

# Oil & Gas offshore: there will be growth

By

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The oil & gas industry has demonstrated a long period of steady growth. Since the 1950s, oil demand growth has only been negative three times: during the two oil crises and, more recently, in 2008<sup>(1)</sup>.

Companies benefit from this growth. During the past 10 years, leaders in oil & gas with a high exposure to offshore, particularly towards subsea and deep offshore, have managed to grow significantly during the past 10 years: Keppel (11 bn\$, revenues CAGR : 17%), Subsea 7 (6 bn\$, 21%), FMC Technologies (6 bn\$, 12%) and Oceaneering (3bn\$, 15%), realizing TSRs of more than 20% for their shareholders between 2003 and 2012 (see Table 1).

**- Table 1 -**  
**TSR of offshore leaders**  
(2003-2012)

<i>Companies with high exposure to deep offshore (&gt;50% of revenues)</i>		<i>Companies with limited exposure to deep offshore (&lt;50% of revenues)</i>	
<u>Company name</u>	<u>TSR (03-12, in %)</u>	<u>Company name</u>	<u>TSR (03-12, in %)</u>
Subsea 7	35%	NOV	21%
Seadrill	30%	Saipem	19%
Dril-Quip	27%	Oil State Intl	19%
Keppel	26%	Diamond	17%
Oceaneering	24%	Cameron	16%
FMC Technologies	24%	DOF	15%
CGG Veritas	24%	Schlumberger	14%
Technip	21%	ENSCO <sup>(3)</sup>	8%
Fugro	21%	Transocean <sup>(2)</sup>	7%
STX OSV	18%	Tidewater <sup>(1)</sup>	6%
Bureau Veritas	18%	Baker Hughes <sup>(1)</sup>	4%
<b>Average</b>	<b>24%</b>	<b>Average</b>	<b>13%</b>

(1) Companies strongly involved in the GoM, share price impacted by market doubts regarding possible new regulation for oil exploitation in the GoM, ; (2) Deepwater Horizon blow out impact on the share price; (3) Limited share of highly technical operations vs. competitors and market doubts on GoM activities  
Source: Bloomberg, Estin & Co interviews, estimates and analyses

<sup>(1)</sup> IEA – International Energy Agency

Will the growth perspectives of offshore companies remain attractive in the future? Will the following factors have a negative impact?

- Improved energy efficiency leading to growth deceleration of demand in primary energy sources;
- Rising share of alternative resources to petrol;
- Shale oil (and gas) as alternatives to offshore drilling;
- Increased risks of offshore drilling and tighter regulations (following Macondo / Deep Horizon accident in 2007) leading to increasing costs for offshore development and production.

#### *Petrol demand will not cease growing*

World economy is projected to grow by 4%<sup>(2)</sup> (in volume terms), driven by still energy hungry emerging countries. Therefore, including improvements in energy efficiency (in both mature and emerging countries), the IEA expects an increase of petrol demand by 0,9% per annum until 2020 and by 0,7% until 2035 – compared to 1,3% for the period between 1997 and 2012. In other words, excluding a major economic downturn, like in 2008, oil demand is expected to continue to grow, even if at a slower pace. In this scenario, even if petrol's share of primary energy decreases (from 33% in 2012 to 29% in 2035), it will remain a dominant energy source. Yearly petrol demand would increase from about 90 mbpd<sup>(3)</sup> in 2012 to 97 mbpd in 2020 and then 108 mbpd in 2035.

#### *Deep offshore production will need to grow to cover increasing demand*

In order to match this demand, different sources of petrol are competing. Currently the majority of petrol is extracted onshore, with conventional (mostly from the Middle East), representing about 60% of worldwide supply, and non-conventional (in particular shale oil in the US), growing strongly but currently representing only about 5% of total supply. Offshore petrol is mostly sourced from shallow operations (Middle-East, Gulf of Mexico, West Africa, North Sea, Asia-Pacific, etc.), and represents 24%, whereas deep offshore (Gulf of Mexico, West Africa, Brazil, etc.) currently accounts for only 6%. The remaining 5% of petrol production comes from other sources (tar sands, etc.).

