

Industries
Energy, Utilities & Mining


O&G Deals*

2007 Annual Review

Mergers and acquisitions activity within
the global oil and gas market



*connectedthinking

PRICEWATERHOUSECOOPERS 

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Methodology

O&G Deals includes analysis of all global cross-border and domestic electricity and gas utility deal activity. It is based on published transactions from John S. Herold, Inc. 'M&A database', December 2007. Analysis encompasses announced deals, including those pending financial and legal closure and those which are completed. Deal values are the consideration value announced or reported including any assumption of debt and liabilities. Figures relate to actual stake purchased and are not multiplied up to 100%.

The geographical split of the deals refers to the location of the asset. The sector and subsectors analysed include: Downstream: gasoline service stations, petrochemical, propane distribution, refining, retailing/marketing - misc., terminals/storages; Midstream: gas gathering/processing, pipelines - gas, pipeline - liquids, tankers/other transportation; Oilfield Equipment Services: diversified, drillers/drilling rigs, geophysical/reservoir services, manufacturers, miscellaneous, offshore services/vessels, production/well services, tool rental/drilling services; Upstream: acreage, reserves. A full list of transactions throughout 2007 is available by visiting the *O&G Deals* website at www.pwc.com/ogdeals.



O&G Deals 2007 reviews M&A activity in the oil and gas industry. We examine both the rationale behind the overall trends and look at the key individual deals.

Deal activity in the oil & gas industry was characterised by a wide diversity of forces in 2007. M&A opportunities for the majors remained limited. Activity by the national oil companies (NOCs) was also relatively subdued. The unique circumstances of Russian energy industry restructuring produced a flow of transactions. Private equity assumed a very high profile and was a major driver of O&G deals. Oilfield service consolidation accelerated sharply leading to a huge increase in service deal value. International transactions replaced North American and European deals in the multi-billion dollar stakes.

We look both at the year under review and ahead to the future direction of deal-making in the sector.

We also highlight, in a series of dialogue panels throughout the report, some of the critical issues for companies engaging in deal activity within the sector. Drawing on our global experience as an adviser to oil and gas M&A players, our commentary addresses all key markets in the sector.

Looking ahead, we examine the effect of the 'credit crunch' and a more uncertain economic outlook on deal-making in the sector. We look at the imperatives that will continue to underpin activity as well as the factors that will inhibit deal-making.

Richard Paterson
Global Energy, Utilities and Mining Leader,
Global Oil & Gas Leader

Rick Roberge
US Energy Transaction Services Leader

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UK Energy Markets & Value
Advisory Leader

02 Report highlights

M&A momentum stays level

Deal activity in the sector remains at the level achieved in 2006. Total deal value edged up slightly – from US\$291.1bn to US\$292.2bn. In contrast, the 2006 total had risen 16% from the previous year. The volume in 2007 was sustained despite a relative lull in the overseas investment activity by the Russian, Chinese and Indian NOCs that had been part of the 2006 increase. Big international moves, in the downstream and the service sector, were key to keeping overall deal totals up. International activity in these two sectors accounted for 23% of total O&G deal value, up from just 4% in 2006.

Big leap in service sector deals

Activity in the oil field services sector intensified with a 165% increase in the total value of deals to US\$67.3bn in 2007. The big leap in the total value continues the trend of 2006 when it rose 132%, to US\$25.4bn from US\$10.9bn in 2005. The share of service sector M&A in total O&G deals has increased from 4% in 2005, through 9% in 2006, to 23% in 2007. The average value of individual deals in the sector nearly tripled from US\$162 million in 2006 to US\$451 million in 2007.



High profile for private equity

Private equity investors were major O&G players in 2007. Remarkably, three of the top ten O&G deals involved private equity buyers. Private equity investment was also a notable feature in the midstream and service sectors. The extent of private equity investment in the top fifty deals is something that has not been seen in the sector in recent years.

Oil sands and coalbed methane remain key upstream targets

In a high oil price environment, and with limited availability of major conventional upstream opportunities, more unconventional oil and gas assets, situated in stable locations close to end markets, continued to attract buyers. There were 20 deals involving Canadian oil sand targets and 18 for coalbed methane in Canada, the US and Australia, compared with 17 and 21 respectively in 2006.

04 Deal totals

Oil and gas total transaction value in 2007 maintained the levels achieved in 2006. Again it was deal value rather than the number of deals that kept the total buoyant. In 2006, average deal value rose 16%. In 2007 the rise was a more modest 3% but it was enough to edge O&G total transaction values up to US\$292.2bn despite a slight fall in deal numbers (Figure 1).

Deal value, both total value and average individual deal value, crept up in 2007 compared to the previous year rather than following a dramatic upward trend in line with the oil price as might be expected. Indeed, as we see below, there was in fact a falling-off of deal sizes in the upstream which resulted in a reduction in average upstream deal value. Companies inevitably remain divided about whether to make M&A moves in the higher priced environment. What is clear is that the floor has been raised. Earlier hesitancy about the sustainability of deals that assumed US\$50-plus oil has been replaced by an acceptance that the world has changed, and that US\$50-US\$60 is now the floor for deal metrics. Nonetheless, the room for upstream deal-making remains constrained.

Most upstream resources are in the hands of the National Oil Companies (NOCs). Partly because of this, the majors, with the exception of Eni, were notably absent. Instead, the majors largely concentrated on non-M&A routes to expansion – investment in new exploration acreage in emerging provinces, investment in existing major fields through production sharing agreements and, in the downstream, focusing on the considerable investment needed to add ‘new’ refining capacity. The O&G deal environment is dominated by mid-cap transactions and it is deals in the less than US\$1bn and smaller bracket that are increasing in size (Figure 2).

