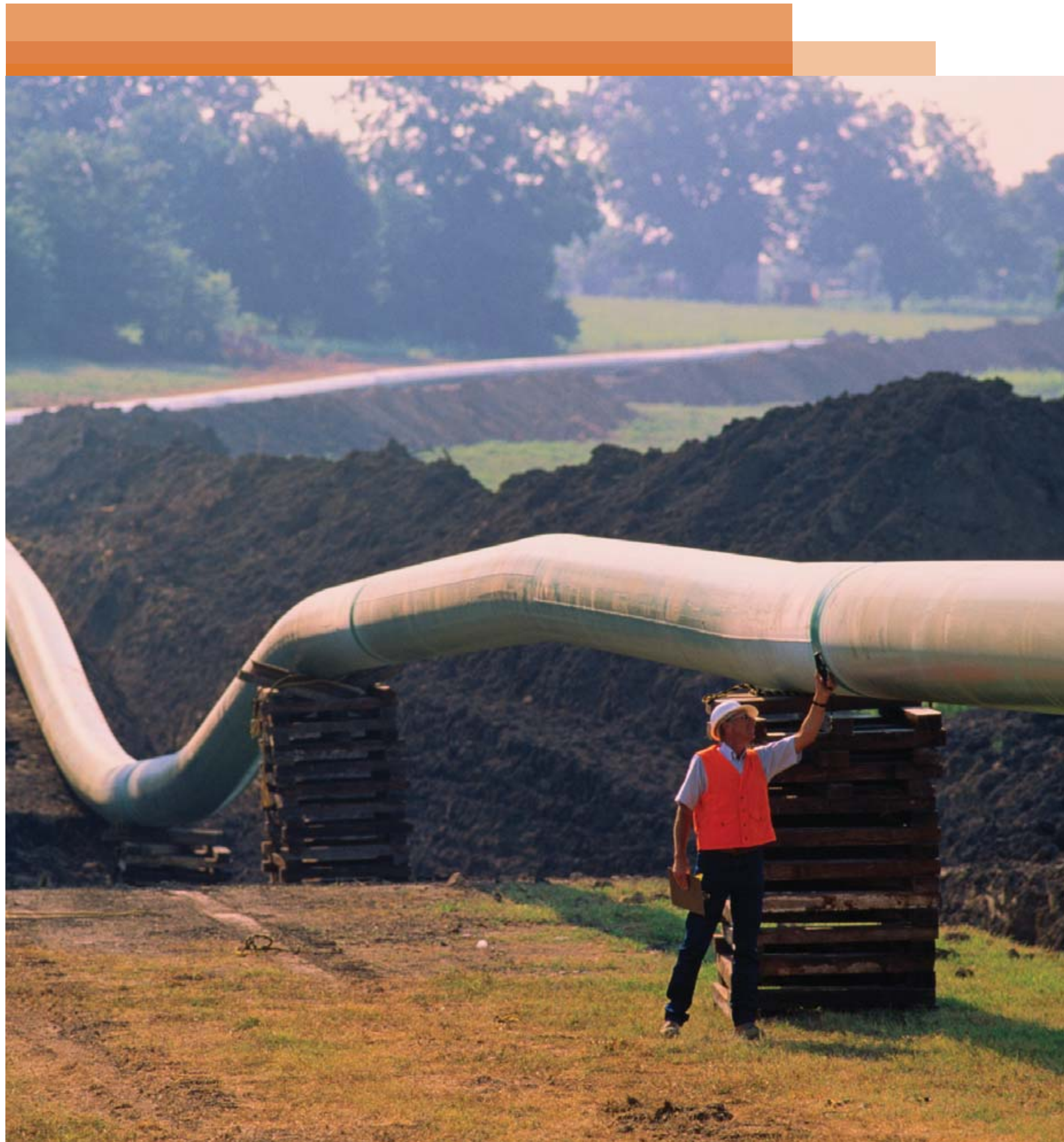
# *The US Energy Revolution*
## The role of private equity in oil and gas

