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**Six Actions to  
Navigate the Current  
Oil & Gas Market  
*A New Strategic  
Agenda for the CFO***



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## EXECUTIVE SUMMARY

*The credit market collapse of 2008 and subsequent global recession triggered a free fall in oil and gas prices. Together, these conditions devastated the market valuations of many oil and gas companies. They also upended many of the assumptions that have governed the financial strategies of these companies.*

*In this new, unfamiliar, and highly volatile world, chief financial officers in the oil and gas industry need to rethink their strategic finance agenda, altering and adapting some of the practices they have pursued in the past and fundamentally changing the way they approach others.*

*CFOs should undertake six action items aimed at preserving and improving their companies' competitive outlooks. They should build and buy strategic liquidity; enhance their strategic risk management programs; audit their defense strategies; manage the corporate portfolio for value; monitor sources of value; and create real growth options. CFOs who do this work well will not only help their companies navigate the turbulent times ahead, they will provide the flexibility and resources needed to pursue the growth opportunities hidden in the chaos.*

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## A NEW STRATEGIC AGENDA FOR OIL AND GAS CFOs

It's hard to imagine a more volatile time for the oil and gas industry. In what seems like the blink of an eye, the strains on production capacity in 2007 and early 2008 were transformed by the credit crisis and global recession into a historic contraction in near-term demand. The resulting free fall in market valuations has created major risks for oil and gas companies, and abundant opportunities as well.

Consumption of petroleum products in 2008 decreased 5.4 percent compared to 2007, marking the first annual decline of more than 1 million barrels per day since 1980. By early 2009, with hydrocarbon prices down nearly 70 percent from July 2008 peaks, the rapid decline in demand and liquidity led many observers to predict that the sky was falling.

They are wrong, at least in the long term. Even with increased attention and activity on the renewable energy front, there is a significant need for hydrocarbons in the foreseeable

future. The International Energy Agency forecasts that by 2030, the global economy will need 64 million barrels per day of incremental crude supply—the equivalent of almost six times Saudi Arabia's current capacity. According to forecasts such as this, there is a strong likelihood that near-term underinvestment in the sector will lead to price rebounds that attain levels as high as or higher than recent peaks within a few years.

Furthermore, there has been a fundamental shift from the reality of the recent past, when financial liquidity was commonplace and CFOs struggled to find good uses for cash, to the current reality, in which cash reserves are a key business enabler and high-leverage players are at risk. To identify and understand the potential risks and opportunities for their companies in this new environment, CFOs must carefully examine their financial and competitive positions, and then shape new strategic agendas.

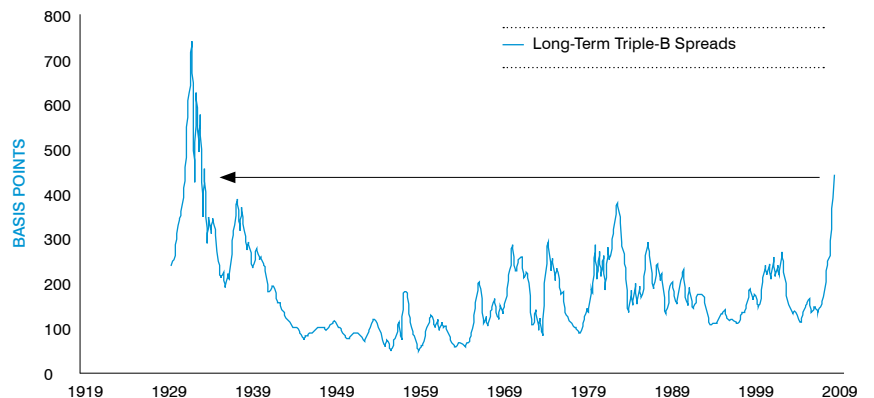
# THE CONTRACTION IN THE FIXED INCOME MARKETS

The historic contraction in the fixed income markets has disrupted the debt strategies of oil and gas companies. In 2008, high-grade debt issuance seemed to be on track for a record year. In the first half of the year, domestic corporate issuers had taken advantage of attractive all-in rates, and debt issuance increased at an annual rate of US\$700 billion. But the market came to a grinding halt midyear, with less than \$30 billion of issuance per month, and corporate spreads began a precipitous rise. By November 2008, Louise Purtle, a senior analyst at credit research firm CreditSights Inc., concluded that, “Corporate spreads have broken beyond the range set by any recession in the last five decades and are closing

in on the peaks seen during the Great Depression in the 1930s.”

