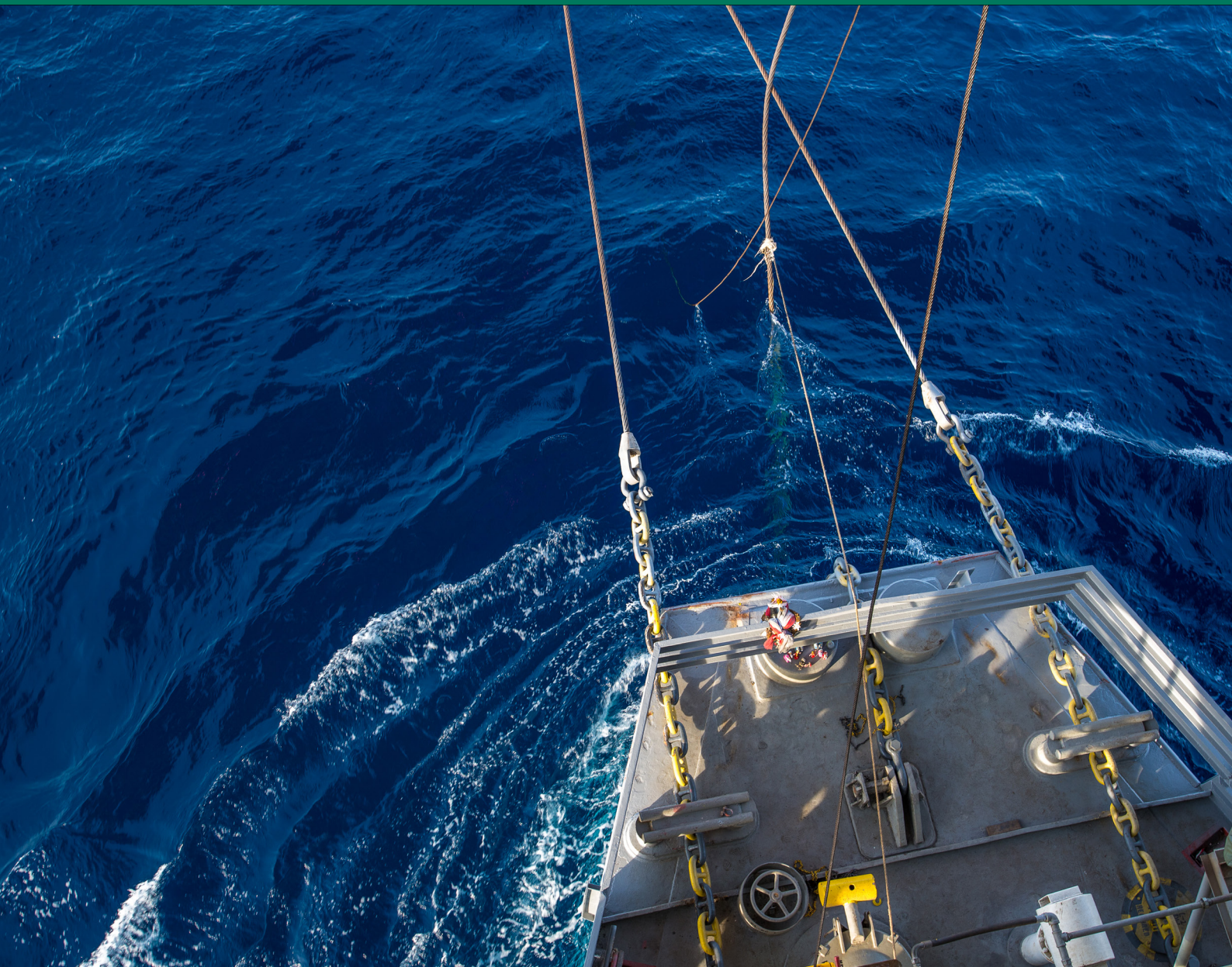




VALUE CREATION IN OIL AND GAS 2018

Managing the Price Cycle



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VALUE CREATION IN OIL AND GAS 2018

Managing the Price Cycle

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November 2018

AT A GLANCE

Changing commodity prices shaped the relative TSR performance of peer groups over our study period. But different capital allocation strategies determined outcomes within these groups and laid the groundwork for future TSR leadership.

A CHALLENGING ENVIRONMENT

Lower oil prices led to a focus on efficiencies and value-based performance metrics. But this was insufficient to counteract the substantial value destruction from revenue erosion. One exception: favorable dynamics benefited R&M companies. In contrast, the Majors delivered flat TSR, with no breakout performer.

DRIVERS OF TSR

Winners in the downturn relied on margin growth, balance sheet strength, and reliable payout expansion. Increasing the multiple was another key driver, especially for the Majors. The relative importance of these factors differed greatly by peer group.

DECISIONS FOR THE FUTURE

With higher commodity prices, most companies will have more capital. Smart decisions about the optimal capital allocation mix will separate the TSR front-runners from the stragglers.

THE FORTUNES OF THE oil industry are inextricably linked to the price of crude. The sector outperformed the S&P 500 Index from December 2007 through mid-2014, tracking the commodity price rally. But the weakness in the oil price that began in mid-2014 and continued through 2017 was a major headwind, causing the sector to underperform the index during this period. TSR for the S&P 500 Index over the downturn was 12% compared with a flat median performance for oil and gas companies. And because of the weak crude price, the oil sector is also near the bottom of the 33 industries in this year's BCG Value Creators rankings (which ranks value creators from 2013 through 2017).

But take a closer look and a more nuanced picture appears. Companies with large upstream operations, including the Majors (the world's five largest publicly traded oil and gas companies), were hurt by the "lower for longer" oil price environment. Downstream players performed well, however, benefiting from stronger crack spreads (the difference in price between crude oil and refined petroleum products) driven by refined product demand. (See Exhibit 1.)