Figure 1: Total oil and gas deals, 2006 & 2007

| | 2006 | | | 2007 | | |
|--|------------------------------|----------------------|------------------------|------------|----------------------|------------------------|
| | Number | Total value (US\$bn) | Average value (US\$bn) | Number | Total value (US\$bn) | Average value (US\$bn) |
| | 912 | 291.1 | 0.319 | 893 | 292.2 | 0.327 |
| | year on year % change | | | -2% | +0.4% | +2.6% |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*; John S. Herold

Figure 2: Size of deals, 2007 (year on year % change in parenthesis)

| By value | Number | Total value (US\$bn) | Average value (US\$bn) |
|--------------------|-----------|----------------------|------------------------|
| Less than US\$250m | 707 (-4%) | 33.5 (+25%) | 0.047 (+27%) |
| US\$250m – US\$1bn | 129 (+8%) | 66.8 (+15%) | 0.518 (+6%) |
| More than US\$1bn | 57 (+0%) | 191.9 (-7%) | 3.366 (-7%) |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*; John S. Herold

In recent years, NOCs from Russia, China and India have become competitors for assets outside their 'home territory'. However, in 2007, there was a lull in this type of growth activity. The relative absence of the majors and foreign expansion from the NOCs was reflected in significant shifts in deal value between different sectors (Figure 3). Both the downstream and the oilfield services sector saw deal values increase in terms of average individual deal value and total value. Aggregate deal value in both sectors more than doubled, in downstream from US\$28bn in 2006 to US\$61.7bn in 2007 and, even more dramatically, from US\$25.4bn to US\$67.3bn in the services sector.

The dynamism of the oilfield services sector is being driven by both the growth in demand and utilisation rates for rigs and the need for service companies to scale up globally in a consolidating market. 2007 was notable for some big consolidation moves in this sector (see next chapter). Much of the US\$33.6bn increase in downstream deal value was accounted for by the single US\$20.1bn purchase of Lyondell, which is classified as an international transaction, but there were also significant increases in downstream deal value in Europe and the Asia Pacific region (see pages 12 and 16).

In contrast, the total value of upstream and midstream deals fell year on year by 28% and 43% respectively, matched by similar falls in average transaction value. The falling-off of upstream value reflects the trends discussed above and the limited market opportunities in the upstream. The midstream change is less dramatic than the headline trend suggests. The difference between the two years is wholly accounted for by the large US\$32.4bn management and private equity buy-out of Kinder Morgan in 2006. Overall deal numbers were broadly level in each sector between 2006 and 2007. In the upstream and services sectors, though, there were significant year on year changes in the number of big US\$1bn plus transactions. The number of US\$1bn plus upstream deals fell from 38 to 29 while those in the services sector doubled from six to twelve, again reflecting the contrasting dynamics and different opportunities in the two sectors.

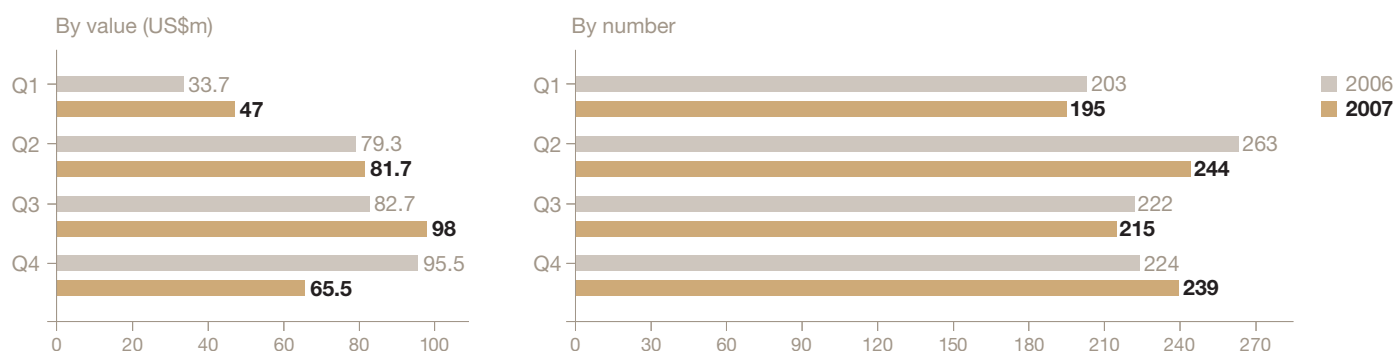
There was no clear evidence of a fall-off in O&G deal activity in the second half of the year as the credit crisis broke. Although final quarter total deal value was down year on year, such changes are sensitive to the exact timing of individual large deals and, in this instance, was wholly accounted for by the single US\$32bn StatoilHydro deal announced in the final quarter of 2006. Indeed, the number of final quarter deals in 2007 was 6.7% up on the final quarter of 2006 (see Figure 4).

