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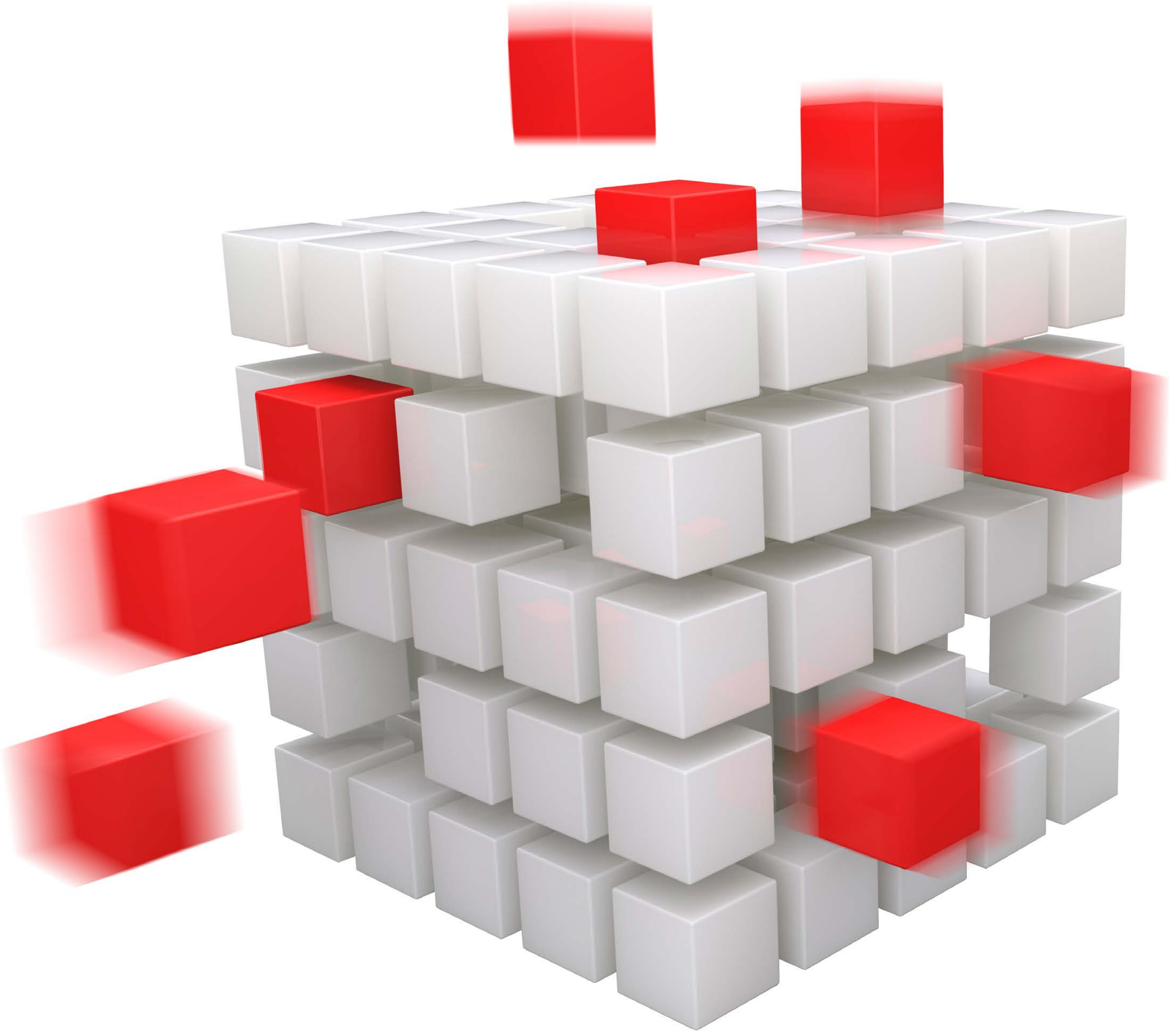
Oil & Gas – Exploration and Production

BEATING VOLATILITY

THROUGH VERACITY AND VELOCITY IN PORTFOLIO MANAGEMENT



ACHIEVE COMPETITIVE AGILITY

Exploration and production (E&P) players in the oil and gas industry are at an inflection point. Crude supplies are plentiful. But demand growth is anything but certain. Low and volatile oil prices have depressed returns—and sent investors scurrying to safer harbors.