As crude prices have moved well above their 2016 low point, all industry players will need to optimize their capital allocation mix among reinvestment, dividends, and debt reduction. In a world where the energy landscape is rapidly evolving, the challenge will be to make the right bets on the future.

Several Factors Determine TSR Performance

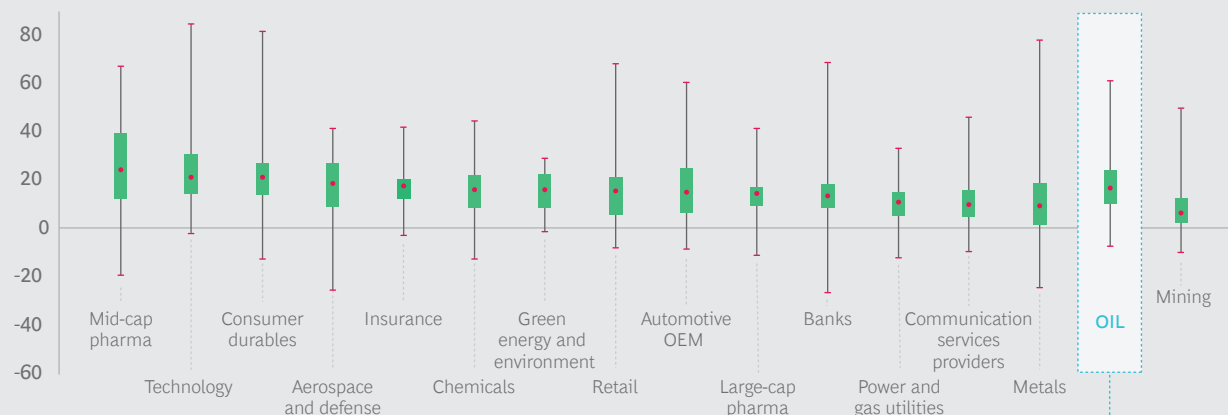
In this report, we examine value creation drivers in three key subsectors along the oil and gas value chain: the Majors, refining and marketing (R&M) companies, and exploration and production (E&P) companies. (See the sidebar "Companies in Our Sample.") Our primary focus is the recent crude price downturn from mid-2014 through 2017. But we also examine TSR performance over the ten-year period from December 2007 through December 2017, marking a full oil price cycle, to see how TSR drivers changed. (See Exhibit 2.) Using BCG analytical tools, we discovered that the relative importance of these drivers differed significantly by peer group.

The weak oil price took its toll on companies' top lines through the price downturn. All but 10 of the 64 companies that we studied saw revenues decline, making value creation tough for the sector. The handful of oil companies that did increase sales—the pure-play E&P companies—tended to be the TSR leaders within their peer group.

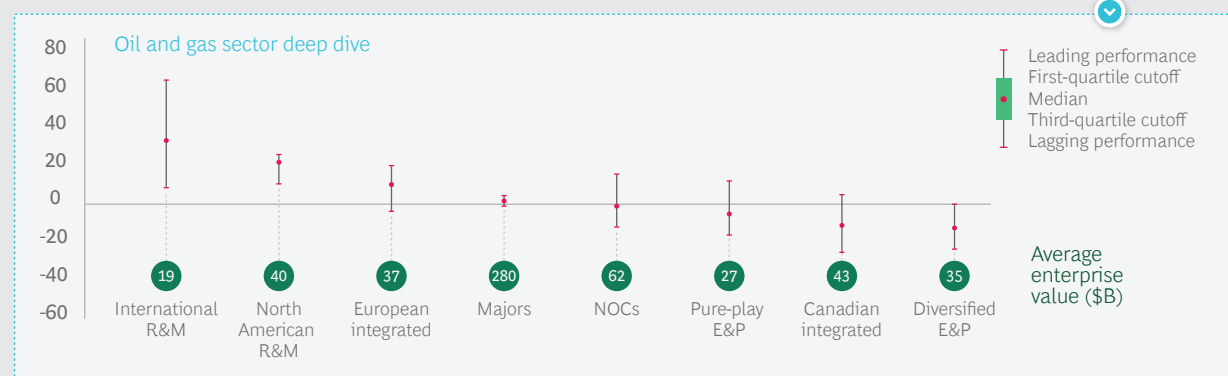
In a world where the energy landscape is rapidly evolving, the challenge will be to make the right bets on the future.

EXHIBIT 1 | The Oil Industry Delivered Weak TSR but Some Subsectors Performed Well

Five-year high, low, and median TSR per sector (sample sectors, January 2013 through December 2017)



High, low, and median TSR per oil and gas subsectors (select subsectors, June 2014 through December 2017)



Sources: S&P Global Market Intelligence; Thomson Reuters Eikon; S&P Capital IQ; BCG ValueScience Center; BCG analysis.

Note: n = 2,425 in full study (this chart shows a wide range of select industry groups). For companies in each O&G subsector, please see the appendix of this report.

In this harsh operating environment, companies had to look elsewhere to create shareholder value. (See the sidebar “The Components of TSR.”) Earnings-margin expansion was an important driver of superior TSR performance both between and within subsectors. (See Exhibit 3.) Companies that increased their margins despite declining revenues—by cutting costs, creating efficiencies, and making value-enhancing acquisitions—typically had greater financial flexibility to reinvest in the business and pay dividends. Companies that didn’t increase their margins had to make tough choices about how to allocate capital, some of which were punished by shareholders.

Multiple expansion also drove value creation upstream, offsetting declining revenues. This expansion, often observed in a downturn, reflected investor expectations of an eventual rebound in earnings.