Since, for the most cost competitive production zones, such as onshore conventional and shallow offshore, only limited new reserves have been discovered, their share in total production will either decline or, at best, remain stable.

Non-conventional, continental oil production has been developing rapidly in the US and will continue to grow. It has entered the petrol market as a cost competitive alternative to deep offshore production. However, in the US, peak production should be reached soon (around in 2025) and, in other geographical locations, development has hardly started and faces difficult barriers:

- In Europe, exploration projects are rarely approved and large scale development is out of sight;
- In China, the national government has approved an important plan, but development is unlikely to be as successful as in the US (higher expected extraction costs and economically less viable fields, lack of water access and lack of technical expertise, etc.).

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<sup>(2)</sup> IMF forecast from October 2013

<sup>(3)</sup> mpbd – million barrels per day

All in all, shale petrol development seems to be limited to the US and will have only a transitory effect on the long-term supply needs of petrol demand.

From this perspective, there seems to be no alternative to deep offshore development to cover the additional 18 mbpd of petrol demand by 2035, compared to 2012. According to our models, offshore production volume should therefore grow by 1,3% p.a. until 2020 and 0,7% until 2035, with stronger growth rates for deep offshore at 4,4% p.a. until 2020 and 3,6% until 2035.

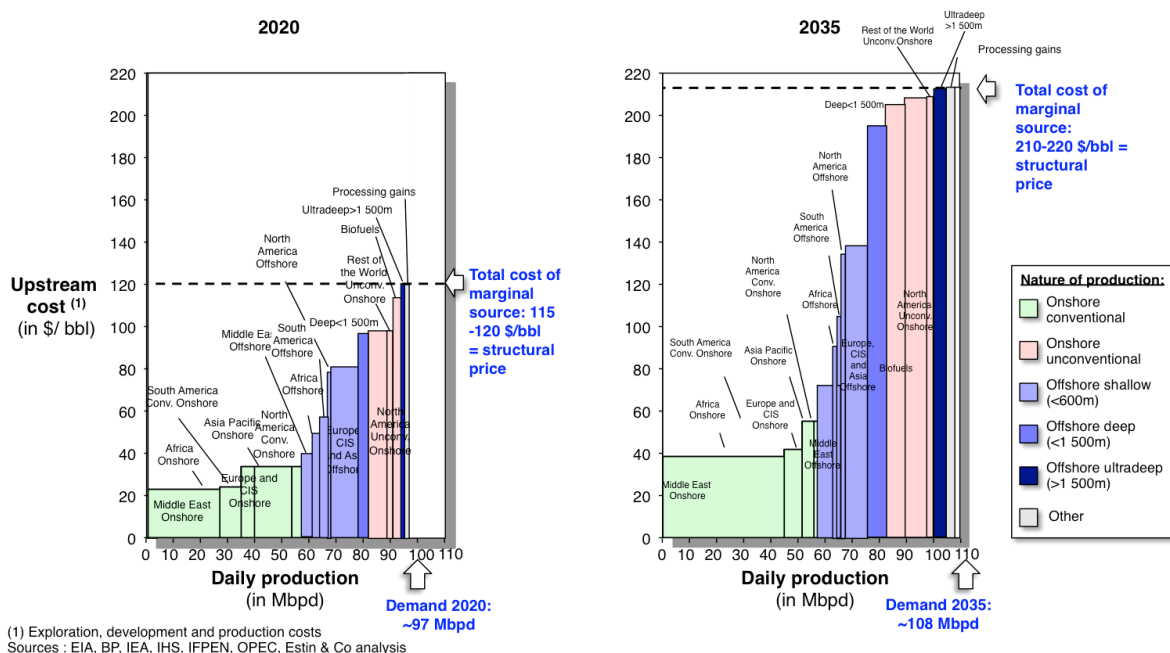
*Production costs will continue to increase*

Unless the offshore industry manages to significantly reduce costs, thanks to technological innovation and further concentration, costs (for exploration, development and production) are set to continue to increase by about 5% per annum since:

- Investments in exploration technologies need to be strengthened to keep up a minimum success rate (e.g. development of 4D seismic technology);
- Due to increasing water depths, more capex will be required in subsea development (above sea architecture and subsea infrastructure, increased complexity of engineering projects, etc.);
- New development architectures (such as complete subsea installations with the absence of FPSOs) will take time to be used at large scale;
- Tightened regulations for security will likely continue to increase costs.