E&P companies can regain their footing by fundamentally rethinking where (and why) they make the asset plays they do. When it comes to finding new oil, risk/reward calculations are already helping them place the right bets. But this is no longer enough.

A more comprehensive and rigorous approach to portfolio management, coupled with faster decision making, will enable E&P companies to make smarter bets. Bets that generate greater returns. Bets that ensure their long-term viability. Bets that stave off disruption once and for all.

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Manas specializes in helping unconventional Oil and Gas operators, Financial Services companies and Auto and Heavy Industry players with strategy, lifecycle management market analysis, and transformation efforts. He collaborates with clients on supply chain transformation, distribution strategy, management transformation and strategy enhancements to help drive business performance and growth. Manas is based in Houston.

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Arnold works with energy and chemical companies to develop and implement business strategies that drive value through performance management, execution and capabilities development, as well as the integration and alignment of these. He specializes in upstream Oil and Gas portfolio management, exploration, development and production domains. Arnold is a frequent presenter at industry conferences and a member of various industry associations. Arnold is based in Singapore.

Easy come. Easy go.

Historically, oil and gas operators built asset portfolios around long-cycle assets such as conventional onshore oilfields. With demand for oil consistently growing and exceeding supplies, investment returns were healthy. Even though long-cycle returns might take eight to 10 years to materialize, investors were content with relatively easy margins. The more oil reserves these E&P companies could tap, the more handsomely they were rewarded. At US$680 billion, capital expenditures for E&P initiatives reached a high in 2014.[1]

The spending party came to a crashing halt in 2015 when demand growth became much less certain. The world's transition from oil to natural gas and renewables picked up steam. Economic growth in China and other countries that pushed up the price of oil when their economies were flourishing sputtered. Consequently, supply outstripped demand. Oil prices tumbled. They've remained low and volatile ever since.

This change of events depressed E&P companies' return on invested capital (ROIC). It now hovers at 2-3 percent with no improvement in sight.[2] Unsurprisingly, investors are rethinking their investment strategies. They are shying away from long-cycle assets that historically delivered accretive returns. In an environment of demand uncertainty, such investments are too risky. And in an environment of oil surpluses, they can no longer assess E&P companies on their volumes of hydrocarbon reserves (see Figure 1). For investors, the value these companies create for shareholders is now all that matters.

This puts E&P companies in a bind.

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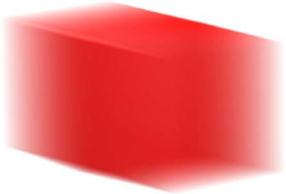