Other factors, while less significant than multiple or margin expansion, stood out as consistent determinants of TSR leadership across subsectors. A competitive cash

COMPANIES IN OUR SAMPLE

For our inaugural report on value creators in the oil and gas industry, we selected 64 companies spanning five peer groups. These groups include the three considered in detail in this report as well as national oil companies (NOCs) and integrated companies smaller than the majors. We excluded oilfield services (OFS) companies and midstream players.

To be included, companies had to be valued at more than \$8 billion, had to have a free float of at least 20%, and had to have existed before 2014. The companies we studied had a combined enterprise value of \$3.6 trillion in 2017. Of this total, the Majors account for 40%, the NOC and E&P groups each makes up 20%, and the

integrated and R&M groups each contributes 10%.

Our study looked at TSR performance over the full 2007 through 2017 price cycle, with a particular focus on the oil price downturn starting in mid-2014. This allowed us to examine TSR performance drivers during the downturn and consider how these factors may evolve as the commodity price environment improves. It also enabled us to look at a larger and more representative sample: among R&M companies, many of the largest players have emerged since 2010 as a result of company demergers, particularly in North America.

payout yield and a commitment to increase the dividend were fundamental to good TSR for all companies, despite capital constraints. So too was avoiding actions that can lead to share dilution. Share buyback programs (which reduce rather than dilute the share base) were on hold during the downturn as companies sought to preserve cash. Dilutive cash preservation measures were penalized: companies that paid dividends by issuing new shares or that raised capital through secondary stock offerings saw their TSRs weaken.

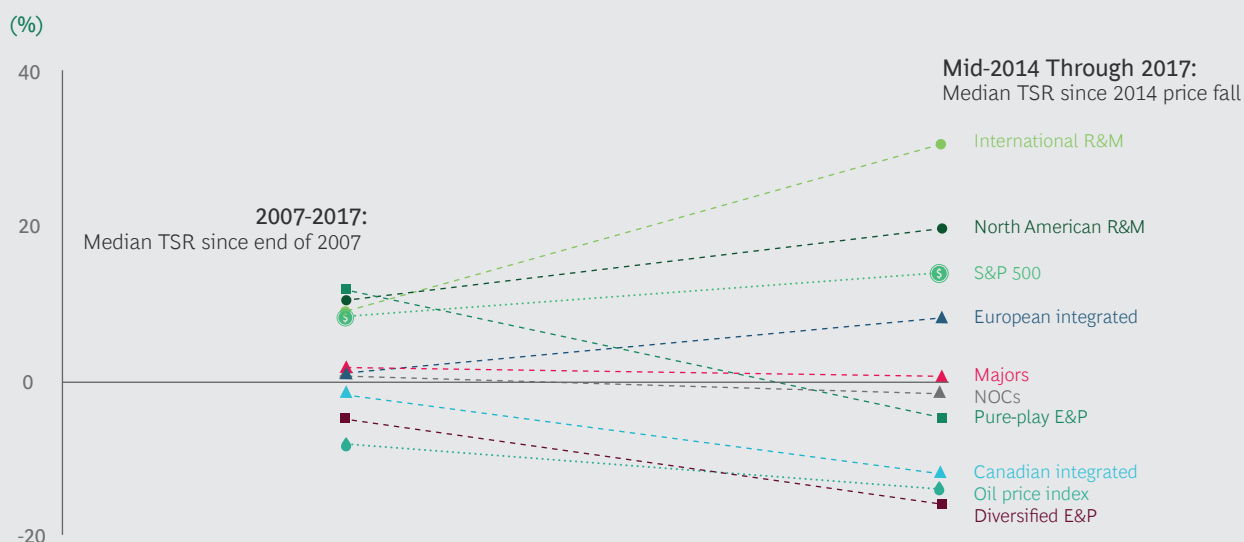
The Majors Struggle to Differentiate Themselves

Shareholder value creation by the Majors was lackluster over both time frames that we examined. During the oil price cycle from the end of 2007 through 2017, the group's median TSR was less than 3%. And over the recent price downturn, value creation was even weaker, with companies' TSRs pinned within a narrow band from 3% (Chevron) to -2% (Total SA). (See Exhibit 4.)

As a group, the Majors did create narrow margin gains over the downturn, but these were offset by revenue losses totaling nearly \$500 billion. One reason was that, with the Majors' portfolios heavily weighted toward upstream investments (with some 80% of capital typically employed in upstream assets), these companies were significantly exposed to the price downturn.

The Majors' integrated business models, global footprints, as well as sheer size provided some protection against the downturn. But their downstream exposure was

EXHIBIT 2 | Diversity in TSR Performance Increased During the Recent Downturn



Sources: S&P Capital IQ; BCG ValueScience Center; BCG analysis.

Note: For companies in each peer group, please see the appendix of this report.

not large enough to counterbalance the effects of the price decline on value creation.

The way that companies approached dividend payments also had a significant bearing on their TSR performance. TSR leaders such as Chevron paid the dividend in cash. Companies, including some European players, that opted for scrip dividends to preserve cash or that diluted their share base in other ways were generally penalized by shareholders.

Since the crude price rebound, the Majors have benefited from a rise in upstream revenues. Because of their integrated nature, however, they have not fared as well as many E&P companies, which are purer commodity price players. As a result, factors other than sales growth—including financial strength and shareholder payout—will play a greater role in driving future TSR performance for the Majors.

Although there were no standout leaders during the time frames we considered, two capital allocation strategies emerged as a route to TSR leadership. And for both these strategies, increasing the dividend was an important factor. The first approach—taken by Chevron, the group’s leader—incorporated strong financials, low gearing, and efficient capital use to drive multiple expansion. The other approach—Shell’s—combined actions across the company’s operations with investments in highly cash-generative upstream assets to boost the earnings margin in the short term.