*February 2013*



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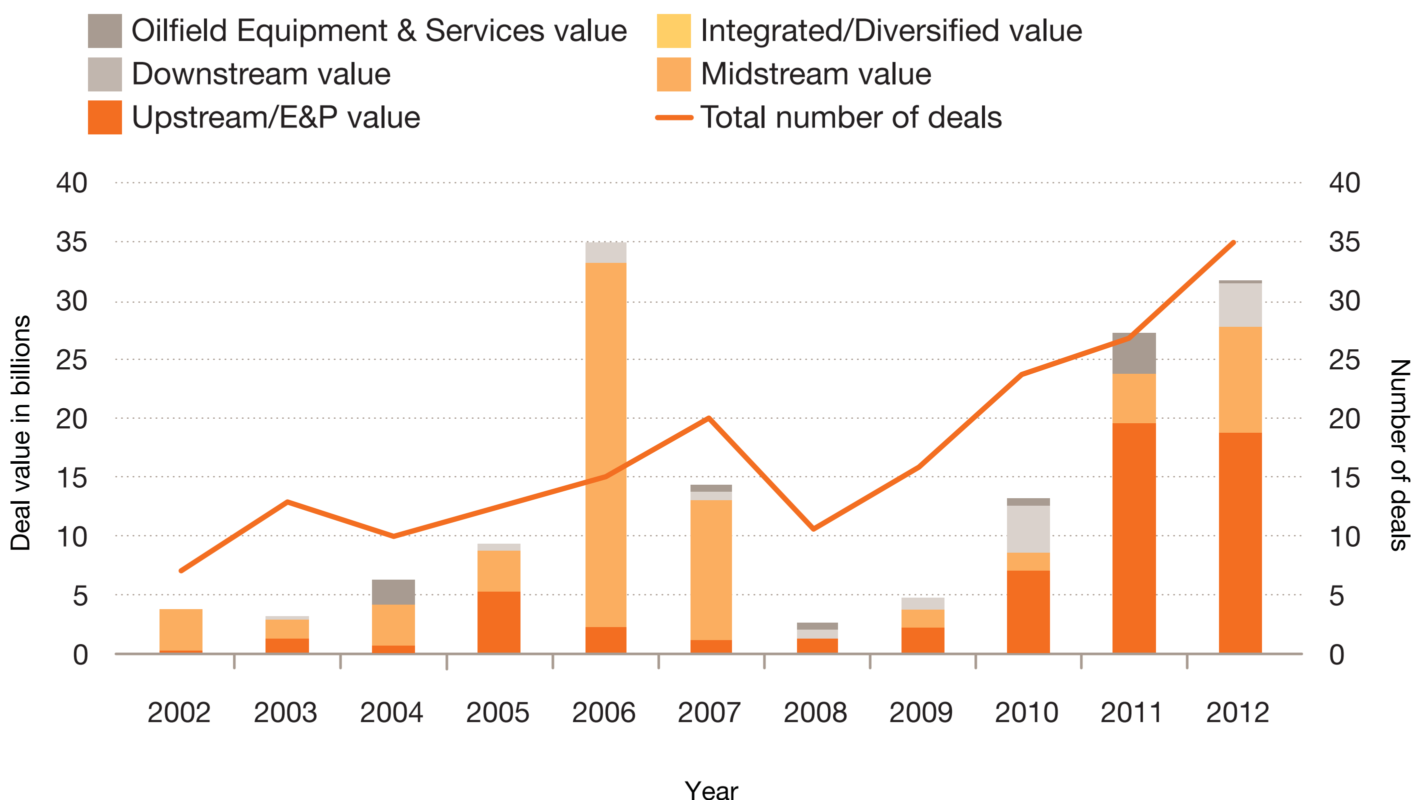
# State of the industry

*During the last decade, the upward trajectory of private equity investment in the oil and gas industry has been unprecedented. Between 2002 and 2012, the annual number of private equity investments has more than doubled (See Figure 1). Although activity dropped during the financial crisis in 2008, the number and value of deals has been rising dramatically, driven by the recovery in credit availability, a divergence in the ratio of crude oil to natural gas prices, and a renaissance in shale resource plays that has produced the highest US oil production in 20 years.*

The current trends stand in stark contrast to the earlier part of the decade where activity was driven primarily by rising oil and natural gas commodity prices and a leverage bubble that burst in 2008. (Note: we focus on the annual number of deals, which provides a clearer picture of growth than do deal values, since these can be skewed by outliers such as a $30 billion transaction in 2006 and $7 billion deals in 2011 and 2012.)

## Total private equity deal activity




Source: IHS Herold

*Note: Search criteria examined in this report represents acquisitions, joint ventures, mergers and swaps of US assets announced between 1/1/02 through 9/30/12 with an enterprise value of at least $50 million. The assets also had to fall into either the upstream/E&P, midstream, downstream, oilfield equipment and services or integrated/diversified industries.