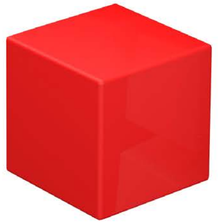
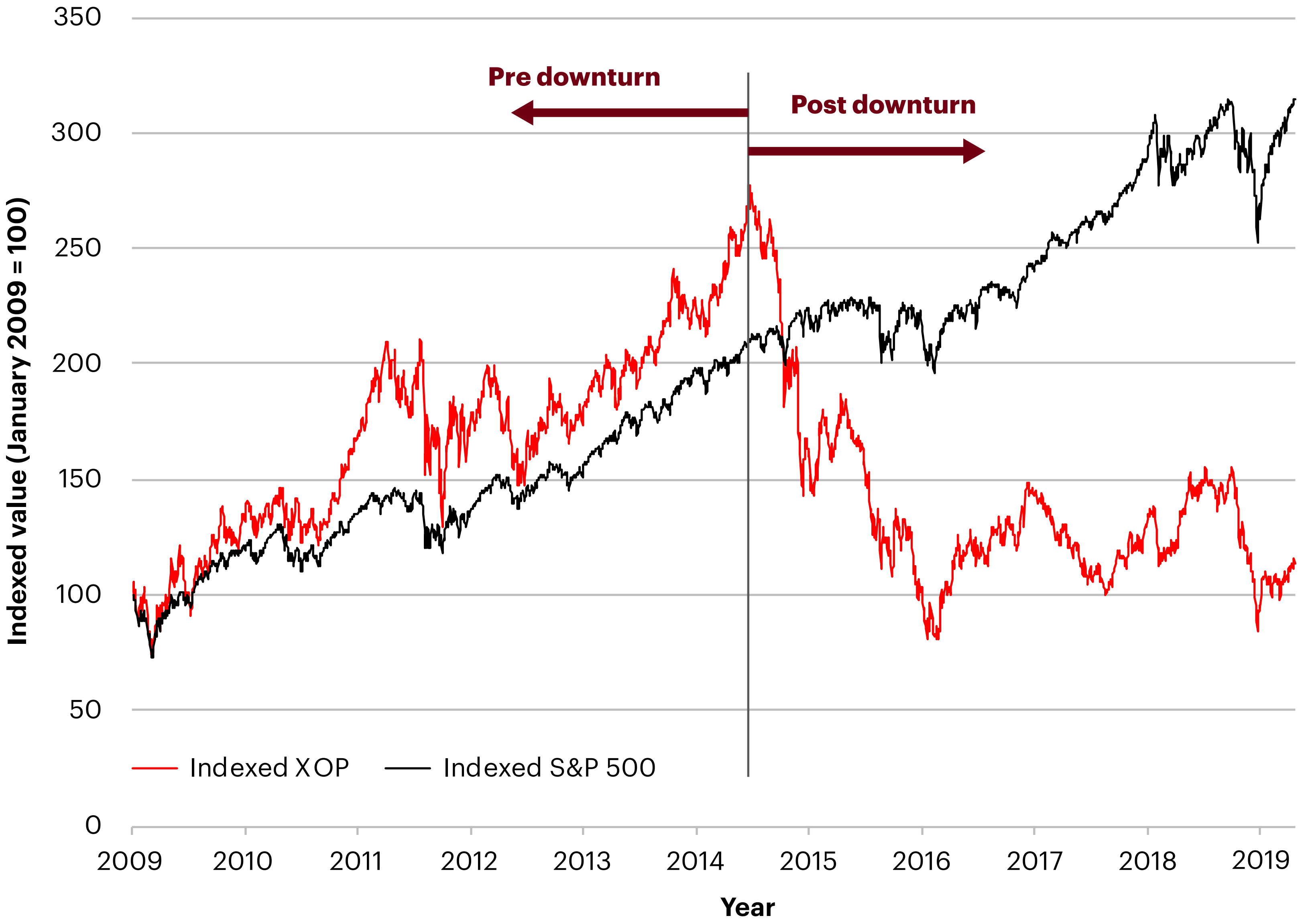


Figure 1. E&P companies are no longer valued for the size of their reserves



Source: Accenture Strategy analysis, 2019. Indexed XOP is the S&P Oil & Gas Exploration and Production Select Industry Index.

Prior to the downturn, changes in E&P companies' share prices could be attributed to changes in S&P 500 overall. Demand for oil—and E&P share prices—increased as the market grew, creating an R-squared (R^2) coefficient of 91%.

Post-downturn, with so much uncertainty about future demand, the change in E&P share prices is no longer linked to S&P 500 growth. Overall market conditions now account for just 9% of E&P companies' share price variations.