Figure 3: Analysis of sector (year on year % change in parenthesis)

| | Number | Total value (US\$bn) | Average value (US\$bn) |
|------------|-----------|----------------------|------------------------|
| Upstream | 576 (-2%) | 133.3 (-28%) | 0.231 (-27%) |
| Midstream | 74 (+1%) | 29.9 (-43%) | 0.404 (-44%) |
| Downstream | 94 (+0) | 61.7 (+120%) | 0.656 (+120%) |
| Services | 149 (-5%) | 67.3 (+165%) | 0.451 (+180%) |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*; John S. Herold

Figure 4: Quarterly tracking of O&G deals by value (US\$m) and number of deals, 2006-2007



Source: PricewaterhouseCoopers, *O&G Deals 2007 Annual Review*

06 Deal makers

Strategic moves by downstream players, significant consolidation in the services sector, restructuring of the Russian energy market, big moves by private equity players and continuing plays around Canadian upstream assets all featured in the top ten O&G deals table of 2007.

The table-topping deal in the sector came in the downstream from Basell, the Dutch chemicals group, in what was, in effect, a leveraged US\$20.1bn buy-out of Lyondell. The deal will be leveraged to the volatility that comes with commodity prices and refining margins in the sector. Basell had missed out in the auction for Huntsman but the move for Lyondell gives it the opportunity to diversify into the high-margin refining sector and integrate Lyondell's US strength with its own strength in Europe. Both the bidder and the target have significant presence in Asia, again reinforcing the geographical fit of the deal.

The big increase in deal values in the oil services sector was led by the merger of Transocean and Global SantaFe. This US\$17.4bn deal creates the largest company in the world offering drilling services in shallow and deep waters. The move highlights the momentum towards consolidation in the sector as companies strive to gain greater scale in response to rising demand. This momentum gathered further pace in December 2007 with the US\$6.6bn purchase of Grant Prideco by National Oilwell Varco resulting in a combined group with a market capitalisation around US\$32bn. Earlier in the year, Sweden's Ssab Svenskt Stal moved for Canada's IPSCO in a US\$7.4bn move that brings together two specialists in steel products for the oil & gas industry.

Figure 5: **Top Ten – oil and gas deals 2007**

| No. | Value of transaction (US\$m) | Date announced | Buyers | Sellers | Primary Continent |
|-----|------------------------------|----------------|---|--|-------------------|
| 1 | 20,145.0 | 17 Jul 07 | Basell Holdings BV; Access Industries | Lyondell Chemical Company | International |
| 2 | 17,363.6 | 23 Jul 07 | Transocean ASA | GlobalSantaFe Corporation | International |
| 3 | 13,238.5 | 03 May 07 | Rosneft | Yukos; Government of Russia | Russia & CIS |
| 4 | 9,585.2 | 12 Jul 07 | Apollo Management LP | Huntsman Corporation | International |
| 5 | 7,373.2 | 03 May 07 | Ssab Svenskt Stal AB | IPSCO Inc | North America |
| 6 | 6,642.7 | 17 Dec 07 | National Oilwell Varco | Grant Prideco Incorporated | International |
| 7 | 6,278.5 | 31 Jul 07 | Marathon Oil Corporation | Western Oil Sands Incorporated | North America |
| 8 | 5,830.2 | 31 Oct 07 | Penn West Energy Trust | Canetic Resources Trust | North America |
| 9 | 5,260.0 | 12 Dec 07 | Institutional Investors; Babcock & Brown Infrastructure; Babcock & Brown Energy Inc | Knight Inc | North America |
| 10 | 5,072.8 | 24 Sep 07 | TAQA | PrimeWest Energy Inc; PrimeWest Energy Trust | North America |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*, based on published transactions from John S. Herold, Inc. *M&A database*, December 2007

Rosneft's US\$13.2bn purchase of Yukos' remaining production units and refineries from bankruptcy was one of the final moves. This acquisition has seen Rosneft transformed from the nation's eighth biggest oil major, worth around US\$6bn in 2004, to become the country's biggest oil producer with a market capitalisation closer to US\$100bn.

Private equity deals in 2007 were headed by Apollo Management's US\$9.6bn bid for US chemicals group Huntsman. Apollo moved for Huntsman through Hexion, a US chemicals group controlled by Apollo. Later in 2007, it emerged that the Abu Dhabi Investment Authority (ADIA) had taken a 10% pre-IPO stake in Apollo, highlighting the quiet importance of sovereign wealth funds in M&A activity across a range of sectors. Australian investment group, Babcock & Brown, increased its US interests with a US\$5.3bn consortium bid for the MidCon gas pipeline assets. The consortium included Canadian and Dutch pension groups as well as Babcock & Brown businesses. Knight (one of the Kinder Morgan companies and formerly Kinder Morgan Inc.), Midcon's owner, retains a 20% stake in MidCon and remains the pipeline operator under a long-term contract.

The US\$5.8bn combination of Penn West and Canetic brought together interests in a significant number of Western Canada's highest quality conventional oil and natural gas pools and also included a number of non-conventional growth opportunities including oil sands, coalbed methane, shale gas and enhanced oil recovery. Canadian assets were also the target of a US\$5.1bn move by Taqa, the Abu Dhabi-based oil and gas investment company, for PrimeWest, an oil and gas royalty trust with natural gas, crude oil and natural gas liquids operations in Alberta and in the US states of Montana, North Dakota and Wyoming.

O&G deal dialogue:

Getting ahead of changes in M&A accounting standards

The Financial Accounting Standards Board (FASB) has recently released new accounting standards (FAS 141R and FAS 160) which introduce far-reaching changes to how companies track and report M&A. The new standards, applicable to both US and international companies, will have a significant impact on accounting practices that have been in place for many years. What should energy companies do before the standards take effect in 2009? Will it change M&A strategy or the economics of deals?

