

# Innovative financing for upstream oil and gas

By John Martin

Managing Director, Global Energy, Standard Chartered Bank



The huge scale of investment required to meet energy demand over the next 20 years is well known to the petroleum industry, with the International Energy Agency (IEA) estimating that some US\$1 trillion a year will need to be invested over this period. In all segments of the petroleum industry, structural changes are now underway which are altering its fundamental nature. What is perhaps less widely discussed is that such changes will have a significant impact on how the industry is financed in future years.

Over the past two decades, the nature of the upstream exploration and production (E&P) business has been affected by restricted access for international oil companies (IOCs) to conventional resources and by the need for the development and application of new technology to exploit new areas. There are no easy reserves anymore, and opportunities for worthwhile exploration in traditional oil basins still open to the international players have become scarce. Companies need to replace their depleting reserves and are forced to do so either through acquisition or through drilling in technologically or politically challenging 'frontier' areas. Both alternatives may rely on external finance, but the financial risks and funding structures are substantially different.

IOCs increasingly have to find and extract new reserves from more difficult locations, such as ultra deep water, utilising advanced technologies. Only a relatively small proportion of this technology is proprietary to the IOCs, which has led to a surge of new opportunities for the

oilfield services sector. Overcoming these challenges and developing new technologies is going to require heavy capital expenditures with associated financing requirements, and service companies will play a central role in their development.

In Brazil, recent oil discoveries in the large offshore 'pre-salt' play of the Campos and Santos basins will probably transform the country into one of the largest oil producers in the world. However, there are considerable technical, infrastructure and resourcing challenges which need to be overcome. Given the scale of the planned developments, the financing needs are going to be massive, especially as numerous major developments are being undertaken simultaneously by one operator (Petrobras). Project sponsors will have to come up with creative ways to raise funding to fulfil these developmental capital costs.

Meanwhile, the shale revolution in the US is causing tectonic shifts in the industry, with the IEA predicting the US to become the world's largest oil producer by 2020. As technology evolves, more unconventional shale resources are becoming commercially extractable; but with the rapid decline rates these plays require constant re-investment to maintain production. Oilfield services companies have expanded in response to the increased demand. Liquids-rich plays have become the focus for the industry as shale gas oversupply has been responsible for low Henry Hub gas prices. In the short term, low natural gas prices will prove to be a boon to economic recovery in the US. However, over the medium term, reduced drilling of shale gas plays

(due to marginal economics), increased demand for gas (for example, in transport) and the export of gas via LNG could all be contributors to a rise in the US gas price. Players such as Shell, Chevron and, recently, ConocoPhillips, are now replicating these technologies in China to explore and develop the shale potential there.

New exploration plays do, however, continue to be unearthed – often by independent oil companies. An example is east Africa, which

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has become a headline story with a recent string of gas discoveries off the coast of Mozambique and Tanzania. Close to 100 trillion cubic feet of gas has been discovered and possibly more is to be booked as drilling continues. The immediate focus is to commercialise these vast discoveries, most likely through the development of multi-train LNG projects. These LNG projects are strategically well placed to be able to export to gas-hungry regions and, in particular, to provide diversity of supply for Asian buyers. The gas play in the region is still in the nascent stages, and the lack of an upstream or midstream industry in these countries is likely to impose additional costs. In addition to the need to build infrastructure and access, there are increased costs and potential risks due to inadequate security and transparency. These roadblocks will need to be tackled together for the commercialisation of east African projects.

### Changing relationships

National oil companies (NOCs) control well in excess of 70 per cent of proven oil and gas reserves in the world and are responsible for over 60 per cent of output. Unlike the IOCs, whose major aim is to maximise shareholder returns, the objectives of NOCs also include the strategic agenda of their parent country, such as improving energy security. Over the past decade there has been a significant increase in 'international' merger and acquisition activity by NOCs as they seek to access opportunities that meet the strategic goals of their respective governments. Asian NOCs, and in particular Chinese state-owned enterprises have been dominant acquirers, and typically they are cash-rich or have easy access to additional finance from Chinese financial institutions. Initially, such acquisitions were focused on developing countries, but more recently they have also targeted OECD countries, as in the Chinese National Offshore Oil Corporation's acquisition of Canada's Nexen, placing them in more direct competition with IOCs.

For IOCs wishing to invest in countries such as Brazil and Nigeria, 'local content' rules are a means by which policymakers attempt to maximise value creation in their local economies. Local content requirements stipulate the inclusion of the NOC or local oil companies and govern employment, infrastructure development, capital and operational expenditure for IOCs operating within a host country. There are pluses and minuses to

this approach. The laudable aim is that in partnership with foreign firms it can allow indigenous companies to develop skills and aid in technology transfer to local industry. However, inexperienced local companies, a lack of vital technical skills and the bureaucracy associated with local content rules can limit the efficient development of resources for the host government.