R-squared with Indexed S&P 500

Pre downturn	Post downturn
91%	**9%**

A short-term solution never solves a long-term problem

Investors are demanding greater exposure to assets with lower risks, predictable returns and limited downside potential. In response, E&P companies shifted more of their portfolios to short-cycle holdings. In 2018, nearly two-thirds of upstream M&A activities were focused on shale.[3]

Returns on such short-cycle investments usually start flowing in a matter of months. So does the oil. But payback times for deepwater projects are decreasing, thereby chipping away at unconventional assets' short-cycle advantage. Today, payback time for deepwater Gulf of Mexico and shale projects in the Permian Basin are both approximately seven years. Yet, development in the Permian over that time unlocks six times more oil (i.e. value) than what is extracted in the Gulf.[4]

Despite this significant output, short-cycle assets have their limitations. New shale acreage is hard to find and costs associated with developing short-cycle assets are quite high. While diversifying portfolio holdings to include more short-cycle assets might make sense from a risk-mitigation perspective, it isn't having much of an effect on the industry's US$500 billion in annual capex spending.[5] Across the industry, ROIC remains stubbornly depressed.

The limits of a low-risk, predictable return model are now readily apparent. If oil and gas companies don't get their portfolios in order and generate accretive returns, investors will not be inclined to contribute the estimated US$20 trillion in investments the industry needs to maintain operations over the next 25 years.[6] Accenture Strategy estimates that investors will walk away, effectively rescinding E&P companies' license to grow, in as little as five years unless changes are made.[7]

> **65% of upstream M&A activities are focused on shorter-cycle shale opportunities. This shift hasn't had much of an effect on the industry's US$500 billion in annual capex spending—or those investments' lackluster returns.**

Sharpe-n up!

E&P companies' reactive approach to asset allocation has created disjointed portfolios that are not aligned to strategic objectives nor optimally balanced for growth. Over-indexing on short-cycle assets may satisfy short-term goals and the desires of a short-sighted investment class. Yet this approach fails to strike a long-term balance between risks versus rewards along with a steady cash flow.

As they navigate the volatility and disruption that lie ahead, oil and gas companies need asset portfolios that are flexible and enable the production of energy from the best asset class in a given moment. Retaining optionality will be critical for companies that want to maintain sufficient dry powder for when opportunities arise. The ability to quickly, continually and strategically acquire new assets and divest underperforming ones will set tomorrow's leaders apart.

A more balanced approach to portfolio management —one that considers not only the potential returns, but also the risks and volatility of each asset—is not rocket science. Wealth managers in the banking industry have applied this approach for decades. One of the measures they utilize is the Sharpe ratio, which looks at an asset's returns in light of the risks that accompany them. With the Sharpe ratio, the gut feeling that had been used to construct investors' portfolio was replaced with discipline and rigor. Chaos was supplanted by order and structure.

There's no reason the Sharpe ratio can't help E&P companies, large and small, apply rigor to their portfolio management process, too. The formula is meaningful because it is based on accurate inputs. Advanced analytics can help them measure risks and rewards associated not only with finding new oil, but with developing the oil they have found.

This changes everything. A quick-fix mindset as illustrated by the recent rush of capital from other parts of the world to the US leaves Sharpe money on the table. Around US$225 billion is wrongly invested.[8] Instead of doubling down on one asset class, E&P companies can maintain an optimal balance in their assets by leveraging the Sharpe ratio and characterizing every asset class based on risk/return while ensuring a steady flow of cash (see Figure 2).