Due to the increase of costs of the marginal supply (which is ultra-deep offshore) of petrol, prices are set to increase from a current average structural price of about 80 \$/barrel to about 115 \$/barrel 2020 to 215 \$/ barrel in 2035 (see Table 2).

**- Table 2 -  
Oil price will increase**



Within this scenario, the deep offshore industry is set to continue long-term growth of about 10% p.a. in value terms, despite or because the factors described in the introduction.

There will be growth in offshore - but leading companies in the industry will have to use different drivers to exceed expectations and to create value.

Fundamentally there are three ways (or a combination of them) for offshore companies to accelerate growth or increase margins above competition:

- 1) Focus on particularly attractive activities or areas with superior growth perspectives and/or higher profitability;
- 2) Concentration of existing activities;
- 3) Redefinition and development of outperforming business models.

*(1) Focus on the most attractive activities*

Growth perspectives are not uniform across types of activity (i.e. decommissioning vs. geoscience) and geographies (i.e. North Sea vs. Asia-Pacific).

In a simplified way, the offshore industry follows the pattern that for any given region, strongest growth is achieved first in exploration, followed by development, then production and, finally, by decommissioning. Such a cycle lasts several decades and is repeated in a similar way in each region. For example, development projects in West Africa and Asia-Pacific are forecasted to grow by more than 20% in volume for the next 5 years, compared to 8% in the North Sea or 5% in the Gulf. Decommissioning in North Sea will have very high growth rates in the future, but the activity hardly exists in West Africa. Focusing on the most promising activities and regions will lead to superior growth.

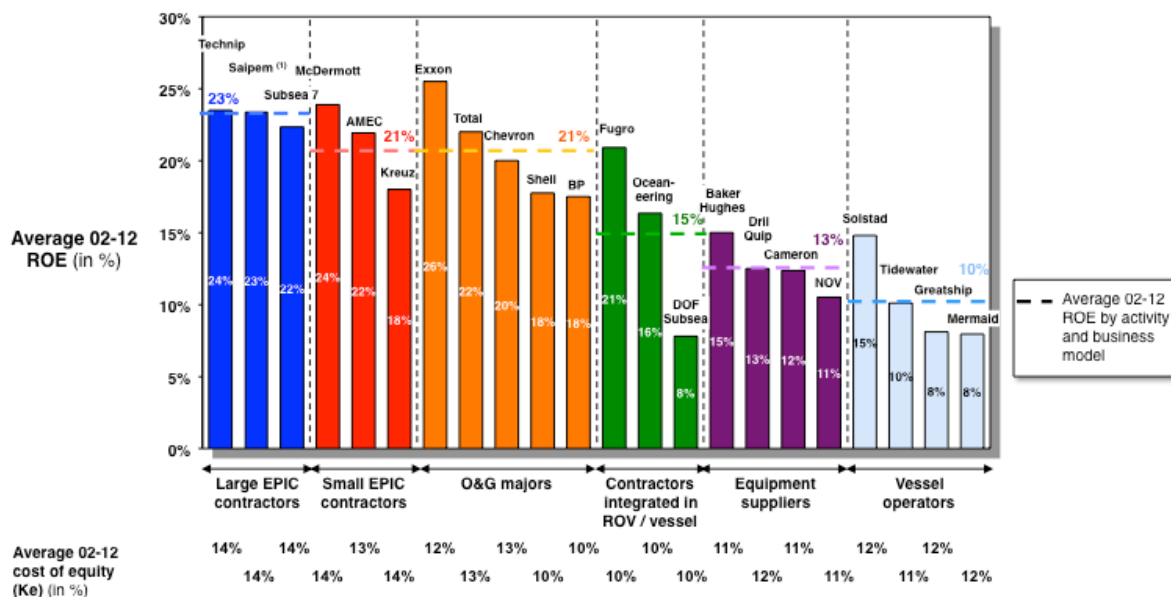
Moreover, profitability level perspectives are not equal and depend on the type of activities and its concentration. For example, the historical net profits for activities such as large EPIC contracting<sup>(4)</sup>, which is highly concentrated, have been high, with an average ROE of 23%. The Oil & Gas majors (producers) and small EPIC contractors<sup>(5)</sup> realise slightly lower, yet still high levels of profitability, with an average ROE of 21%. Small contractors are less profitable as the entry barriers are lower and, depending on the region, the activity is much less concentrated. Other activities in the offshore industry, have a lower structural profitability with an average ROE of 10 to 15% but like the Oil & Gas majors, also enjoy a lower risk profile, with an average Ke of 11% (see table 3). Selection of the most attractive activities is key to superior growth and profitability (for a given level of risk).