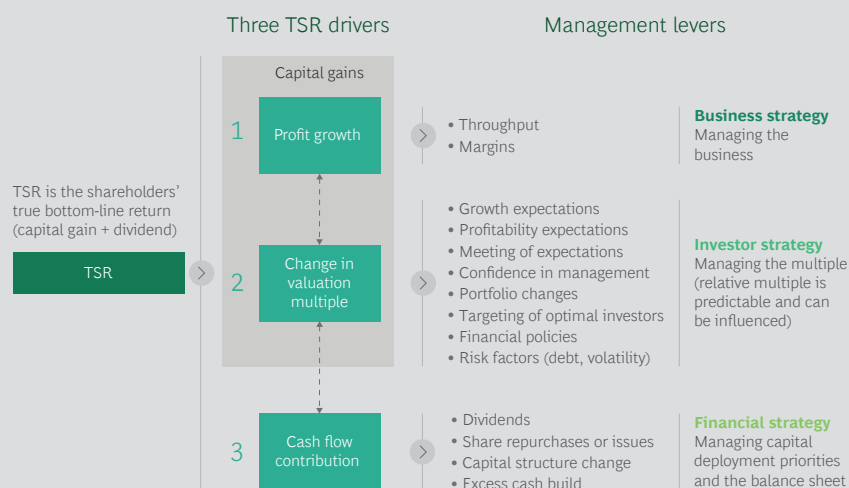
In our analysis, we found that Chevron excelled in three areas from 2007 through 2017. First, it made a commitment to raise shareholder payouts through the downturn. Second, it maintained relatively low leverage and a strong credit rating. And

THE COMPONENTS OF TSR

Total shareholder return is measured as the return from a stock investment, assuming all dividends are reinvested in the stock. TSR is a product of multiple factors. (See the exhibit below.) Our approach deconstructs TSR into a number of underlying drivers. We use a combination of revenue growth and margin change to assess changes in fundamental value. We then factor in the change in a company's valuation multiple to

determine the impact of investor expectations. Together, these two factors determine the change in a company's market capitalization and the capital gain (or loss) for investors. Finally, we track the distribution of free cash flow to investors and debt holders in the form of dividends, share repurchases, and repayments of debt to determine the contribution of free-cash-flow payouts to a company's TSR.

TSR Is the Product of Multiple Factors



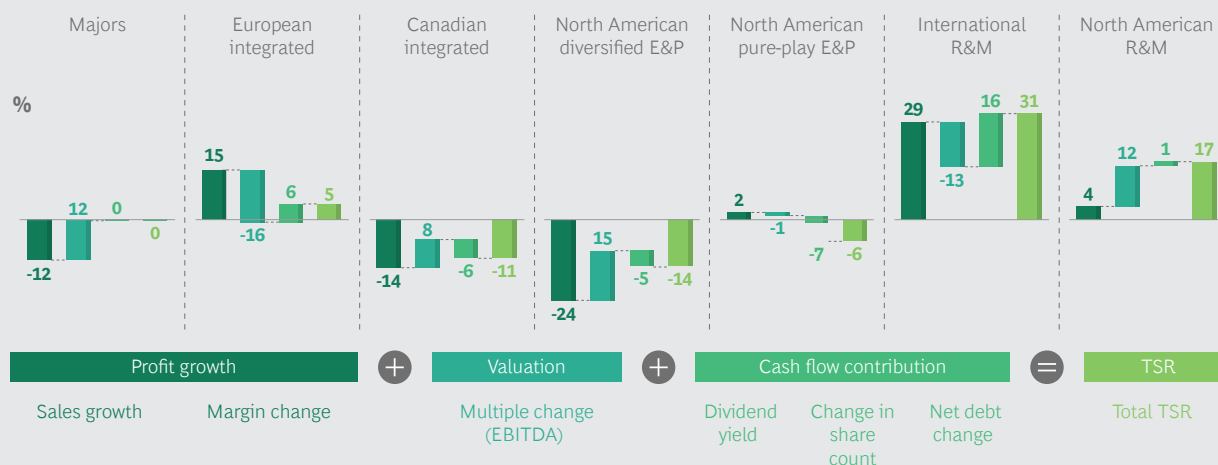
Source: BCG.

third, Chevron was able to increase its multiple: with Australian liquefied natural gas (LNG) projects coming online, investors had a clear line of sight to future production expansion, which underpinned forward EBITDA growth expectations and supported a higher multiple. A company's valuation multiple is affected by many factors outside its influence, making it the least controllable element of TSR strategy. BCG's Smart Multiple methodology uses proprietary modeling to empirically identify the drivers of a valuation multiple. For the ten years through 2017, multiple growth among the Majors was driven by a narrow set of factors, with a bias toward financial metrics, profitability, and payout performance.

Shell, which has a radically different strategy than its US rival, Chevron, also generated positive TSR momentum over the recent crude price downturn. By taking

EXHIBIT 3 | Margin Growth and Multiple Expansion Were Key Drivers of TSR

Median TSR performance and relative contribution, June 2014 through December 2017 (%)



Sources: S&P Capital IQ; BCG ValueScience Center; BCG analysis.

Note: For companies in each peer group, please see the appendix of this report. Because of rounding, numbers may not add up to the totals provided.