Resource-rich NOCs can also require ongoing funding for asset investment when their cash flow goes to their state treasuries. International banks, local banks (for 'local content' reasons they may be included in loan syndicates and they typically charge higher interest rates than international banks) and even IOC partners themselves may provide funding to ensure the necessary investment in assets.

### Funding environment

In parallel with a changing petroleum sector, the banking and finance industry is undergoing fundamental changes. A new regulatory framework is being imposed through the implementation of the Basel III accord in the wake of the financial crisis. There is additional uncertainty for banks as national regulators attempt to translate global standards into local rules. Banks will face the challenge of choosing the right strategy and operating model in implementing the new rules and the changes will be a good indication of the strengths and weaknesses of financial institutions. Banks' future positions will depend on how they can use their current capabilities and how they invest in new ones that will keep them in a competitive position among their peers.

In the tightened regulatory environment, banks will be required to keep higher capital against loans. At the same time, in order to keep a stable funding ratio, their funding will have to be better matched to the maturity of their assets. This is likely to result in higher costs of funds for banks and eventually higher borrowing costs for oil and gas clients because banks will not benefit from the relatively lower costs of shorter-term deposits. The availability of long-term finance for projects will be crucial given the huge capital requirements of new developments in the industry in the following years. However, project finance is an asset class that will be impacted by the new regulations of Basel III. This is because of the long tenors and associated development and operating risks which will attract higher capital adequacy requirements than has been demanded in



the past. As borrowing from a bank is likely to be more expensive than in the past, fixed income investors are the possible new players in the financing landscape of the petroleum industry. The bond market can partly fill the gap left by banks' reduced ability to offer project finance. Pricing is now becoming a crucial factor in matching risks and returns for banks and, therefore, as costs of funds from banks are rising, oil companies will be looking more into the international bond market when it comes to financing upstream projects.

### Financial needs

The industry comprises many different types of players (majors, IOCs, NOCs, independents) who are focussed on a diverse range of geographical regions and segments. Therefore the financial needs and risk profiles of these players vary widely. For oil and gas developments which require financing, lenders will examine the financial, managerial and technical capabilities and strengths of the project sponsors, service company contractors, as well as many other factors such as political risks and project economics. Such factors will influence financing structures, loan conditions, tenors and pricing.

Given the changing landscape of the industry, lenders have to keep pace with an understanding of the risks in areas such as ultra deep water, oil shale, new technologies, new provinces, in order to continue to assist in the future growth of the industry.

The industry's financing needs are expected to be massive, but they will be different for different players. Oil majors will most likely continue to utilise their own equity funds and internal cash flow supplemented by tapping the international bond markets. However, they may raise limited recourse project finance from international banks in those cases where joint venture partners are unable to meet the project development costs from their own resources.

Many of the NOCs will require various forms of debt finance to supplement their internal finance resources. Most NOCs have experience in raising project finance from international banks, but the cost of such debt will vary depending on the relevant country's credit rating. For those countries with investment grade or near investment grade ratings, the international bond markets may offer a competitive alternative to the international bank market. There is usually sufficient appetite from

bond investors for attractive oil and gas assets.

Smaller independent companies have frequently proven to be successful in discovering commercially viable oil and gas reserves. There have been several recent examples in east and west Africa. Often the capital costs of developing such reserves are substantial compared to the capitalisation and managerial resources of the companies. For smaller players, the role of private equity providers will be important. They will need equity capital to finance their exploration before they can tap either private placement or public bond markets, or obtain project financing in the form of reserve-based lending from banks for their future developments. Without the right equity investors and finance providers, smaller companies may end up as potential takeover targets as they face the challenges of growing their reserves and production through project development and acquisitions. This is sometimes a key feature of their strategy.

The important role of service companies in project developments will require financing on their side as well. Their funding needs will require banks to provide working capital, corporate performance bonds, buyer or supplier credits or bank guarantees.

Major structural changes are poised to transform the petroleum industry. They will have a major impact on how oil and gas assets and companies are financed. The scale of the industry's required investments will necessitate greater diversification of funding sources and more innovative financing structures from a range of equity and debt providers. International banks will continue to play an important role in providing reserve-based loans, limited recourse project debt and various other loan products. Multilateral agencies will remain important as both producing and consuming countries promote energy developments. However, reflecting tougher regulatory requirements, the capacity of the bank market for long-term debt may be a challenge and is likely to be available at a higher cost than in the past.

The increasing importance of NOCs means that IOCs will face more competition for funding new developments, often in higher risk environments, and this may impact the financing costs. However, despite all the challenges and changes in the industry and bank financing environment, by combining the various sources of funding, the financing needs of the oil and gas industry should be met in the future. ■