Three specific changes particularly deserve the attention of oil and gas companies' senior executives and boards – the expensing of transaction and restructuring costs; the broader application of fair value concepts to earn-outs; and acquired contingencies. These changes will significantly impact financial statements, both at the time of the deal and after, and have the potential to generate greater post-deal earnings volatility. The good news is that the new standards should not change M&A strategy but they will almost certainly impact on how deals are designed and reported. Additionally, the new standards do not change the economics of deals, but they will affect the planning and execution, as well as accounting and disclosure. Due diligence will require greater precision, especially with regard to financial projections and deal accounting. It will be important to reassess how, when, and what to say about deals in investor communications. Planning early improves the ability to adapt existing processes and practices.

Whether your company is considering a transaction, joint venture agreement, production sharing agreement, divestiture or organic expansion, PricewaterhouseCoopers brings together a global team with appropriate industry experience and skills, including functional and technical specialists, for our oil and gas clients. We review external reporting for transparency consistent with the internal information that management uses to run the business. To gain audit comfort, we examine and validate the controls put in place by management to mitigate financial reporting risks.

08 Deal places

Deal numbers remained stable in North America and Europe but both territories saw big falls in transaction value with no mega-deals emerging to rival the landmark US\$32bn Kinder Morgan and StatoilHydro deals of 2006. Instead, attention switched to the international arena with many of the biggest deals covering multi-territory assets.

Elsewhere, the share of deals in Russia and the CIS increased as restructuring of the Russian energy industry moved apace. O&G deals in the Asia Pacific region remained remarkably level, both as a share of global deal value and in terms of actual total deal value. However, average value of transactions for Asia Pacific O&G assets rose by more than a third, led by larger deal activity in the downstream and offsetting a fall in the number of deals.

Figure 6a : All O&G deals by continent

| North America | 2006 | 2007 | % change |
|-------------------------|-------|-------|----------|
| Value of deals (US\$bn) | 164.7 | 129.7 | -21.3% |
| Number of deals | 556 | 563 | +1.3% |

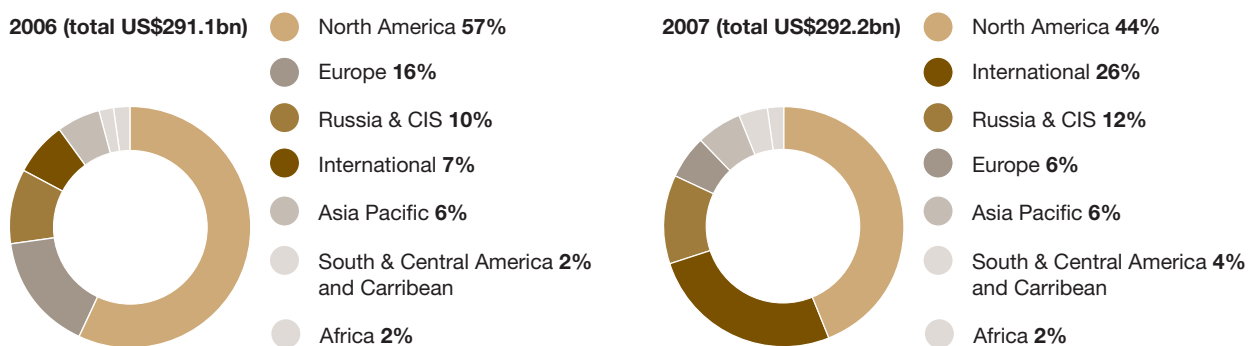
| Europe | 2006 | 2007 | % change |
|-------------------------|------|------|----------|
| Value of deals (US\$bn) | 46.7 | 18.2 | -61% |
| Number of deals | 88 | 78 | -11.4% |

| Russia and the CIS | 2006 | 2007 | % change |
|---------------------------|------|------|----------|
| Value of deals (US\$bn) | 30.1 | 35.7 | +18.5% |
| Number of deals | 42 | 41 | -2.4% |

| International | 2006 | 2007 | % change |
|-------------------------|------|------|----------|
| Value of deals (US\$bn) | 20.5 | 75.8 | +269.2% |
| Number of deals | 50 | 71 | +42% |



Figure 6b: All transactions by continent by value of transactions – 2006-2007



Source: PricewaterhouseCoopers, O&G Deals Annual Review 2007

| South & Central America and Caribbean | 2006 | 2007 | % change |
|---------------------------------------|------|------|----------|
| Value of deals (US\$bn) | 5.5 | 11.4 | +108.4% |
| Number of deals | 33 | 39 | +18.2% |

| Africa | 2006 | 2007 | % change |
|-------------------------|------|------|----------|
| Value of deals (US\$bn) | 7.4 | 5.2 | -29.6% |
| Number of deals | 38 | 25 | -34.2% |

| Asia Pacific | 2006 | 2007 | % change |
|-------------------------|------|------|----------|
| Value of deals (US\$bn) | 16.2 | 16.2 | 0% |
| Number of deals | 105 | 76 | -27.6% |

10 Deal places: North America

O&G deal volume in North America was down 21%, from US\$164.7bn in 2006 to US\$129.7bn in 2007. Much of the difference was accounted for by the presence of the US\$32.4bn Kinder Morgan buy out in the 2006 total. Setting this aside, deal numbers and value were broadly level year on year. There were 31 deals in 2007 worth US\$1bn or above, for example, compared to 32 in 2006.