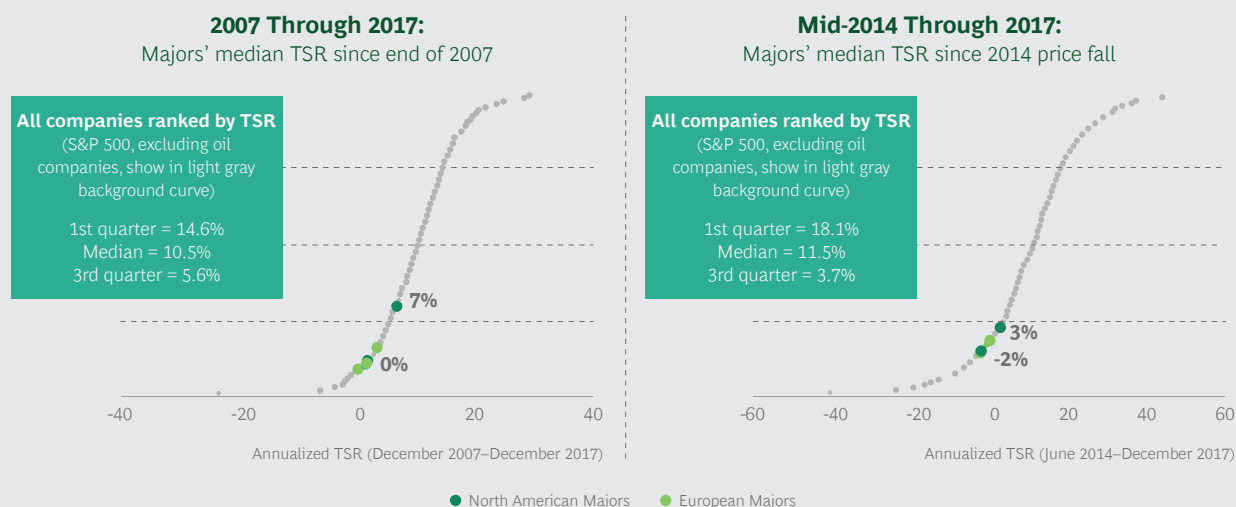
steps to improve both the quality as well as the operating metrics of its asset portfolio, the company was able to deliver leading margin growth. These steps included:

- The acquisition of BG Group in 2016, which shifted the portfolio toward assets with higher free cash flow per barrel
- A significant divestment program, following the BG acquisition, to improve the overall quality of the remaining portfolio
- An improvement in capital efficiency, which was achieved by cutting capex over the period by 54% (compared with a peer group average of 33%) and reducing production costs per barrel of oil equivalent by 37% (versus an average of 34% for the group)
- An increase in the net income margin from its downstream business, which was the biggest percentage improvement across the peer group

Each strategy is based on a different vision of the key drivers of shareholder value—and each carries risk. Having the financial strength to maintain the dividend and increase the valuation multiple requires deep core areas supporting continuity in a company's strategy. That can make it harder for companies to adapt to the oil industry's ever-changing business environment. And controlling the valuation multiple can be a difficult task.

By going all out to boost their earnings margins, companies may fail to maintain the strong financial position needed to service debt and pay dividends, leaving them exposed in the next downturn.

EXHIBIT 4 | The Majors Performed in a Relatively Tight Band over Our Time Horizons



Sources: S&P Capital IQ; BCG ValueScience Center.

Note: Background curve: S&P 500, based on data ending in December. TSRs use companies' reporting currency.

For the Majors, these strategies—while delivering only marginal differences in TSR over the oil price downturn—indicate alternative routes to value creation as oil prices rise. As the energy landscape evolves, companies are facing new challenges from the growth in renewable energy and the prospect of peak oil demand amid continuing capital constraints. Confronted with these uncertainties, they must still grapple with the question of where to allocate capital: into reinvestment, debt reduction, or increasing the dividend payout.

Because the Majors are large, integrated players, their average TSR does not need to be as high as that of other industry peer groups, notably growth players. Still, it needs to be competitive enough to attract investor capital. If they are to create meaningful shareholder value and differentiate themselves from their peers, companies may have to adopt the more aggressive capital allocation strategies outlined above and shoulder the potential risks that come with them.

Down Is the New Up for Refiners

Upstream is considered the oil industry area with the greatest potential returns, particularly when oil prices are favorable. But a look at the data shows that downstream players have been among the top performers since 2007, with a median TSR for R&M companies of about 10%—more than any other group except for pure-play E&P companies. Despite persistent headwinds, R&M companies have continued to create value for shareholders over the past decade by operating in growth regions, diversifying into adjacent sectors, cutting costs, and generating cash to fund high dividends.

R&M companies extended their TSR lead during the recent oil price downturn, beating other peer groups hands down with a median TSR of 26%. They were the only one of the three groups to increase earnings, resulting in double-digit EBITDA

margin expansion despite revenue falls. And international players, including European independent refiners (Neste and Tüpraş) and Indian refiners (Hindustan and Bharat), led value creation in the oil and gas sector, with some performing on a par with the top companies in BCG's Value Creators rankings. The key driver: refining crack spreads expanded in many markets, driven by increased product demand as oil prices declined by about 50%. R&M was also the only group in which all companies delivered TSRs in positive territory over the downturn.

More than any other factor, this ability to generate margin growth was the key driver of TSR performance for both international and North American refiners. Physical location and refinery complexity played an important role in margin expansion. Owners of more complex refineries could process more advantaged crudes and generate larger gross margins. These companies, which include Valero and Neste, generally had higher multiples than their peers, suggesting investors may expect that more complex refiners will benefit from future industry dynamics.

The ability to generate margin growth was the key driver of TSR performance for both international and North American refiners.

Refining margins varied widely by region. Refiners in Asia and Europe were the beneficiaries of the greatest margin gains, showing increases of 40% to 80% from 2014 through 2017. In North America, refining margins still grew very robustly, at about 20%. Leading companies in all regions took advantage of these favorable market conditions by increasing throughput. (See Exhibit 5.)

Cost control was another factor that drove margin expansion among refiners. While R&M companies as a whole increased operating and administrative expenses, leading companies kept cost rises to about 7% on average, compared with 28% for the stragglers.