Although economists may quibble about whether this downturn will be as bad as the recession of 1981 and 1982, fixed income markets reached their worst point since the Great Depression in June 2009 (*see Exhibit 1*). Lenders are changing the terms of revolving lines of credit for even the strongest companies. As witnessed by the collapse in the U.S. banking industry, the liquidity crisis this has spawned can be a much faster route to insolvency than operational challenges. The fact that many of today’s companies are facing both liquidity crunches and operational challenges also leads to a very gloomy outlook for default rates.

**Exhibit 1**  
*Credit Spreads Reach Highest Point Since 1930s, Sparking Talk of Depression*



Source: CreditSights; Federal Reserve; National Bureau of Economic Research; Moody's  
\*Louise Purtle, "What Does Life After Leverage Look Like? (part II)," CreditSights Research Conference presentation, November 2008. CreditSights developed this analysis from "a Moody's data series on Long Term Corporate Bond Yield Averages that is derived from pricing data on a regularly replenished population of U.S. corporate bonds with maturities that range from 20 to 30 years. This provides a constant corporate pricing history, though one should keep in mind that the tax reforms of the mid-1980s ushered in a substantial change in the relative appeal of debt and equity financing, thus reducing the direct comparability of the pricing of corporate debt in the period before and after 1986... We have used the Federal Reserve's constant maturity 30-year bond yield for the period for which it is available (from February 1977), the constant maturity 20-year (from January 1962), the constant maturity 10-year (from April 1953), and the National Bureau of Economic Research's series entitled U.S. Yield on Long-Term United States Bonds for the period prior to 1953. The shorter duration of these assets compared to the 20- to 30-year corporate bonds means that the 'spreads' that are derived by subtracting the risk-free yield from the corporate yield could be overstated for the period prior to 1977."

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## IMPACT ON CORPORATE VALUATIONS

The upheaval in the fixed income markets has driven down company valuations through three mechanisms:

The first is that the value of corporate debt today is much lower because of the much higher price of credit risk. For many companies in which debt represents an increasingly large proportion of total enterprise value (due to declining share prices, plus, in some cases, increasing debt levels), the effect can be huge.

The second mechanism stems from the asset allocation decisions generally favored by companies with defined-benefit pension plans. Many of these companies have relied heavily on equity returns to fund their plans. Losses in global equity markets in 2008, however, have eroded the value of plan assets to such an extent that it will greatly increase the future plan contributions that must be made according to amortization schedules and minimum funding levels. This will be a major cash drain for large companies with sizable defined-benefit exposures.

*Recent downward pressure on corporate valuations heightens the importance of financial strength and strategic liquidity.*

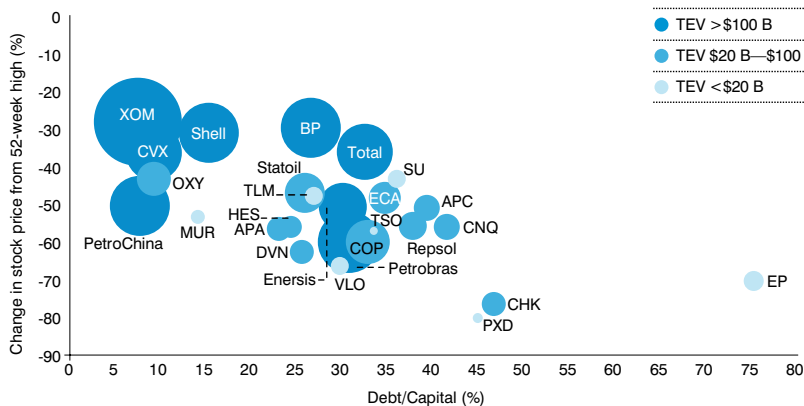
Third is the contagion effect on equity values caused by the historically high cost of debt and the increased probability of defaults. In a discounted cash flow (DCF) analysis, the expected residual value of equity (the weighted average of all possible outcomes) must also decline sharply in today's market. The equity holders face an increasing risk of getting little or nothing. This is especially true for the equity of smaller, non-investment grade companies, companies with less excess cash, and those with fewer secondary sources of liquidity.