The number of upstream deals rose by 11% but big strategic moves by North American corporations, such as the 2006 deals involving Anadarko, were absent in 2007. Oil price volatility and high valuations were factors clearly limiting large strategic moves. The most significant move was Marathon Oil's US\$6.3bn purchase of Canada's Western Oil Sands. Marathon is the US's fourth largest oil and gas company and the deal represents its first step into the Alberta oil sands in northern Canada with a 20% stake in the Athabaska Oil Sands Project. Dominion Resources took the opportunity to continue its exit from the exploration and production (E&P) sector. Its sale to Eni was one of five disposals of E&P assets by the company totalling US\$9.9bn as it switched its focus to power generation and energy distribution, transmission, storage and retail businesses.

Moves by foreign buyers for North American assets were also a common theme in 2007. Ipso, the largest North American target, for example, was the focus of a US\$7.4bn take-out by Sweden's SSAB. Other noteworthy moves from European buyers included Italian company Eni's US\$4.7bn purchase of Gulf of Mexico assets from Dominion Resources. Canadian assets were the focus of Norwegian company StatoilHydro's US\$2bn acquisition of the North American Oil Sands Corporation and the US\$5.1bn bid by Taqa, the Abu Dhabi-based oil and gas investment company, for PrimeWest. PrimeWest was constituted as a Canadian income trust. These entities became more vulnerable to acquisition following a regulatory change in their income trust Canadian tax advantages which resulted in a drop in their unit price. In addition, further uncertainty over Alberta oil sands investments grew in 2007 as the Government of Alberta passed new legislation increasing royalty rates. Finally, Babcock & Brown led a consortium purchasing MidCon from Knight and Anadarko sold a share of its Gulf of Mexico assets to Japanese NOC, Nippon/Mitsubishi, for US\$1.2bn.

Seventy-six per cent of all deals for North American assets were in the upstream sector, accounting for 63% of all North American O&G deal value. This upstream deal share was up slightly on 2006. Midstream numbers were down by 28% although actual total value was slightly up on 2006 levels, if the value of the 2006 Kinder Morgan deal is taken out of the comparison. The Knight purchase headed the midstream list followed by GE Energy's US\$2.1bn acquisition of interests from HM Capital, including natural gas gathering and processing systems in Texas, Louisiana, Oklahoma and Kansas, as well as an intrastate pipeline in Louisiana. Two separate purchases by Enterprise GP Holdings, worth a total of US\$2.7bn, saw the general partner of a large publicly traded master limited partnership (MLP), acquire the Texas Eastern Products Pipeline Company from EPCO and further pipeline and gas storage and processing interests in Texas and Louisiana from NGP Energy Capital Management and an individual seller.

The downstream sector saw the fewest number of North American deals and total deal value more than halved, down 55% on 2006 levels. The US\$7.5bn fall in downstream deal value was more than offset by a US\$17bn leap in the total value of service sector transactions, up 288% from US\$5.9bn in 2006 to US\$22.9bn in 2007. The pace of consolidation in the service sector is illustrated by the way in which IPSCO featured in the biggest deal in successive years, in 2006 as a buyer and in 2007 as a target. The extent of consolidation is highlighted by the increase in US\$1bn plus deals. The IPSCO purchase of NS Group was the only one in 2006. In 2007 there were five US\$1bn plus North American service sector deals.

Figure 7: North America oil and gas deals by sector

| | By value (US\$bn) | % share | Year on year % change |
|--------------|----------------------|---------|-----------------------|
| Upstream | 81.2 | 63% | -15% |
| Midstream | 19.4 | 15% | -61% |
| Downstream | 6.2 | 5% | -55% |
| Services | 22.9 | 18% | 288% |
| Total | US\$129.7bn | | |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*; John S. Herold

12 Deal places: Europe

Total O&G deal value in Europe could not rival that of 2006 when the overall total was boosted by the StatoilHydro US\$32.2bn upstream merger. Setting this single deal aside, remaining upstream deal value was slightly up and the value of downstream deals more than doubled, from US\$3.7bn in 2006 to US\$8.4bn in 2007, to account for the biggest share of total European O&G deal value.

In the upstream sector 31 European deals totalling US\$4.6bn were completed during 2007 with a further five having undisclosed deal values. The largest upstream deals were: the US\$0.9bn E.ON AG purchase of two undeveloped Norwegian fields and acreage from RD Shell; the US\$0.6bn merger of Pertra with DNO's Norwegian operations, Det Norske Oljeselskap ASA (NOIL), to form Det norske oljeselskap ASA; and Taqa's US\$0.6bn acquisition of Talisman Brae assets in the UK North Sea.

Downstream deal totals overtook those in the service sector in 2007. The boom in service sector deals, which had seen year on year service transaction value rise seven-fold in 2006, fell back somewhat in 2007. European service sector total deal value fell 18% from US\$5.9bn in 2006 to US\$4.9bn in 2007. In contrast, downstream total deal value rose 125%. When it came to deal numbers, the service and downstream sectors mirrored each other – service deals went down year on year, from 22 to 17 and downstream deals went up from 17 to 22.

