIR PERFORMANCE BY OPTIMIZING THEIR PORTFOLIO ALONG A "RISK-RETURN EFFICIENT CORPORATE INVESTMENT FRONTIER"

RETURN ON INVESTED CAPITAL



Source: Oliver Wyman market analysis of industrial companies.

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But before we examine potential solutions to these challenges more closely, let's look at why examples of the three blind spots mentioned above matter to the future of the energy industry.

BLIND SPOT #1 NON-FINANCIAL RISKS

Nuclear power generation is a sector that is subject to non-financial risks that can greatly alter the economics of the business. Chief among these are regulatory changes,



new technologies and laws addressing environmental and energy issues. Companies considering building new nuclear plants and decommissioning existing ones need to consider these non-financial risks carefully before making such important and long-term decisions.

For example, gas prices have fallen to record lows, giving gas-fired power plants a significant advantage over nuclear plants. This development has prompted some nuclear operators to consider decommissioning facilities.

However, these multibillion dollar decisions could take over a decade to play out, with potentially poor results if executives do not carefully consider the non-financial risks that could materialize. Gas plants have previously not been widely used to replace the type of power produced by nuclear plants because they have not been able to cost-efficiently produce the reliable and uninterrupted “baseload” power that is generated by nuclear power plants, and it’s unclear whether

they will ever be able to do so. Changes in legislation and regulations around coal plants (the primary source of baseload power) and carbon emissions could also quickly alter the economics of the nuclear power business.

BLIND SPOT #2 GOING IT ALONE

It is well known that acquisitions can often be worth more as part of the organization’s portfolio than on a stand-alone basis. However, what is less understood is that the “synergy” created by an acquisition is often from a different part of the organization than the primary operator of the asset.

International oil companies are large organizations that often make decisions in “silos” that operate independently. The supply and trading arms of these companies typically have the best perspective on a company’s potential opportunities to earn higher margins in the market based on the quality, location and timing of sales. However, they usually do

86%

The percentage of senior finance executives who expect as much, or more, difficulty forecasting critical risks

not weigh in on decisions to invest in assets for operations, such as refinery upgrades.

By breaking down these silos, companies can discover investments that add greater value. For example, if refinery operations work closely with supply and trading divisions to make investment decisions, international oil companies are more likely to identify additional marketing and trading opportunities that potential investments can create.

BLIND SPOT #3 TUNNEL VISION

No one can predict the future. Companies must build robust investment portfolios that can deliver returns in a wide range of alternative market and price scenarios. But many companies fail to consider alternative scenarios while constructing their portfolios and make investment decisions based on static views of the future, or consider only small subsets of possible outcomes.

With the growth of unconventional oil in North America, investments in midstream assets, ranging from pipelines to marine terminals, have become a hotbed of activity. But companies need to consider myriad alternative scenarios that could unfold before making these investments. For example, the outcome of the future of pipelines to

transport Western Canadian crude to refiners in the United States could seriously harm – or benefit – the value of investments in pipelines, rail and terminals in the region.

NEXT STEPS

The reasons why companies often fall short of evaluating the potential impact of investments on their entire business portfolios may seem straightforward. But in our experience, companies rarely address these challenges when they are making an investment decision. Instead, some executives use subjective judgment that reflects their strategic views. One Fortune 500 chief financial officer candidly summed up this approach by stating, “If I like the investment, the required return is 11 percent. If not, it’s 14 percent.” Or, in other cases, companies resist divestments for fear of signaling balance sheet weakness.

One way to avoid such pitfalls is for companies to develop competitive internal capital marketplaces. Below are four steps that we’ve observed enable companies to move forward.

ONE DEFINE A TARGET STRATEGIC PORTFOLIO

Developing a multidimensional investment policy statement to guide portfolio investment and rebalancing decisions

helps to align stakeholders about the future direction of the company.

Target portfolio returns assist executives in determining acceptable levels of risk. For example, an international oil major with a target return of 13 percent can more easily determine if it is willing to absorb a 3 percent variation once every five years if the trade-off is outperforming 19 out of 20 quarterly reporting periods. Portfolio constraints, such as the type of asset and liquidity, concentration of assets within the portfolio, geographic footprint and ownership structure, should be considered, as well as legal, regulatory and social considerations.

TWO ESTABLISH AN ANALYTICAL RISK-RETURN FRAMEWORK

In many ways, the investment challenge that businesses face is analogous to how most people think about their personal investments within capital markets. Most individuals develop portfolios that include stocks (value, growth), bonds (treasuries, high-yield) and alternatives (real estate, private equity). An integrated energy company has even more diverse asset classes competing for capital to build out upstream (domestic, international, deepwater, unconventional), midstream (terminals, pipelines, rail transportation) and downstream (refining, supply and trading, retail) businesses. Indeed, a company might have more than 10 asset classes within its portfolio, each with a unique risk-return profile, and each requiring a unique risk-adjusted hurdle rate.

As a result, a framework for profiling individual assets within its portfolio, and ultimately for

making trade-offs in a data-driven manner, is essential to determine the optimal mix of the portfolio. A corporate risk register should be used to identify and assess the key risks, drivers and root causes of variation in financial performance. Risk-adjusted hurdle rates should be developed at the asset class level.

THREE MEASURE INDIVIDUAL ASSET PERFORMANCE

Companies need a quantitative and systematic way to quickly screen new portfolio investment opportunities as well as to monitor the performance of existing assets. While defining the target strategic portfolio establishes the company's direction, it does not make individual asset investment or divestiture decisions any easier, nor does it prescribe the timing, which will be based largely on market opportunities.

To achieve this, it's important to build a results-based culture and clear accountability for asset performance. At the same time, companies should leverage their IT organizations as a business partner to generate insights from big data, and track performance relative to their investment budget and investment plans.

FOUR OPTIMIZE THE EFFICIENT CORPORATE PORTFOLIO FRONTIER

Unlocking incremental value within any portfolio typically requires rebalancing assets to realize higher returns for the same or less risk. Unfortunately, more and more financial executives are having trouble making financial

forecasts. According to a recent survey of senior finance executives conducted by the Association for Financial Professionals with the Marsh & McLennan Companies Global Risk Center, 86 percent of those surveyed anticipate they will have as much, if not more, difficulty forecasting critical risks to their businesses over the next three years.

One solution is for companies to develop dynamic sets of tools and modeling capabilities that simulate the performance of various portfolio options under a range of commonly accepted stress scenarios. The outputs from this type of application can be invaluable in providing the company's executive team and board of directors with confidence in their portfolio decision making. This same type of optimization can be used at more granular levels within most organizations to evaluate customers, suppliers and products. No matter what the asset is, there is always an optimal mix that maximizes returns based on the appetite for risk.

Transforming a business portfolio requires the will and the ability to account for a wide range of critical risks and evaluate their impact on an organization's financial performance. But we believe those businesses that take the time to select the assets that best suit all of these needs will find the investment worth the effort. For they will likely be the organizations that improve their returns by the widest margins as the energy industry reshapes itself.

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