Thus, with credit and commodity demand showing historic weakness, many stock prices are near record lows. Companies with less financial strength—the smaller players, those with less liquidity, and those with lower credit quality—now trade at a discount to their comparables. In fact, as of March 2009, the stock prices of highly leveraged oil and gas companies and those with market capitalizations of less than \$20 billion had dropped an average of 66 percent from their 52-week highs versus an average drop

of 40 percent for the players with market capitalizations over \$100 billion (see Exhibit 2).

All of these effects on corporate valuations heighten the importance of financial strength and strategic liquidity in today's market—for providing both buoyancy to enterprise value and the funding necessary to support operations, to enhance bargaining power, to improve competitive position, and to support opportunistic investment.

**Exhibit 2**  
*Stock Price vs. Leverage in Oil and Gas Companies*



Note: Data as of March 19, 2009; TEV = total enterprise value.  
Source: Capital IQ, Booz & Company analysis

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# SIX ACTION ITEMS FOR THE CFO'S STRATEGIC AGENDA

This new era for corporate valuations, in which the impact of fixed income market illiquidity has culminated in dramatically lower enterprise values through the multitude of mechanisms outlined earlier, has had a profound impact on corporate strategies to maximize shareholder value. It has also given rise to six new imperatives for finance's strategic agenda in the oil and gas industry.

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## 1. BUILD OR BUY STRATEGIC LIQUIDITY

Strategic liquidity is critically important at this stage of the oil and gas industry. Rarely, if ever, has the industry faced credit challenges of this magnitude in combination with very low commodity prices and cash flows. For years, companies with high credit ratings, low financial leverage, and large amounts of excess cash were criticized for their conservative capital structures. But now, financial strength and liquidity are powerful strategic assets, and a source of buoyancy in corporate valuations.

Today, leading oil and gas companies have built primary liquidity by retaining operating cash flow and the proceeds of asset sales, and by drawing down on their bank lines. They are establishing secondary liquidity through back-up lines of credit, financings, securitizations of receivables and other assets, future production volume payments, and sale lease-backs, albeit at higher prices. They are also exploring other vehicles for improved financial liquidity, such as enhanced flexibility in leases as well as in purchasing and outsourcing contracts.

Buying strategic liquidity through liability management (as well as minimizing maturity towers and plugging maturity gaps in liability ladders) begins with extending duration, terming out and refinancing debt,

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and pursuing exchange offers and the retirement of near-term maturities. Reductions in the proportion of floating-rate debt, which can be achieved by swapping floating-rate notes to fixed-rate ones, lifting or mirroring fixed-to-floating swaps, and shortening floating-rate terms, can also be used to enhance liquidity.

CFOs can also enhance liquidity by working with the chief procurement officer and the leaders of every other major function to ensure that each component of the company's overall spending is optimized. The declines in demand brought about by falling oil prices have affected vendors to the oil and gas industry, creating the opportunity to renegotiate supply

contracts on more advantageous terms. A greater focus on the demand side of spending, especially in companies that have reduced their capacity, workforces, and capital projects, can yield significant savings. In addition, the CFO's "big picture" view of overall spending can be used to identify areas, such as marketing and legal, in which more rigorous spending discipline can improve the bottom line.