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<sup>(4)</sup> Contractors that are focused on front engineering and project management for large EPIC contracts (Contract size > 500 M\$)

<sup>(5)</sup> Contractors that either provide detailed engineering and project management for small development projects or are subcontracted on large EPIC contracts

**- Table 3 -**  
**Risk/ return profiles differ by activity and business model**  
 (2002-2012)



(1) Saipem subsea activities only, estimated  
 Source: Bloomberg, Annual reports, Estin & Co analyses

*(2) Concentration of existing activities*

Most offshore activities are characterized by economies of scale, either at the local or regional level (i.e. operation of offshore vessels or engineering of small offshore development project) or global level (i.e. production of offshore specific equipment). Development of leadership positions through concentration of the strategic segments will create additional value. However, a certain number of segments are already concentrated, for example the market share of the top four leading players in subsea trees, umbilicals, manifolds and jumpers, and control equipment represent already more than 70% of the global market and entry barriers are high.

Entry barriers are expected to further increase as, in many countries, operating as a foreign company has become more difficult; local content requirements (i.e. labour, equipment manufacturing, local flag for vessel operations, etc.) have increased, particularly in countries within attractive regions such as West Africa (Nigeria, Angola) and Asia-Pacific (Malaysia/ Brunei, Australia, Indonesia, India).

Another factor leading to higher entry barriers and concentration is increased safety regulations (such as OCIMF) following the Macondo accident in the Gulf of Mexico. Increased standards translate into higher costs (training of staff, implementation of new processes to allow complete transparency of operations, etc.) and capex (increased standards of equipment, redundancy investments, etc.) which will emphasize advantages of larger companies and will lead to the crowding out of small companies in fields where there used to be limited entry barriers.

### *(3) Re-definition and development of outperforming business models*

The offshore industry, having focused on growth rather than on efficiency in many activities, presents room to develop and re-define business models with the potential to outperform competitors. Some examples of re-defining business models and to reduce the complexity of the complex value-chain and to gain efficiency are:

- Integrated offer along the value-chain to simplify Oil & Gas project structure and to provide the end client with a bundled offer of services, equipment and expertise and also to ensure availability of critical components in bidding processes (with the exemple of Technip integration into umbilical equipment);
- Re-internalization of key services and strategic equipment to capture more value (with the example of Subsea7 merger with Acergy to integrate the pipelaying to the engineering and general contracting services);
- Dematerialazation of assets to reduce capital intensity of traditional asset-heavy Oil & Gas activity in order to achieve scales in other activities to consolidate positions (with the increasing trends towards lease-back of offshore assets to financial institutions);
- Re-segmentation of the services and equipment following technology development and to face the commoditization of certain equipment (focus on strategic equipment, niche components ...).

The offshore environment will remain attractive. However, the offshore activities are constantly changing to adapt to new challenges. Therefore, sources of value creation are shifting and only companies with the strongest dynamics, highest anticipation and most innovative business models will manage to outperform the competition.

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*Estin & Co is an international strategy consultancy based in Paris, London, Zurich and Shanghai. The firm assists the boards of major European, North American and Asian groups in their growth strategies, and private equity funds in analysing and improving the value of their investments.*

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