But diversification into higher-growth areas also played a part. Increased demand for renewable fuel products, for instance, boosted margin growth for Finnish refiner Neste. Profits from renewable products have grown 10% per year faster than oil products since 2014, and they now make up roughly half of Neste's operating income. US firm Marathon Petroleum has benefited from profit growth of up to 50% in its midstream business, while Indian Oil increased profit margins on the back of its growing, higher-value petrochemicals division. Although R&M companies don't break out trading, expanded trading activities in a period of high price volatility likely provided another boost to TSR. (See "Is North American Refining at a Crossroads?" BCG article, January 2017.)

Companies that expanded into these new areas successfully did so at scale to provide a meaningful earnings uplift, and they maintained their conviction in investment decisions, giving greater clarity for investors.

Larger payouts to investors and strong debt reduction also set the TSR leaders apart and differentiated international R&M companies from weaker North American players. Average dividend yields are now closer to the yields from investing in utility companies and appeal to a growing base of income- and value-focused investors in R&M companies. Leading companies not only had higher dividend yields over the period (4.2% versus laggards' 2.8%), they also increased payouts faster—a

EXHIBIT 5 | R&M Companies Were Among the Top 20 Value Creators

Rank	Company	TSR, 12/07– 12/17	Subsector	Company	TSR, 6/14– 12/17	Subsector
1	Tüpraş	22.7%	International R&M	Hindustan Petroleum	61.1%	International R&M
2	Bharat Petroleum	22.5%	International R&M	Neste	49.8%	International R&M
3	Concho Resources	22.0%	North American pure-play E&P	Bharat Petroleum	36.2%	International R&M
4	Hindustan Petroleum	21.5%	International R&M	Tüpraş	35.3%	International R&M
5	YPF	17.7%	NOC	Polski Koncern Naftowy	34.3%	International R&M
6	Continental Resources	15.0%	North American pure-play E&P	Indian Oil	30.5%	International R&M
7	Pioneer Natural Resources	13.6%	North American pure-play E&P	S-Oil	28.6%	International R&M
8	Neste	12.4%	International R&M	Idemitsu Kosan	25.7%	International R&M
9	HollyFrontier	12.2%	North American R&M	Andeavor	23.8%	North American R&M
10	Cimarex Energy	11.7%	North American pure-play E&P	Valero Energy	23.0%	North American R&M
11	Cabot Oil & Gas	11.3%	North American pure-play E&P	SK Innovation	22.7%	International R&M
12	Andeavor	10.9%	North American R&M	Marathon Petroleum	19.4%	North American R&M
13	EOG Resources	10.0%	North American pure-play E&P	OMV Aktiengesellschaft	18.1%	European integrated
14	Indian Oil	9.7%	International R&M	PTT	13.9%	NOC
15	Polski Koncern Naftowy	9.5%	International R&M	JXTG Holdings	12.5%	International R&M
16	S-Oil	8.0%	International R&M	Diamondback Energy	10.6%	North American pure-play E&P
17	Chevron	6.8%	Majors	Phillips 66	10.0%	North American R&M
18	Idemitsu Kosan	6.7%	International R&M	HollyFrontier	9.3%	North American R&M
19	Valero Energy	6.3%	North American R&M	Polskie Górnictwo Naftowe	9.1%	NOC
20	Ecopetrol	5.9%	NOC	Rosneft	8.0%	NOC

Sources: S&P Capital IQ; BCG ValueScience Center; BCG analysis.

positive signal for investors. And by deleveraging the business, TSR leaders used more of their cash flow for dividends and less for servicing debt payments.

North American players also boosted the dividend but met the cost of these payments by increasing leverage. This strategy risks making investors skeptical about a company's fundamentals, especially if it continues over several years. But while North American players grappled with weaker margins and higher debt than their international peers, strong growth in their valuation multiples helped offset both and ensured that they were in the middle of their peer group for overall TSR.

Efficient use of capital was another significant TSR lever across the group. The secret to capital efficiency was careful investment in high-growth opportunities. Companies that did this successfully had greater financial flexibility to allocate cash across the business. TSR leaders increased their capital base by just 3% and saw a significant uplift in operating profit. Laggards boosted the capital base by twice that, but the impact on profit was negligible.

In a highly cyclical industry where oil prices are on the rise, refiners as a whole could see their margins come under pressure from increased input costs. But changing market dynamics will favor some refiners over others: the 2020 introduction of International Maritime Organization rules limiting the sulfur content in marine fuel looks set to significantly alter demand trends, benefiting complex refiners. (See “Preparing for a Sea Change in Global Refining,” BCG article, June 2017.)

Low Oil Prices Erode E&P Companies’ Value Proposition

Without downstream operations limiting the impact of the crude price decline, E&P companies were exposed to the full effects of the drop. They were hit by a triple whammy of revenue, earnings, and margin contraction from mid-2014 through 2017—resulting in negative TSR for the peer group. E&P was the oil sector’s best TSR performer for the period from December 2007 through mid-2014, led by pure-play companies. But it was one of the sector’s laggards during the downturn—though multiple expansion lifted the performance of diversified players.

During the crude price downturn, E&P companies were hit by a triple whammy of revenue, earnings, and margin contraction.

We included in our analysis both small pure-play E&P companies and larger diversified E&P companies. Pure plays are typically focused on one geographic area and a single type of upstream asset. Diversified E&P companies are larger and operate across multiple regions and upstream asset types. Spurred by the shale boom, however, both pure plays and diversified companies have invested heavily in the “shale patch”—unconventional oil and gas reserves centered largely in North America—to boost returns.

Our study found a clear distinction between the performances of pure-play E&P companies and diversified E&P companies. As a whole, the two groups delivered a negative median TSR over the downturn. But some pure-play E&P companies fared significantly better, with a handful producing positive TSR in double digits.