Figure 8: Europe oil and gas deals by sector

| | By value (US\$bn) | % share | Year on year % change |
|--------------|-------------------|---------|-----------------------|
| Upstream | 4.6 | 25% | -87% |
| Midstream | 0.3 | 2% | +12% |
| Downstream | 8.4 | 46% | +125% |
| Services | 4.9 | 27% | -18% |
| Total | US\$18.2bn | | |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*; John S. Herold

The largest downstream deal saw Malaysia's state-owned oil and gas company, Petronas, buy Italian lubricant maker FL Selenia from Kohlberg Kravis Roberts in a US\$1.5bn deal. Petronas already had a strategic alliance with FL Selenia to distribute lubricants. The other US\$1bn plus downstream activity saw Swiss-listed Petroplus, which was floated by its private equity backers in 2006, continue its steady acquisition of refineries from the majors with the US\$1.4bn purchase of BP's Coryton refinery in England and a US\$475 million deal with Royal Dutch Shell for the Petit Couronne and Reichstett Vendenheim refineries in France. The sale to Petroplus was one of three 2007 downstream disposals in Europe by Royal Dutch Shell totalling US\$1.3bn.

The biggest deal in the European oilfield services sector was an all-share merger between Norway's Wavefield and its bigger domestic rival TGS. The two companies specialise in seismic surveys and the US\$1bn deal would create the world's fourth largest oilfield-mapping services company. The deal has proved to be controversial with the involvement of two activist investment funds – Audley Capital, based in London and Bermuda-based Everest Capital – who had bought into Wavefield and are pressing for better deal terms from TGS. The intensity of oil field service sector consolidation was highlighted by another tussle over a small Norwegian seismic company. Oil services giant Schlumberger launched a US\$400 million bid for Eastern Echo only to find the bid potentially frustrated by a share grab by the much smaller CGG Veritas of France.

O&G deal dialogue:



Assessing risk as energy trading makes a comeback

In the world of high oil prices, investment banks and trading houses have become significant players, trading barrels and megawatts in addition to traditional stocks and other financial instruments. The acquisition of the trading book of an energy merchant (and the methods used to produce them) is inherently complex and requires meticulous due diligence. Evaluating a trading portfolio comes down to the inputs. One transaction, depending on the type of deal, could have hundreds of inputs. Adjustments to these inputs could be the difference between a deal being underwater by US\$100 million or in the money by the same amount.

In many cases, there are differences between an auditor's evaluation of trading book for financial reporting purposes and management's analysis of the trading book for management reporting purposes. These different approaches are beneficial to an acquisition due diligence process since management calculates their trading positions on a daily basis. Key issues in assessing risk include:

- Align trades by type and commodity.
- Identify market areas.
- Evaluate the positions the trading system did not capture.
- Evaluate the contracts and their level of complexity.
- Evaluate market location and assessment of complexity.

As long as the market place is deregulated, energy trading companies will continue to do deals. These deals require a well developed, structured process designed to handle the valuation and analysis complexity generated by numerous possible trading outcomes. PricewaterhouseCoopers' energy professionals have the experience and deep industry understanding to manage this complexity and to deliver value and contribute to your successful deal.

14 Deal places: Russia and the Commonwealth of Independent States

Total deal value was up 19%, from US\$30.1bn in 2006 to US\$35.7bn in 2007, in the Russian Federation and neighbouring CIS states. The number of deals was relatively unchanged, 41 deals in 2007 compared to 42 the previous year. This pushed average individual deal value up 21% and the US\$870 million deal size was three to four times the average US\$236 million recorded in other geographic regions. The number of US\$1bn plus deals, which had risen from four in 2005 to eleven in 2006, fell back to seven.

Not surprisingly, the vast majority, 83%, of the region's O&G deal value was in the upstream sector. This was more than double the 40% upstream share worldwide outside the region. The remainder of Russian and CIS activity was split fairly evenly between the midstream and downstream with a negligible amount of services deals.

M&A activity was driven by the continuing restructuring of the Russian energy industry. The two biggest transactions saw Rosneft buying the rest of Yukos for US\$13.2bn and then sharing a half interest in Tomskneft in a US\$3.7bn deal with Gazprom Neft. The acquisition of Yukos assets saw Rosneft overtake Lukoil as the number one producer in Russia. Italian-Russian energy reciprocity stepped up with Enel/Eni transacting US\$5.8bn of business in two deals that formed part of the Yukos break-up. The Italians took a 20% stake in integrated Russian oil producer Gazprom Neft, formerly held by Yukos, for US\$3.6bn and acquired lot 2 in the Yukos liquidation procedure for US\$2.1bn. Gazprom has a two-year call option to buy the Gazprom Neft stake.

Figure 9: Russia and the CIS oil and gas deals by sector

| | By value (US\$bn) | % share | Year on year % change |
|--------------|-------------------|---------|-----------------------|
| Upstream | 29.6 | 83% | 10% |
| Midstream | 3.2 | 9% | No figure for 2006 |
| Downstream | 2.8 | 8% | -10% |
| Services | 0.1 | 0% | 39% |
| Total | US\$35.7m | | |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*; John S. Herold

Other inward investment moves saw the state-owned China International Trust and Investment Company (CITIC) sharing a half interest with KazMunaiGaz in Kazakhstan's Karazhanbas heavy oil field in fulfilment of a condition it entered into when it bought the assets in 2006. Urals Energy, a small LSE-listed E&P company, agreed a 35.3% interest in the Srednebotuobinskoye (SRB) oilfield in eastern Siberia in a US\$590 million with Taas-Yuriakh Neftgazodobycha .