Sharpe ratio

$$\frac{r_p - r_f}{D_p}$$

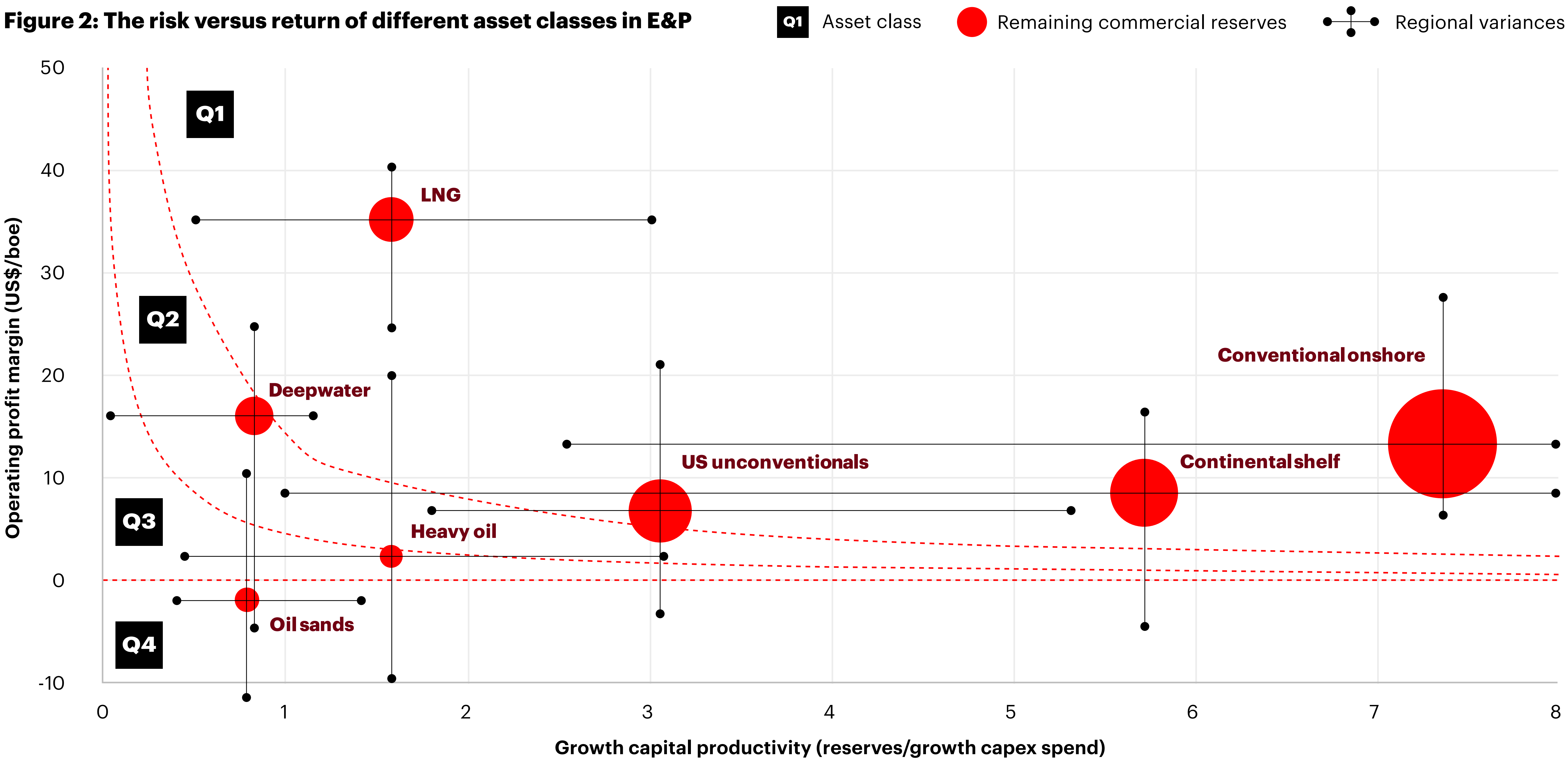
r_p expected return of the portfolio or investment

$\bar{r}_f$ risk free rate

D_p standard deviation on portfolio returns

The Sharpe ratio calculates excess return divided by risk. In the formula, excess return is the return on an investment minus the returns of the least risky asset. Risk is represented by the standard deviation of returns on the investment.

Figure 2: The risk versus return of different asset classes in E&P



Source: Accenture Strategy analysis, 2019.

For the analysis, we assumed a Brent price of $65/bbl with corresponding market discounts for WTI, Canadian crude and LNG. Gas prices are local averages. The horizontal axis represents capex related to production growth, whereas capex for sustaining production comes out of the operating profit margin.

Real-time management for real-time returns

Traditionally, it took providers a long time and many resources to calculate the capital expenses associated with drilling and completing wells, not to mention the operating expenses incurred once oil starts flowing. Today, digital technologies and cloud computing make it possible for E&P companies to evaluate multiple data sets, from multiple teams, simultaneously.