Only the smallest players—which are typically focused on shale oil assets—were able to drive the uplift in production volumes needed to increase revenues even as commodity prices declined. Because winning pure-play E&P companies such as Diamondback delivered good revenue growth, their investors were willing to accept stock offerings that raised funds for production growth but also diluted the share base.

In contrast, diversified E&P companies were too large to compete solely by increasing revenues with a rapid boost in production from unconventional assets. Instead, they suffered revenue declines and delivered negative TSRs across the board. But unlike pure-play companies, whose investors remain oriented toward growth, diversified companies’ shareholder registers have changed as they have grown and are now dominated by value and income investors. Consequently, for this group of companies, increasing the dividend was paramount to achieving TSR leadership over other diversified players.

The leading diversified companies, such as Occidental Petroleum, provided shareholders with generous dividend yields without diluting the share base. Instead, they raised debt to meet dividend payments. But unlike pure-play E&P companies, diversified companies that opted for dilutive stock offerings to fund the dividend or pay for

acquisitions were punished by investors. Since the rebound in crude prices, many diversified E&P companies have increased dividends or initiated share buyback programs in 2018 to reignite investor interest. For example, Anadarko has raised its dividend fivefold, cut debt, and expanded its share repurchase program to \$4 billion.

Many diversified E&P companies were themselves potential M&A targets, bolstering their valuation multiples and causing multiple expansion to have a positive impact on TSR performance.

As oil prices rise, small pure-play E&Ps have an incentive to continue boosting production in order to increase revenues and outperform on TSR, even if the consequence is less capital discipline. Diversified E&P companies face a more complicated task to increase TSRs, however. While many in this group continue to lack the financial strength of the Majors, they face a similar imperative to maintain capital discipline and keep a steady flow of competitive dividends if they are to meet the expectations of income-oriented investors. Plans to reduce debt taken on to pay for acquisitions may hamper their ability to fund ambitious dividend programs. Still, because of their larger exposure to the price of crude, most look set for a share price uplift, potentially greater than that of the Majors.

TSR Action Steps to Take in a Higher-Oil-Price Environment

During the lower-for-longer oil price era that started in mid-2014, the operational and strategic focus of most players was on cost control and capital efficiency improvements to maximize the value of existing production and new barrels brought onstream. The industry's mantra was value over volume. Many companies were able to prioritize the value of their assets because they had a clear line of sight to volume growth on the basis of investment decisions that predated the oil price decline. But this phase appears to be coming to an end for two reasons: a dearth of new project approvals during the price downturn and a working through of the development queue for upstream projects.

As oil prices rise, revenues increase, and pressure grows to renew upstream project development, the question of how companies should efficiently allocate capital—so that they maximize TSR but also ensure the long-term future of the business—will become more pressing.

This is especially true for the Majors: upstream-focused operations require significant capital reinvestment just to maintain a steady state. The Majors will need to decide on the right balance between channeling capital to their upstream businesses, to other sectors outside of upstream, into higher dividends to reward and retain equity investors, or toward additional debt reduction.

Oil companies' ability to easily raise fresh capital from investors cannot be taken for granted. We have found that the proportion of equity investors oriented toward income and value rather than growth has increased over the past decade for most industry peer groups, putting added pressure on companies to deliver sustainable dividends in the near term. At the same time, the Majors' upstream activities are still high-risk businesses that need to offer increased returns to attract investor

Especially for the Majors, upstream-focused operations require significant capital reinvestment just to maintain a steady state.

capital over the long term. Given the Majors' lackluster performance against the S&P since mid-2014, investors must feel they are not getting the share price rewards that match the risks they are taking.

Companies will need to take steps in the following areas if they are to create better value for shareholders.

UPSTREAM MARGIN EXPANSION

As commodity prices evolve, how companies react to the new price environment will go a long way toward determining TSR winners. Upstream players will need to translate more-favorable prices into earnings by boosting volumes in higher-margin assets while maintaining capital discipline by placing a premium on cost-competitive plays, asset types, and regions. Today, new digital technologies enable companies to increase operating efficiencies and maximize free cash flow while containing costs and maintaining competitiveness with new energy solutions. Companies that successfully deploy these technologies in the field will have an advantage in delivering bottom-line earnings.

REINVESTMENT

Over the past year, some of the Majors have started to renew upstream project development by making bolt-on acquisitions. Many of these are purchases of small, already developed brownfield assets that are of high value but lack the scale to meet the Majors' large reserve replacement requirements. Consequently, we anticipate that the number of investment approvals for both new and brownfield upstream projects will increase. Companies that can tap new oil and gas resources at the lowest cost, maximizing the boost to their earnings margins, will see the greatest improvement in TSR.

We also expect companies to give priority to upstream projects with short development cycles, particularly in unconventional resources, in order to reduce their capital costs. Still, many of these projects may struggle to deliver the large production volumes with high free cash flow per barrel that are necessary to impact the Majors' sizable portfolios and bolster their earnings margins.

With oil prices well ahead of 2016 lows, investors in pure-play E&P companies are counting on them to boost TSR by raising production volumes from shale assets. But infrastructure bottlenecks in the Permian Basin, the biggest shale area in the US, threaten to jeopardize these companies' ability to meet ambitious growth targets. As a result, companies that maximize volumetric growth at the highest netback pricing—while retaining capital and fiscal discipline—will benefit from superior TSR performance.

