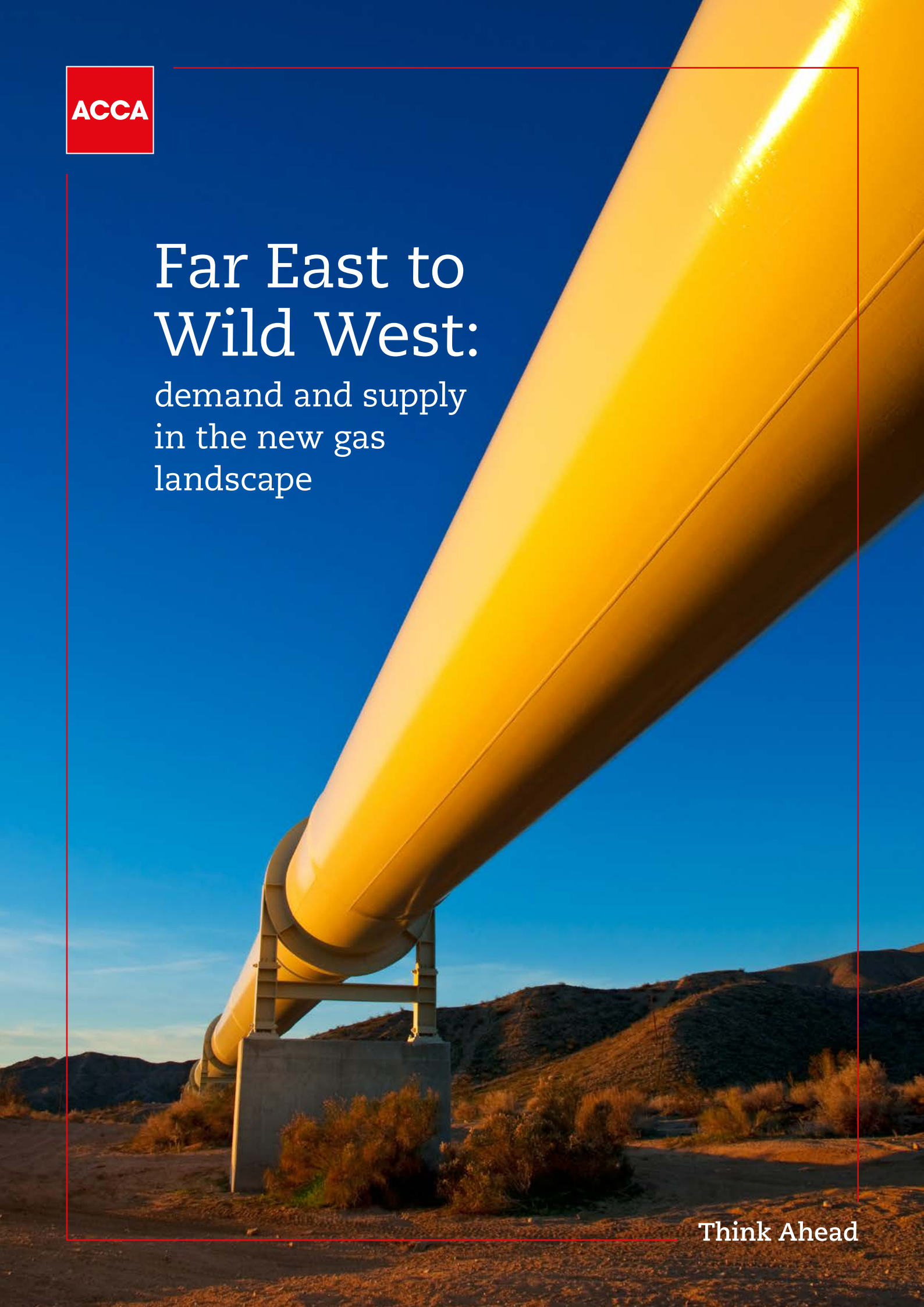

Far East to Wild West:

demand and supply in the new gas landscape

Think Ahead

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About this report

This paper explores trends in the gas sector and their impact on professional accountants.

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Executive summary

When the oil price reached its peak, many gas company CFOs had the luxury of considering long-term profitability and financing ambitious projects. Today, the low and fluctuating price of oil and increasing supply mean that finance teams have to think differently.

This report investigates what this means. How have low oil prices and the US's rise to prominence as a gas producer affected global gas supply and demand? Should we expect to see changes in the way liquefied natural gas (LNG) is bought and sold? What will this mean for finance professionals working in the gas sector?