With this capability, linear decision-making by a few engineers and geologists gives way to fluid, real-time strategy discussions that involve multiple stakeholders—from the areas of engineering and operations to finance and capital planning. In a highly collaborative fashion, E&P companies can assess the strategic value of every asset in ways never before imaginable. Accelerated decision-making makes near real-time asset moves possible.

Because value is now determined by how efficiently E&P companies can develop resources, it's important that they own the "right" assets—acquiring those that allow them to play to their strengths and divesting those that don't. This directive is supported by the Accenture Disruptability Index, which found the energy industry's highly volatile state makes it most susceptible to future disruption. That research suggests that oil and gas companies can overcome this challenge by retaining only the relevant parts of the core business, while redirecting investments to new areas.[9] This recommendation applies not just to their operations, but to their mix of assets as well.

But today, the time and frictional costs required to transfer assets is very high. This erodes the value potential. Accenture Strategy has found that a three-month delay in the sale of a US$1 billion business can cost the buyer up to US$30 million more and the seller up to US$45 million more.[10] Oil and gas executives clearly understand the imperative. Our research found that 81 percent of them are interested in industrializing mergers and acquisitions (M&A).[11]

Through our work with E&P clients around the world, we've seen the value of a data-led approach to evaluating returns and rewards, along with a faster and more efficient M&A process. This combination enables E&P companies to shape a dynamic portfolio management strategy that not only boosts ROIC, but also retains the optionality and agility the ongoing disruption in the industry calls for.

Among E&P companies, the ability to quickly, continually and strategically acquire new assets and divest underperforming ones will set tomorrow's leaders apart.

Regaining your balance

Forward-thinking E&P companies are starting to experiment with a dynamic portfolio management approach. But most are holding back. Their hesitation is understandable. For one thing, they've never been required to create a strategic, balanced asset portfolio. They simply don't know where to start. Also, the industry as a whole is risk averse. E&P companies believe that any mistakes they make while changing their portfolios will likely come with a high cost. What they fail to realize is that the cost of inaction is even higher.

We advocate three actions:

1 Bring balance to portfolio decisions

Forward-thinking E&P companies will extend their risk/return analyses to the areas of development and production. This is about more than tweaking an existing approach. It's about adopting a new mindset, a data-driven asset allocation strategy, and a risk/reward culture that covers the entire E&P lifecycle and permeates every aspect of E&P organizations. This step change will position balanced portfolio management as an important —if not the most important—driver of investor confidence and enabler of future growth.

2 Supercharge the analytical underpinnings

E&P companies will need to build new capabilities to develop asset portfolios that pull the right risk/reward levers across exploration, development and production. Analytics and cognitive systems with sheer unlimited processing capacity allow operators to answer critical questions: What types of asset classes or geographies have symbiotic properties? Which have produced meaningful and valuable outcomes for other operators? Such insights can be game changers.

Data analysis and interpretation will play a critical role in this. But so will critical reasoning, intuition and creative thinking. Our research suggests that only 8 percent of business executives demonstrate these characteristics today.[12] E&P companies that want to stand apart will need to hone their "whole-brain" leadership capabilities. They will relentlessly focus on finding and developing the right team to lead the new portfolio management approach.