A number of other factors have been drawing private equity into the oil and gas industry over the last decade. The industry requires a tremendous amount of capital, and this need only continues to grow. The shale revolution is projected to require more than $5 trillion in investment over the next 20 years in the US alone—largely directed to the upstream and midstream sectors. Private equity has been moving in to capitalize on this demand for capital. This has also resulted in specific energy targeted funds often with different return profiles than the typical leveraged buyout style returns.

However, perhaps most importantly, oil and gas investment opportunities fall along the entire risk continuum and cater to practically all profiles, strategies and appetites—everything from low-risk interstate transportation deals with fully contracted profiles, to high-risk high-reward commodity price plays.

The risk continuum below ranks the four major sectors of the industry from lower to higher risk. While not exact within each sector, we have attempted to provide a broad outline of the general level of risk within each sector.

## Private equity risk continuum

The resulting capital requirements offer investment opportunities for every risk appetite within the energy sector: from start-ups and companies needing growth capital to mature asset ownership; from direct exposure to commodity prices to exposure at the macro levels only; from fully contracted assets to short-term deals with significant price volatility. Moreover, the industry's lengthy supply chain offers an expansive range of businesses for potential investment with an equally robust range of risk profiles to suit just about any investment mandate.

The broad array of investment opportunities is matched by a full complement of exit strategies. Initial public offerings (IPO) via a master limited partnership (MLP) structure, which are largely limited to the energy industry, have seen a resurgence during the last five years. Upstream MLP IPOs have surged—historically there have been few in this sector. Recently, the market has begun accepting downstream MLPs. In all sectors, "drop-down" strategies have proven to be a very successful mechanism as MLPs seek to bolster distributable cash flow with a stable source of deals for the publicly traded MLP.

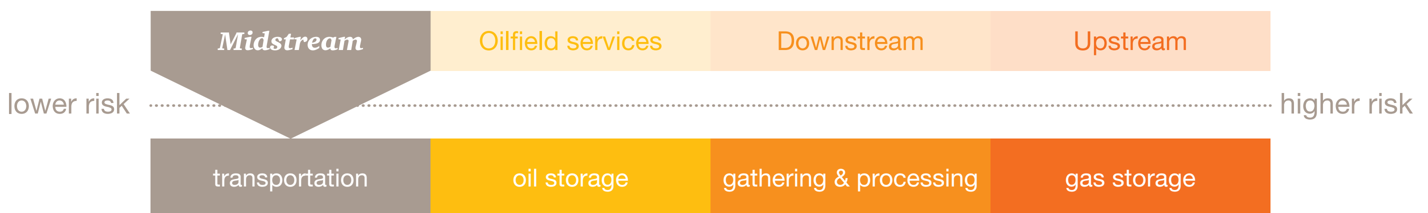
Technology innovations are also driving private equity activity in the energy sector. Innovation continues to spur growth and opportunities within oilfield services, where entrepreneurs and investors are leveraging the industry's low barriers to entry, as well as the follow on effect for exploration and production (E&P) companies that have enjoyed a reduction in risk due to major improvements in technology, largely tied to the hydraulic fracking process.

***The following sections look at each of the major segments of the energy sector in the context of where these opportunities may exist along the risk continuum. Each of the industry segments is discussed in detail from lower to higher risk profiles, with a deeper dive into each of the segment's sub segments.***

# Sector plays – Midstream

Steady, low-risk cash flows have made the midstream sector one of the most popular for private equity investors. Along with a full variety of investment opportunities, midstream investments also enjoy the full range of exit opportunities, including IPOs through MLPs.

## Midstream risk profile




As the midstream risk profile illustrates, transportation falls at the lower end of the spectrum. As a heavily fee-based business with long-term contracts and only some macro-level commodity price risk exposure, transportation has been a favorite investment arena for private equity.

Although private equity has traditionally favored non-FERC regulated intrastate transportation, there has been some movement toward interstate pipelines. These pipeline assets are often distressed and provide opportunities for private capital to play the cycle, restructure the assets, and not suffer pressures to maintain distributable cash flows. With significant capital needs for new pipeline and gathering capacity to accommodate the drastic changes in the direction hydrocarbons now flow in the US, companies continue to reevaluate their portfolios of assets and sell off non-core systems to raise capital to reinvest in and organically grow core assets.