Beyond liquidity per se, there is the need to build financial strength through the re-equitization of leveraged balance sheets—especially companies that are non-investment grade—through debt-equity exchanges, debt tenders and open market repurchases, and pension

pre-funding. There has also been a sharp reversal in the heavy reliance on distribution of excess cash and elimination of equity through higher dividends and share repurchase programs. As equity market receptivity improves, there will likely be a resurgence in less traditional forms of equity, including rights offerings, attached warrants, mandatory convertibles, hybrids (such as long-dated senior subordinated notes with dividend deferrals) that receive equity credit, and the forward issuance of equity for immediate deleveraging while deferring equity dilution. CFOs may also discover opportunities to use equity shelf programs that distribute small amounts of equity over time.

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## 2. IMPLEMENT A REAL STRATEGIC RISK MANAGEMENT PROGRAM

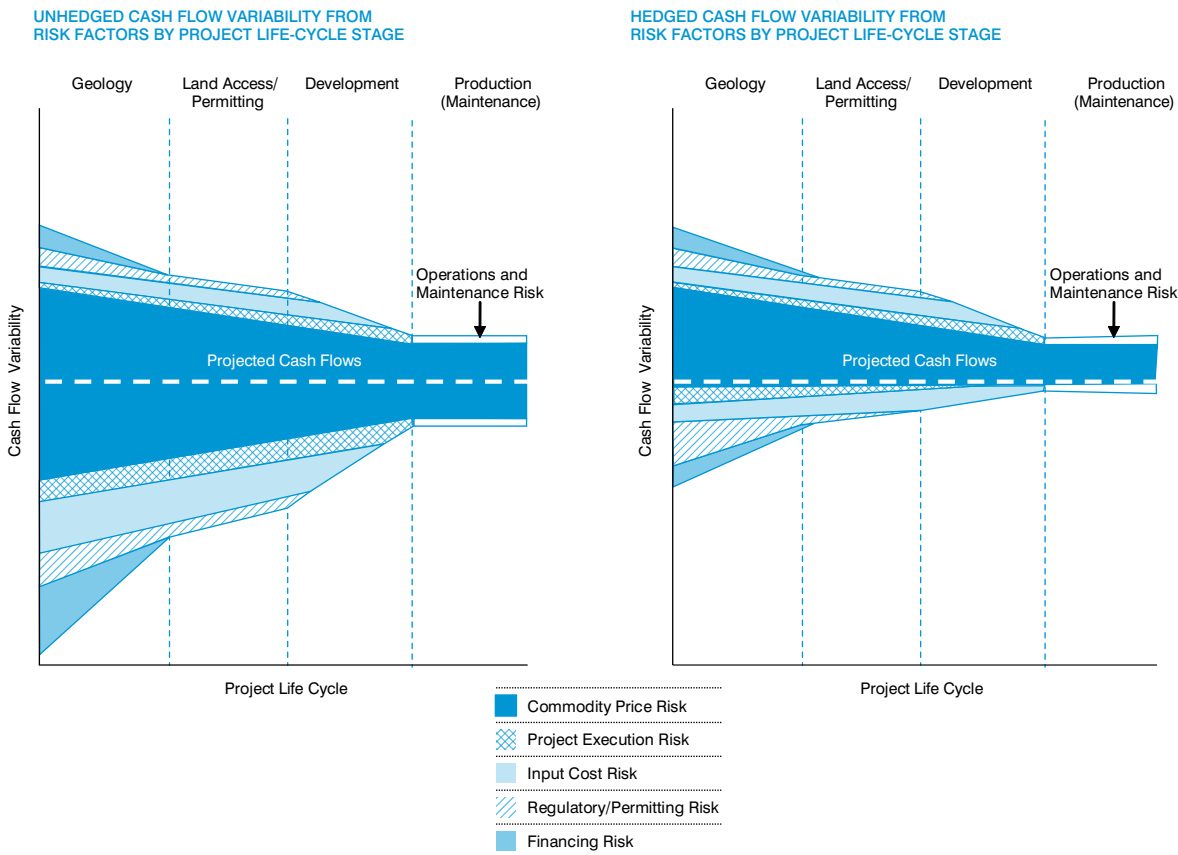
Today more than ever, oil and gas companies cannot afford the additional cash flow volatility imposed by unmanaged commodity, currency, and interest rate exposures. This is especially true in light of the high cost of liquidity. Surplus cash and equity, the traditional buffers against poorly managed exposures, are hard to come by these days and they should be put to more promising and productive uses.