3 Analyze and act in real time

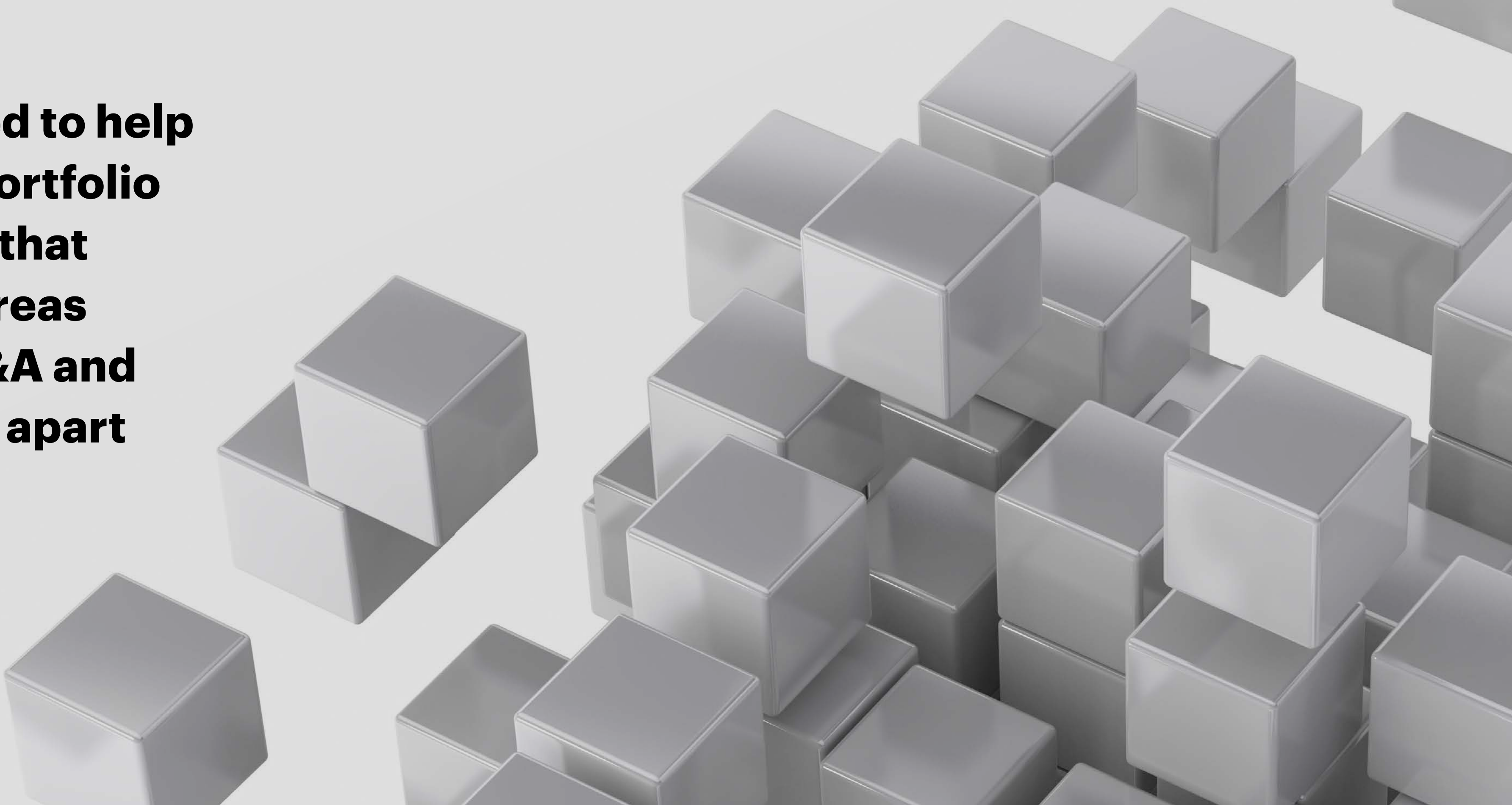
Winning E&P companies will demonstrate a new level of agility by doing several things extraordinarily well. They will build a new operating model that uses new technologies, advanced analytics and streamlined M&A processes to continually rebalance assets with an eye on maximizing investor returns. They will monitor the economic impact of their strategies and investment decisions, rapidly reallocating capital, making nimble portfolio decisions and re-prioritizing technology investments as needed. And they will feed their observations and results back into the portfolio evaluation process and start again. The most agile companies will continuously leverage these capabilities to create a virtuous cycle of sustainable growth.

Intrigued by the rejuvenation potential?

E&P companies are no longer rewarded for finding new oil. Value comes from developing and producing the right assets in the most nimble and cost-effective fashion.

Accenture Strategy is uniquely positioned to help clients seize that value with a real-time portfolio management approach. It's an approach that assesses potential rewards and risks in areas beyond exploration. That streamlines M&A and asset holdings. That sets E&P companies apart with veracity and velocity.

Reach out to our authors if you'd like to explore the possibilities in your own organization.



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ABOUT ACCENTURE

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