Gathering and processing offers a rich risk spectrum for private equity plays depending on the age and decline rates of the reserves, nature of the commodities gathered and type of customer contracts. Gathering revenues are typically volume dependent; steep decline rates or aging fields can affect future gathering cash flows, particularly if the commodity price environment is discouraging exploration in the fields serviced by the gathering system. On-going development activity indicates the market believes natural gas prices will remain low for the foreseeable future and investment is primarily in liquids-rich shale plays. Processing rich gas to derivative liquids products as well as transportation of those natural gas liquids (NGL) has become a larger portion of the midstream segment. Deal structures for constructing processing plants offer a wide range of commodity price risk options including fee-based agreements and riskier deals where the processor takes on commodity price risk through keep-whole or percentage of proceeds customer contracts.

Natural gas storage falls at the higher end of the risk continuum and these opportunities have traditionally appealed to active investors that are comfortable taking on commodity price risk. Nonetheless, some infrastructure funds have taken an interest in storage when the opportunities involve companies with fully contracted services, solid cash flow, and are in a good location where cycle times to inject and withdraw are relatively quick. Gas storage poses higher risks than oil storage, as variable earnings depend on whether volatility and other factors that affect demand and result in price swings. These price swings offer opportunities for investors to capitalize on short-term price volatility by taking out short-term storage contracts for unused capacity. Without price variability, these opportunities arise less and storage revenues suffer.

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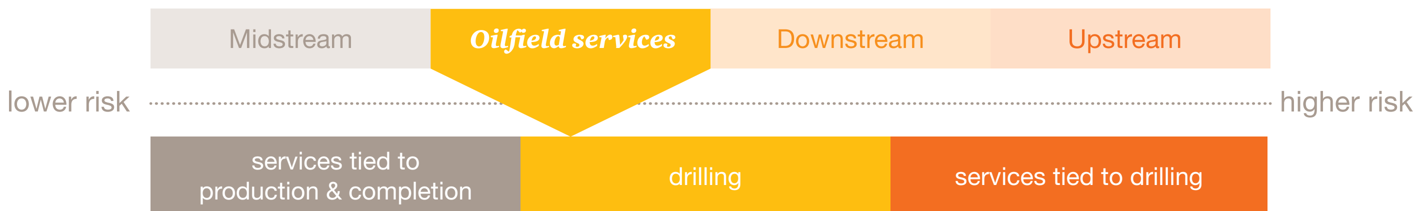
# *Sector plays – Oilfield services*

Although energy sector plays will always be subject to some commodity price risk, the oilfield services sector offers investment opportunities in traditional, established businesses often favored by private equity. The disaggregated nature of the industry offers an enormous number of opportunities for investment across the value chain and private equity firms with deep understanding of the industry's economics have moved aggressively into this sector.

## Oilfield services risk profile




As outlined in the oilfield services risk profile, companies where service offerings are tied more to production than drilling, face lower risk as they are less leveraged to commodity price swings, which directly affect capital expenditure budgets.

Hydraulic fracking has opened up an entirely new portfolio of opportunities to address the needs for increased drilling activities and also the new regions where new drilling is now taking place. There are numerous companies that provide water, chemicals, consumables, services and pipe. There has also been significant growth in companies involved in maintenance, water disposal, compression, wire lining and pressure pumping.

Technology innovation is also creating abundant new options for this sector within the energy industry. Major innovation stems from mega players, however, entrepreneurs are establishing new companies and taking advantage of the industry's low barriers to entry. As a result, the sector offers technology-oriented opportunities along a continuum from growth capital to mature businesses with stable cash flow profiles.

Part of the attraction to oilfield services, as is the case with the industry in general, is the healthy range of exit strategies. Several companies can be combined into a single IPO or an individual company can be sold to a major integrated player looking to expand and diversify its service portfolio.

# *Sector plays – Downstream*

Traditionally, the downstream sector has not been a major focus for private equity investment. It is a capital-intensive industry with high volumes and low margins. It is also extremely vulnerable to economic cycles.