Over the years many oil and gas companies have engaged in a variety of hedging initiatives to both manage cash flow volatility and exploit a price view. Notwithstanding these efforts, the recent collapse in energy

commodity prices has led many upstream companies to curtail capital programs. This is particularly true for unconventional plays with marginal economics that make them vulnerable to commodity price swings. But these are long-term projects, whose economic viability should be a function of the long end of the forward price curve, not of spot prices. Yet some companies are throttling back on their capital programs—even though much of the volatility is in spot prices—due to the volatility of cash flows and uncertainty around their future.

Instead, CFOs should be managing the commercial risks associated with

*Exhibit 3*  
*Unhedged vs. Hedged Project Cash Flow Variability*



Source: Booz and Company analysis

their business and consider locking in the long-term economics on large capital programs. On the revenue side, for instance, managing the price risk associated with gas production revenues can be done in a variety of ways, including the use of long-term contracts as well as financial instruments such as futures, swaps, and other derivatives. On the cost side, companies can hedge underlying commodities through sourcing strategies, including prepay or trigger contracts (i.e., contracts with built-in price reductions tied to the decline of major materials costs), or they can hedge indirectly via commodity markets (e.g., by using the steel contract on the London Metals Exchange to hedge oil country tubular goods—OCTG—costs). Exhibit 3 shows the effect that hedging can have on cash flow variability over project life cycles in oil and gas companies.

Uncertainty about prices and the future composition of cost and revenue streams, as well as thinner markets for longer-dated contracts, constrains companies' ability to hedge far into the future. Generally speaking, most companies do not hedge beyond three years and many hedge only one year forward. But these policies must be developed with a view to both the company's relative advantage in "owning" that risk, and the markets available for managing risk in that asset class. Best practice is to reduce the proportion of net exposure hedged further out in time and add layers of hedge as the exposure moves closer in time.

### 3. AUDIT YOUR DEFENSE STRATEGY

Today's depressed stock prices have weakened the offensive efforts of many oil and gas companies and made them vulnerable targets for players with stronger balance sheets. As a result, executive teams should review their takeover defenses.

A high-level defense audit has four basic categories:

- *State and corporate takeover laws*, which govern issues such as the percentage of shareholders needed to approve an acquisition (with and without board approval), the percentage of board members needed to approve an acquisition, and the process for altering, amending, or repealing corporate bylaws.

- *Board structure and policies*, such as the length of board members' terms, whether the board itself can change the size of the board, and whether newly created board seats can be filled by a majority of the directors in office.
- *Shareholder voting processes*, including whether shareholders are able to act by written consent and the processes for convening special meetings.
- *Poison pill provisions*, such as whether there is an active poison pill, whether there are provisions in place to strengthen it, and whether there is a "blank check" that will allow the board to issue new preferred stock.

One company we examined recently had a reasonably strong defense program in place. It included a requirement of two-thirds shareholder approval for a takeover; a classified board with staggered terms; an accordion (expandable) board with no cumulative voting that would allow shareholders to concentrate their votes on fewer candidates; an active poison pill; and the ability to issue unlimited amounts of dilutive preferred stock in priority above the common stock.

## 4. MANAGE YOUR CORPORATE PORTFOLIO FOR VALUE

Especially in a downturn, it is important to manage corporate portfolios for value, not performance. Yet the vast majority of corporate portfolio frameworks today emphasize traditional financial performance metrics, not a value perspective. The premise, of course, is that traditional financial performance metrics—such as margins, operating income, return on capital employed (ROCE), and economic profit or economic value added (EVA)—are proxies for value.