Elsewhere, TNK-BP announced the sale to Gazprom of its 63% stake in Russia Petroleum, license holder and producer of the Kovytkta gasfield in Eastern Siberia. After closing, BP, TNK-BP and Gazprom will form a joint venture with US\$3bn of assets to be contributed by each partner. Upon formation of the JV, TNK-BP will have an option to buy back a 25% interest in Kovytkta. However, at the time of writing, the deal remained on hold with Gazprom saying it had not received adequate information and documentation of the value of Kovytkta. Remaining deals in the region saw a consolidation of state-owned oil and gas shippers.

O&G deal dialogue:



Fair value of assets and liabilities in a transaction

There is a diversity of approaches to what represents 'fair value' for financial reporting purposes. Is fair value the same as the transaction price? What is the appropriate discount rate? How should fair value methods be applied? Multiple accounting standards have defined and discussed 'fair value' differently. New accounting guidance (FAS 157) to create a consistent framework has now been introduced which heightens the importance of bringing an energy company's valuation analysis in line with the new guidance on prospective transactions.

Under the new guidance fair value is defined as: "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."

- This is an 'exit price', or the price at which to dispose of an asset or settle a liability. It is not the price to acquire an asset or assume a liability.
- It represents what you could get for the asset if you sold it now – rather than focusing on the purchase price.
- Weighting of multiple valuation approaches is permitted and encouraged where appropriate
- Discount rate adjustments are allowed to be considered systematic risk (it is no longer necessary to discount at the risk-free rate).

These changes will have a profound impact on acquisition due diligence. Valuation expertise will be needed earlier in the deal. Valuation and accounting will need to be well co-ordinated to thoroughly assess the financial reporting impacts. A wider array of 'what-if' analysis/dynamic deal modelling will be required to deal with the inherent uncertainties and volatilities.

16 Deal places: Asia Pacific

Total 2007 deal value in the Asia Pacific region maintained its 2006 level with a total US\$16.2bn of deal activity. The total continues to fall short of the US\$19.6bn transacted in 2005.

Deal numbers fell 28% from 105 to 76 but this pushed average size up 38% to US\$213 million.

The region covers a wide diversity of markets. In mature markets such as Australia, consolidation is a theme, but in other markets, such as China and India, some deals are strategic investments to gain a foothold in the territory. Australia provided the focus for the largest number of deals within the region but South Korea was the location for the biggest share of total transaction value with a string of deals for downstream refining, petrochemical and retailing assets. A US\$2.5bn purchase of South Korean refining assets by Hanjin Group headed the list of Asia Pacific deals. The deal, for a 28.4% stake in S-Oil refinery assets from Ssangyong Cement Industries, was made by a special purpose company, Hanjin Energy, set up by the Hanjin Group. Hanjin Energy is 82.5% owned by Korean Air and the deal is partly motivated by the need for a stable supply of jet fuel.

The Middle East accounted for the second largest deal value within the region with a total of US\$3bn. A single US\$2.1bn sale, the outcome of the Turkish Government's auction for a 51 per cent stake in Petkim, Turkey's main chemicals company, dominated the total. This was the second biggest deal in the Asia Pacific region as a whole. A consortium, including Socar, the State Oil Company of Azerbaijan Republic, placed the winning bid and Petkim will provide an outlet for Azerbaijan's rising gas production.

Figure 10: Geographical location of Asia Pacific oil and gas deals, 2007

| | Number of deals | Total deal value (US\$bn) | Average deal value (US\$m) | % share of Asia Pacific total deal value |
|---|-----------------|---------------------------|----------------------------|--|
| South Korea & Japan | 8 | 5.2 | 654 | 32% |
| Middle East (including Turkey) | 7 | 3.0 | 434 | 19% |
| China | 11 | 2.7 | 249 | 17% |
| Australia & New Zealand | 19 | 2.1 | 113 | 13% |
| South East Asia (including: Cambodia, Malaysia, Papua New Guinea, Philippines, Singapore, Thailand) | 25 | 2.2 | 82 | 13% |
| India and neighbouring South Asia | 6 | 1.0 | 170 | 6% |
| Total | 76 | US\$16.2bn | US\$213m | |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*; John S. Herold

In China, one of the most noteworthy transactions was US private equity group Blackstone's first investment in China in the form of a minority stake in chemicals maker China National BlueStar. It was bought, subject to regulatory approval, from state-owned ChemChina for US\$600 million. In Australia, upstream deals constituted the majority of deals. The largest bid was ARC Energy's US\$737 million friendly merger with oil and gas producer Anzon. If completed it would have created one of Australia's largest independent energy companies. However, at the time of writing, Anzon has since recommended a superior 2008 bid from competitor Nexus Energy and ARC has withdrawn its bid.

The O&G sector in Australia saw a considerable amount of investment in liquefied natural gas (LNG) assets. In the past, some of this might have been expected to show up in deal activity as companies used deals to inject equity. Instead, companies are taking on projects in their own right. For example, Woodside Energy's aggressive LNG development of its 100%-owned Pluto gas field in Western Australia at a cost of US\$11bn. One of the larger upstream deals involving Australian companies in 2007 was Woodside's US\$418 million disposal of its Mauritanian onshore and offshore assets to Malaysia's state-owned oil and gas company Petronas. The sale formed part of Woodside's strategy to divest from Africa to focus on its significant development projects.

Continuing demand for coal seam methane (CSM) gas assets was reflected by AGL Energy's US\$188 million deal for Queensland Gas Company's Undulla Nose coal seam methane operations. One of the key drivers of the demand for CSM is that there is greater competition for many of the traditional gas sources across Australia's east coast. This is occurring at the same time as the demand for gas-fired electricity generation grows, driven in turn by water constraints facing coal-fired and hydro generators, government incentives for gas-fired generation, and by climate change concerns and imminent emissions-trading requirements.