## Downstream risk profile

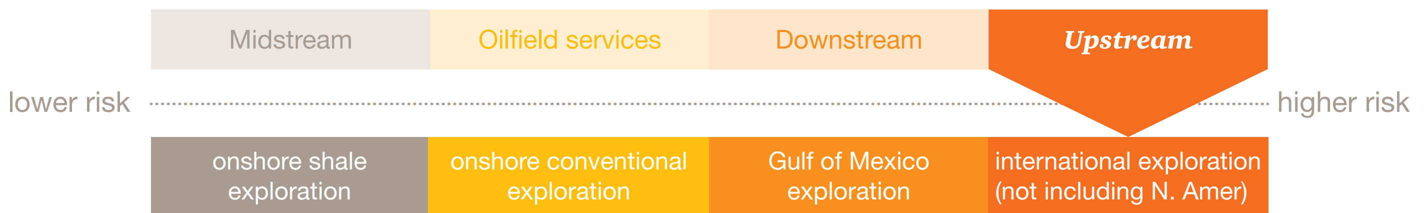
When private equity does enter the refining sector, these firms are often acquiring distressed assets at the bottom of the cycle and trying to monetize them at the top. The downstream sector has offered the greatest number of distressed asset opportunities as falling gasoline demand in the US has resulted in a number of smaller refineries struggling to stay profitable.

However, the current US downstream landscape is changing. The increasing transportation bottlenecks around the US are creating oil price differentials at various locations. Add to that low natural gas prices which reduce production costs, and the result is a very positive short-term outlook for this sector. As a result, there have been some major refinery deals recently on the East Coast. Private equity is also moving into some downstream marketing opportunities, albeit on a very opportunistic basis.

# *Sector plays – Upstream*

Although the upstream sector is inherently leveraged to commodity price risk, the growth and increased liquidity of futures markets and hedging strategies provides a strong armor against commodity price swings. That armor makes the sector more appealing to private equity. With natural gas prices currently low, investors are playing the long commodity price cycle. Although there is much debate about when and why natural gas prices will increase, few argue that they are likely to rise in the near-term.

## Upstream risk profile




Along the upstream risk continuum, opportunities range from international deepwater exploration to the US onshore shale plays, which now come with minimal exploration risk. International plays also come with specific country risk in various areas of the world. These investments are primarily dominated by the oil majors who have the balance sheets and the deep local country knowledge and relationships in order to assess all risks and to underwrite these investments.

In the shale plays, exploration risks have declined considerably with the technological advances in hydraulic fracturing. Although there is still offshore exploration in areas like the Gulf of Mexico, the growth of onshore shale plays has shifted capital to the less risky areas of the regional shale plays where geological knowledge continuously expands. As a result,

upstream risk profiles are aligning more with private equity risk appetites. Given that the knowledge of the shale resource increases with each drilling location, upstream plays are also leveraging operational capabilities of experienced management teams.

Conversely, the growth of shale has also boosted the interest in conventional producing wells for contrarian investors; these properties are often not garnering management attention and Wall Street's focus on shale resources is causing them to be undervalued. This creates opportunities for private equity firms to unlock this value. They are investing in these wells and applying behind the pipe expertise to improve production—an attractive opportunity when investors can lock in forward pricing.

*Recently large private equity players have entered the market mostly via corporate deals, changing the landscape of E&P deals for private equity.*

Traditionally, a few long-standing energy funds have focused on E&P, either buying properties or backing experienced management teams to leverage their relationships and geologic expertise to build companies. However, recently large private equity players have entered the market mostly via corporate deals, changing the landscape of E&P deals for private equity. Direct ownership of the assets offers much more flexibility when monetizing the investments in the future.

# *Potential plays for every player*

During the past decade, private equity has been making investments across the entire value chain of the energy industry. The industry requires enormous amounts of capital and private equity has been capitalizing on the abundance and variety of opportunity. Because of its disaggregated nature, oil and gas offers a uniquely broad range of businesses for potential investment along the entire value chain. The array of opportunities is matched by a full complement of exit strategies, especially IPOs via MLPs which have grown dramatically over the past few years. Private equity firms can target investment opportunities that fall along the entire risk continuum and cater to practically every risk profile, strategy and appetite.

*Over the next three to five years, we expect private activity to continue to increase. We expect on-going major presence in the midstream and upstream sectors as they look to expand their footprint in the US shale resource landscape. Energy targeted funds have experienced record inflows recently and this capital will be deployed to various opportunities across the risk continuum.*

# Contacts

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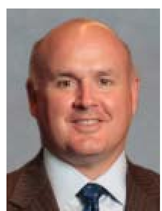

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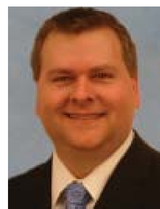

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