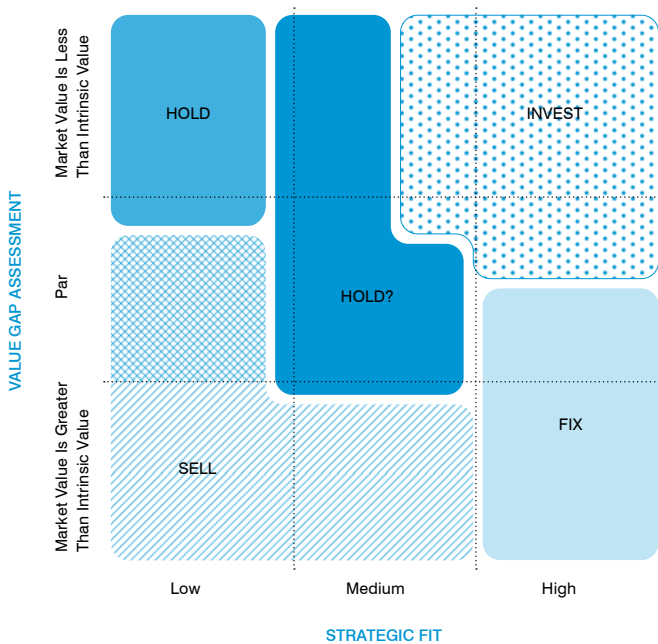
In fact, it is precisely because this performance is already capitalized into market values that these metrics are *inappropriate* for portfolio decisions.

*Focus on value, not performance metrics.* Make decisions based on a comparison of intrinsic values, based on discounted cash flow, versus disposition value (see Exhibit 4). Avoid decisions based on margins or ROCE. Selling the dogs and acquiring the stars as dictated by traditional performance metrics can be your most costly strategy, especially in a downturn, because market values already incorporate current, and expected future, performance.

*Incorporate the costs of opportunity forgone.* Determine whether any assets might be worth more to others. A robust analysis of value

contribution goes beyond simplistic tests for the presence or absence of portfolio synergies because there are always valuable alternatives for company resources (such as people, capital, time). This analysis should consider opportunity costs, such as the forgone synergy value to natural owners, and can include a screen of natural owners based on strategic fit, an estimate of their likely operating synergies, and an estimate of their willingness and ability to acquire, as well as potential net proceeds. The economic point of indifference for holding any asset, versus disposing of any asset, then becomes the set of operating conditions that generate a forecast with a discounted cash flow value greater than the likely net proceeds of disposition to other natural owners.

Exhibit 4  
A Value-Based Corporate Portfolio Strategy Framework



Source: Booz & Company

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## 5. MONITOR YOUR SOURCES OF VALUE

In a turbulent market, traditional approaches to performance measurement, financial management, and valuation come up short. Value-based management must move beyond measuring value to managing it.

Today, more than ever, strategies are failing in the decisions, not the vision. It is the deployment and execution of strategies that require countless economic, value-based decisions to be made at all levels within the company: managing the asset portfolio, driving for operational excellence, developing

essential capabilities, and exercising M&A discipline.

To manage capital expense in the oil and gas industry, it will be increasingly important to discern exactly which assets are creating value over what scenarios. For instance, companies with shorter time frames or higher leverage ratios can ramp down or delay investments in elements of their portfolios, such as unconventional and biofuels, that are currently on the marginal side of the supply curve until the price of oil recovers.

*In a turbulent market, traditional approaches to performance measurement, financial management, and valuation come up short. Value-based management must move beyond measuring value to managing it.*

## 6. CREATE REAL OPTIONS FOR GROWTH

In a market that expects to see a 12 percent decrease in exploration and production (E&P) spending this year, many leading companies are holding the line on their investment budgets. Exxon Mobil, Chevron, Total, and Shell have all announced that their capital expenditures budgets for 2009 will remain the same as 2008's budget or be reduced by less than 5 percent; moreover, some companies, such as China National Offshore Oil Corporation (CNOOC) and Petrobras, are increasing their capital expenditures. They know that to succeed in the long term, they must move their growth agendas forward.