In addition to interviews with industry experts, this paper also makes reference to views gathered through a survey to seek the inputs of ACCA members around the world.

Gas is attractive to buyers, and this looks set to continue. The price has dropped alongside the oil price, and supply is increasing.

The US could fundamentally reshape the gas sector: 79% of survey respondents said that the rise of the US as a gas producer will have a serious impact on global gas markets – forcing prices down not only at home but also in Asia and even Europe. But the picture is less clear than it might seem: with pricing pressures making new drilling a risky undertaking, growth is slowing.

For sellers, gas is a long-term option. More complex than oil, wells cannot be as easily turned on or off according to the current price. Also, infrastructure has to be built to store and transport gas, whereas oil can go straight into barrels. Furthermore, gas prices vary more by region compared to oil.

It is therefore a less attractive short-term investment, and the low prices are causing a move away from investing in unproven assets and towards those that can provide a more reliable return. Companies are still looking at replacing reserves, but mostly seek quality assets that will become commercially viable relatively quickly.

At the same time, the relationship between buyers and sellers in LNG markets is evolving, with an end to long-term supply contracts no longer being an unrealistic prospect for buyers as the spot market opens up.

Uncertain times mean that companies are placing a stronger emphasis on improving cash flow. 'Everything in the gas sector has switched to a short-term perspective', says Adi Karev, Global Oil & Gas Leader at EY. 'Risk appetite has vanished, and this changes what finance teams have to focus on. At the moment, that means focusing on dividends for shareholders'. There is also greater financial scrutiny of upstream projects and gas supply contracts, spot markets are expected to grow as supply increases, and offtake contracts are evolving. And with plenty of room still for consolidation, mergers and acquisitions (M&A) activity – while less frantic than expected by many industry experts – is set to increase.

With finance teams having to consider these factors, their jobs are becoming more complex and more pressured; companies, meanwhile, will have to be flexible to cope with pricing pressures.

Introduction

When the US – once a net importer of gas – shipped its first LNG cargoes in late 2016, it seemed that the rules of the game had been rewritten.

GAS SUPPLY CONTINUES TO TRANSFORM

Even before the oil price began to plummet in the second half of 2014, gas was being discussed as the future of the energy sector. Just as shale oil and tar sands changed the landscape for upstream oil producers, so shale gas and coal-bed methane would do so for gas. When the US – once a net importer of gas – shipped its first LNG cargoes in late 2016, it seemed that the rules of the game had been rewritten.

What's more, a number of large conventional gas discoveries around the world showed that supply was in no danger of reducing. LNG liquefaction plants were planned in Russia, Mozambique, Angola, Indonesia, and even off the west coast of Australia on floating production vessels (Shell Global n.d.). Many countries now recognise the potential for LNG as a fuel source in its own right (World Maritime News n.d.) – and climate-change proponents have begun to talk about gas, the cleanest of the fossil fuels, as the perfect 'fuel of transition' in the move to renewable energy sources (Brown 2017).

The current state of the gas market

Like its cousin crude oil, gas is priced regionally. But in its gaseous form, it can only be transported – and therefore bought and sold – as far as pipelines allow. Liquefaction allows gas to be traded across oceans, but LNG is priced discretely, and is predominantly traded under long-term contracts indexed to the oil price. Therefore, when the oil price drops, typically so does that of gas (EY 2014).

Even in places where pipelines supply gas effectively, such as Western Europe, LNG can be a competitively priced alternative – and a lively global spot market[1] can make it an attractive option for meeting unexpected grid demands.

So despite being indexed to oil in many markets, is gas still an attractive option for operators and investors? How does this attractiveness differ from that of oil, and how does LNG differ, in turn, from pipeline gas?

1 Paul Garvey, *Woodside's Peter Coleman: LNG spot pricing threatens supply glut*, April 13, 2016

1. The impact of supply

From a buyer's perspective, gas has probably never been more attractive.

LNG prices have dropped significantly, in line with the oil price. In Japan, which produces no gas of its own and as an island nation must rely on LNG shipments, the average monthly price for LNG cargoes dropped from $13.90 per million British thermal units (mBtu) in January 2015 (S&P Global (Platts) 2017) to $8.50 in February 2017 (Reuters (2016a).