MERGERS & ACQUISITIONS

After optimizing investment in the core business, companies can bolster value creation through selective M&A in attractive assets and segments. Several of the Majors, especially the Europeans, have made debt reduction a central ambition for the future. With stronger balance sheets, companies will be better placed to pursue M&A transactions. While some of these will be paid for with surplus cash flow, others will be stock-based deals financed by the issue of new shares. Though share di-

Many projects may struggle to deliver the large volumes and high free cash flow necessary to impact the Majors' sizable portfolios.

lution is typically a negative for TSR performance in the near term, share-based transactions can add value in the longer term.

SHAREHOLDER PAYOUTS

Companies across peer groups have initiated dividend increases and share buyback programs to reward their investors following the downturn. BCG research shows that players that can maintain and increase a high dividend command a higher valuation multiple. This is because investors view dividends as a promise of future payouts and a sign of faith in the business over the long term. On the flip side, companies that cut the dividend risk being severely punished by shareholders. Consequently, industry players should carefully analyze their sources and uses of cash and optimize payout plans so that dividends are sustainable even in the event of a significant deterioration in the market.

ENERGY TRANSITIONS

The impact of energy transitions, led by the switch from fossil fuels to renewable energy sources, will be felt by upstream, downstream, and integrated players alike. The seismic shift in energy usage poses fundamental questions about the way in which oil and gas companies operate. All players need to consider both how much they invest in new alternative energy businesses as well as how best to invest without negatively impacting their relative TSR performance.

Our analysis over the past decade indicates that investor concerns about these issues have not negatively impacted TSR performance in the sector, with investors focusing on capital gains and cash payout yields. For the Majors, we found no positive correlation between their clean-energy investments and either share price or multiple. Nevertheless, increasing stakeholder activism could present a potential risk to TSR because of the negative effects it can have on earnings and valuations. Mitigation strategies exist to protect TSR, such as planning ahead for potential disclosure requirements or investing in alternative energy. But first companies need to be sensitive to these risks. Adopting a financial strategy that emphasizes yield over volumetric growth may not be a cure-all.

STRATEGIC DECISIONS

In an evolving energy landscape, companies across the industry will need to take steps to secure their future—whether by reinvesting in upstream assets or by diversifying across business segments or into new energy investments. Given the high proportion of income-oriented investors that value sustainable dividend payouts in the short term, it may take longer for companies to see the effects of these decisions on their share price and TSR performance. This is particularly the case for companies with larger market capitalizations.

Companies today are benefiting from a more favorable commodity price environment, but in the future, competition between fuels may depress product prices across the board. Regardless of how these forces play out, we expect more-volatile prices to test oil and gas companies' ability to make critical decisions.

Players will need to develop a strategy that is resilient in this changeable energy landscape, creates the right balance among various TSR drivers, and signals to investors a

Companies are benefiting from a favorable commodity price environment, but in the future, competition between fuels may depress product prices.

clear value creation path for both the near term and the long term. They will need to consider the role M&A can play in redefining their portfolios, the impact and sustainability of increasing dividends, the fundamental drivers of valuation multiples, the investor reaction to potential strategy shifts, and how reallocating spending among business areas will impact their TSRs. Companies that can successfully build resilient strategies will be the oil and gas value creators over the next price cycle.

Appendix: Companies Surveyed

The full list of companies that BCG tracked for this report is as follows:

The Oil and Gas Value Creators 2018: Companies Surveyed

Company	Categorization	Company	Categorization
1 Anadarko Petroleum	North American diversified E&P	33 Inpex	International E&P
2 Andeavor	North American R&M	34 JXTC Holdings	International R&M
3 Apache	North American diversified E&P	35 Marathon Oil	North American diversified E&P
4 Bharat Petroleum	International R&M	36 Marathon Petroleum	North American R&M
5 BP	Majors	37 Neste	International R&M
6 Cabot Oil & Gas	North American pure-play E&P	38 Noble Energy	North American diversified E&P
7 Canadian Natural Resources	North American diversified E&P	39 Occidental Petroleum	North American diversified E&P
8 Cenovus Energy	Canadian integrated	40 Oil and Natural Gas Corporation	NOC
9 Chevron	Majors	41 Oil Search Limited	International E&P
10 China Petroleum & Chemical	NOC	42 OMV Aktiengesellschaft	European integrated
11 Cimarex Energy	North American pure-play E&P	43 PetroChina	NOC
12 CNOOC	NOC	44 Petrobras	NOC
13 Concho Resources	North American pure-play E&P	45 Phillips 66	North American R&M
14 ConocoPhillips	North American diversified E&P	46 Pioneer Natural Resources	North American pure-play E&P
15 Continental Resources	North American pure-play E&P	47 Polski Koncern Naftowy	International R&M
16 Devon Energy	North American pure-play E&P	48 Polskie Górnictwo Naftowe	NOC
17 Diamondback Energy	North American pure-play E&P	49 PTT	NOC
18 Ecopetrol	NOC	50 PTT Exploration and Production	NOC
19 Empresas Copec	International R&M	51 Gazprom	NOC
20 Encana	North American pure-play E&P	52 Rosneft	NOC
21 Eni	European integrated	53 Repsol	European integrated
22 EOG Resources	North American pure-play E&P	54 Royal Dutch Shell	Majors
23 EQT	North American pure-play E&P	55 Santos	International E&P
24 Exxon Mobil	Majors	56 SK Innovation	International R&M
25 Galp Energia	European integrated	57 S-Oil	International R&M
26 Hess	North American diversified E&P	58 Equinor	NOC
27 Hindustan Petroleum	International R&M	59 Suncor Energy	Canadian integrated
28 HollyFrontier	North American R&M	60 Total SA	Majors
29 Husky Energy	Canadian integrated	61 Tüpraş	International R&M
30 Idemitsu Kosan	International R&M	62 Valero Energy	North American R&M
31 Imperial Oil	Canadian integrated	63 Woodside Petroleum	International E&P
32 Indian Oil	International R&M	64 YPF	NOC

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