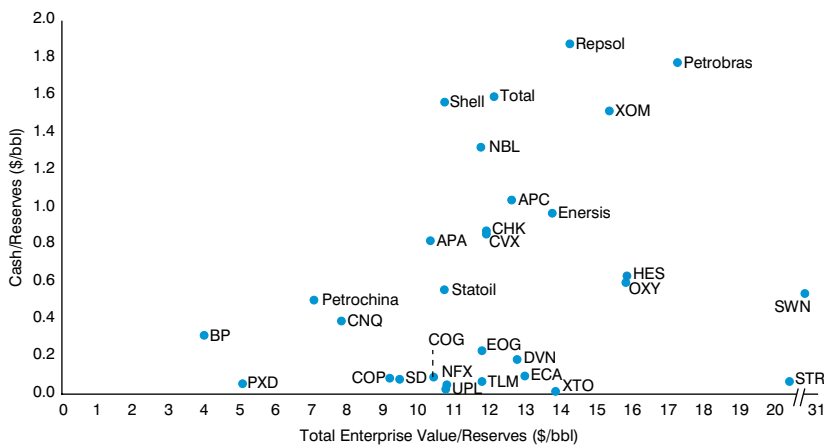
Successful growth platforms emerge from the intersection of macro trends, underserved needs, and organizational capabilities. In some cases, these platforms will be developed organically. In other cases, resource constraints—principally human and financial—as well as time constraints, can lead companies to nonorganic tactics to build their growth platform, including acquisitions, non-op interests, acreage purchases, licensing, partnering in 3-D

data acquisition, co-marketing, and other forms of collaborative enterprise. But in all cases, the best growth strategies are aimed at building up the corporate portfolio of ideas, skills, and competencies, rather than “moving the needle” in terms of financial outcomes. All too often, growth strategies revolve around simply plugging a revenue or earnings growth gap.

In this market, relative liquidity (cash position per barrel of reserves) and value (total enterprise value per barrel of reserves) provide insight into how well your company is positioned to pursue the opportunities created by the recession. Liquidity in the current market supports strategic flexibility; value supports profitability (*see Exhibit 5*).

The larger and stronger players in the industry clearly have a valuable opportunity to shape the market to their advantage. Some stronger players have missed land leases that provide access to key resources and could benefit from enhanced capabilities, while some of the smaller operators, which have

*Exhibit 5*  
*Relative Strength in the Oil and Gas Industry*



Note: Data as of March 19, 2009  
Source: Booz and Company analysis

amassed significant land positions and expertise, are in need of cash. These dynamics have created deals such as StatoilHydro's acquisition of a 32.5 percent interest in Chesapeake Energy's Marcellus Shale assets for \$3.375 billion and BP's acquisition of a 25 percent interest in Chesapeake's Fayetteville Shale assets for \$1.9 billion.

The game isn't only for large and cash-rich companies. Small players should also be considering mergers with similar-sized companies, or partnerships. Opportunities like those that exist today have been harnessed during market discontinuities in the past. Devon Energy Corporation, for example, established a leading competitive position by acquiring several similar-sized competitors—the company has completed 26 acquisitions in its history—and used inorganic moves to expand into new basins such as the Barnett Shale. Similarly in downstream, Valero Energy Corporation pursued a consolidation strategy at a time when the refining sector was definitely not in vogue, increasing its capacity from 530,000 barrels per day to 3.3 million barrels per day during a seven-year period. The company later reaped the rewards when refining margins improved.

In today's markets, the prices of many targets are more attractive and many sellers are motivated by their need to shore up liquidity. Further, when equity markets are either relatively high, or relatively low, the use of equity in lieu of cash can be an attractive option. Sellers can retain an interest in the ongoing entity and reduce the risk of selling at the bottom, and acquirers can often afford to pay a higher premium. An example of a game-changing deal along these lines was announced by Suncor and Petro-Canada, the sum of which creates a more diverse, heavier-weight global player, with many cost and capital deployment synergies.

## CONCLUSION

CFOs are key players in the effort to steer their oil and gas companies through the turbulent times ahead. To be successful, they will have to formulate and execute a comprehensive agenda that enables their companies to manage risk, adjust their capital structures, protect themselves with effective defense strategies, sort out the real sources of value among their businesses and make sound portfolio decisions, and provide the flexibility and resources needed to pursue growth opportunities created by the credit market meltdown and global recession.

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