Figure 11: Asia Pacific oil and gas deals by sector

| | By value (US\$bn) | % share | Year on year % change |
|--------------|----------------------|---------|-----------------------|
| Upstream | 4.5 | 28% | -56% |
| Midstream | 1.5 | 9% | 400% |
| Downstream | 9.5 | 58% | 94% |
| Services | 0.7 | 5% | 0% |
| Total | US\$16.2bn | | |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*; John S. Herold

18 Deal places: International

International deals, involving either international groups of investors or assets that are spread across territories, were up across the board in 2007, with the exception of the upstream. Total value rose 269% from US\$20.5bn in 2006 to US\$75.8bn in 2007. Deal numbers were up 42% from 50 to 71 and average deal value was up 160% from US\$400 million to US\$1.1bn.

International deals took four of the top ten deals in 2007, with bids for Lyondell, GlobalSantaFe, Huntsman and IPSCO totalling US\$54.4bn. In the 2006 top ten, in contrast, there was just one international deal, worth US\$5.3bn. These additional top ten deals accounted for the big increase in average international deal value and much of the year on year increase in total international deal value. The midstream sector had the biggest increase in international deal numbers with a doubling of transactions from 12 to 25 accounted for by the buying and selling of shipping assets, some of which reflected growth in the LNG market. But it was the downstream and the service sectors that drove international deal value upward.

The jump in downstream international deal value came from just two transactions – the bids for Lyondell and Huntsman. US\$36.1bn, nearly half of 2007 international deal value, came from the 33 deals in the oilfield services sector. Many of these were bigger purchases, accounting for the overall increase in average international deal value. The 2007 average international oilfield services deal value was US\$1.1bn. In the previous year, there had been a similar number of international oilfield services deals (30 in 2006) but the total value and average value of these deals was much lower, at US\$12bn and US\$0.4bn respectively. These trends reflect the intense competition for service assets as companies expand their global scale in response to demand.

In the upstream sector the largest international deal completed during 2007 by far was Eni's US\$3.5bn acquisition of Burren Energy which included assets in Yemen, Egypt, Turkmenistan, India and The Republic of Congo.

Figure 12: International oil and gas deals by sector

| | By value (US\$bn) | % share | Year on year % change |
|--------------|-------------------|---------|-----------------------|
| Upstream | 3.9 | 5% | -39% |
| Midstream | 4.3 | 6% | 126% |
| Downstream | 31.6 | 42% | 15700% |
| Services | 36.1 | 48% | 201% |
| Total | US\$75.8bn | | |

Source: PricewaterhouseCoopers, *O&G Deals Annual Review 2007*; John S. Herold

The continuing unravelling of the 'credit crunch', economic slowdown and fears of actual recession will cast a cloud of uncertainty over the period ahead. However, while the wider financial and economic environment will be less predictable, many of the imperatives within the sector will remain. Corporate players will be mindful of the pressure to replace reserves and the structural rationale for consolidation. National oil companies will continue to use their strength to look for international expansion opportunities. Middle Eastern investors will remain active deal makers. Supply constraints, geopolitical considerations and climate change concerns will necessitate continual re-evaluation of asset portfolios.

The phase of service sector consolidation and oilfield service companies' reach for global scale has a long way to run. Ultimately, logic points to a small number of big global oilfield services players that will be akin to the majors in the integrated sector. The sector is complex with many speciality services and consolidation will not necessarily make sense across the board, but the scope for deal-making will be high on the agenda of many companies as well as investors.

Economic slowdown and possible lower oil prices will act as a spur as well as a brake on activity. Along with the 'credit crunch' it will inhibit private equity activity but it is also likely to create opportunities for corporate players. A softening of prices would undoubtedly have an impact on deal prices but deal activity could remain robust or, indeed, gain new momentum as companies identify opportunities for value.

For the majors, the steady process of tidying up assets, offloading those that are non-strategic and investing in areas that generate better returns, will continue but really major transformational deals will continue to present a challenge. As always, the possibility of deal-making between a major and one of the larger independents cannot be ruled out. Big moves by the national oil companies, however, will remain more likely than big moves by the majors.

Twin imperatives will continue to be at work for the NOCs. The worries of countries not having enough oil and natural gas, such as China and India, will continue to trigger deals to secure resources. Companies from resource-rich states will seek deals to expand globally. Outward expansion by the Russian, Chinese and Indian NOCs was relatively subdued in 2007 but the mandate for these entities remains the same and the possible turbulence of the period ahead may yield opportunities for them. At the same time, the two-way investment interplay between these countries and western O&G companies as well as investors will continue to be dynamic.

The exceptional deal volume that flowed from Russian restructuring will recede. However, other government-triggered opportunities will arise. In Australia, for example, the state government of South Australia is removing an ownership cap on Santos, Australia's third-largest oil and gas group. With substantial reserves and a strong desire to increase its international presence, the company sees this as a growth opportunity, allowing them to offer scrip for acquisitions. It has also been speculated that the move will lead to a multi-billion dollar auction.

Finally, the 'credit crunch' will inevitably have an impact on deal-making in the sector. In 2007 a number of big deals were financed with leverage and that capability is going to be compromised in the period ahead. We are unlikely to see the same share of top deals being accounted for by such arrangements in the coming year. Such an impact is likely to be felt, in particular, in the midstream sector where a significant number of deals traditionally rely on more leverage.

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