The supply of gas available for international shipment is rising, which will clearly also have an impact on prices. In 2016, 20m tonnes a year of LNG were tied up in projects awaiting final investment decisions. Globally, LNG production has increased to more than 230m tonnes a year, and is expected to further increase to 370m a year by 2020. Wood Mackenzie estimates that the total amount of LNG from projects under development in 2016 stood at 125mta[2], which would amount to 46% of current global LNG supply.

The drop in the oil price may impair the plans for some of these proposed LNG projects, says Al Troner, president of Asia Pacific Energy Consulting, but supply will continue to rise. 'Even the world's most careful and conservative oil and gas companies have run into serious cost overruns on their ventures into LNG', he says. 'And a lot of the players currently proposing LNG projects are being far too optimistic about their viability in the current environment. But even when these are discounted, there will still be an overhang of supply'.

PRICING PRESSURE

As the survey results suggest, the gas-pricing situation is not certain, thanks to pressure on the supply side and a growth in the demand side of the equation. Two-thirds of respondents said they were concerned or extremely concerned that further drops in the oil price will cause gas prices to decrease.

One solution to price instability would be to decouple LNG prices from oil prices. Currently, gas-on-gas LNG pricing occurs only in the Americas, with European, African and Asian LNG contracts still indexed to oil (Apte and Critchlow 2011). That this will at happen at some point is still, however, a minority opinion. Only 36% of the survey respondents believed that, in the long-term, oil and gas prices will be decoupled from one another.

'I think it will happen eventually, but it will take time', says Tim Boersma, director of the Global Gas Program at Columbia University's Center on Global Energy Policy, 'and it will happen on a contract-by-contract basis until the consensus is there. In 2008/9, there was increased pressure put on oil-indexed gas contracts in Western Europe, but the incumbent gas suppliers all responded in different ways. Statoil adopted a new pricing model offering hub indexed gas to its customers. Russia's Gazprom and Algeria's Sonatrach were more reluctant to give up oil-indexation, offering discounts instead of a completely new pricing mechanism to their offtakers'.

Boersma says that this is a good example of how this process will work in the long term. Some market participants will be inclined to embrace new pricing structures, but others will be more reluctant. 'However', he adds, 'as more LNG suppliers come to market, and some parts of the market become increasingly liquid, the pressure will be on [suppliers] to adapt.'

2 Million tonnes a year

79%

of respondents agreed that the rise of the US as a global gas producer will have a serious impact on global gas markets

Gas sector: high-level SWOT

So just how attractive is gas for investors and operators?

Strengths

- **Cleaner-burning fuel than oil and coal:** burning natural gas produces just over half the amount of carbon dioxide than coal per unit of energy.
- **No refining process required:** gas requires only light processing compared with oil, which must undergo a lengthy and expensive refining process before it can be used.

Weaknesses

- **Lower per-unit cost than oil:** the sale price of a unit of gas is lower than the equivalent of crude oil – a downside for producers.
- **Longer-term extraction process:** because of the nature of gas, and the infrastructure it requires to transport it from the production site, gas investments tend to be longer-term commitments than oil investments, where rigs can easily be moved on short notice with no major consequences.

Opportunities

- **Rising global demand:** there is growing international demand for gas, and particularly high demand in the Asia Pacific region owing to the shutdown of many nuclear plants – which have been replaced by gas-fired power plants.
- **Move to renewables positions gas as the ideal 'fuel of transition':** a number of countries have chosen gas as the fuel they will use to help move towards a cleaner energy-generation mix.

Threats

- **Transition to a buyer's market:** gas-buying organisations are increasingly finding themselves with better leverage over suppliers, owing to a rise in global production. This has the potential to reduce gas prices over the long-term.
- **Increasing supply threatens profitability:** related to this is the fact that if prices drop, some of the larger, more capital-intensive gas production projects such as floating LNG (FLNG) could come under threat.

THE US 'ON THE UP'?

Also adding to the growing global supply of gas is the US. Operators there are optimistic about the prospect that the country could become a leading figure in LNG exports, and in February 2016, Houston-based Cheniere Energy dispatched a shipment of LNG to India – the first batch of US shale gas to be delivered to Asia (Bloomberg 2016). In the recent ACCA survey of oil and gas finance professionals from around the world, 79% agreed that the rise of the US as a global gas producer will have a serious impact on global gas markets.

'The US's arrival as an exporter of LNG will be a game changer for the global gas sector,' says Philippe Berterottière, chairman and CEO of GTT, a French LNG engineering company. 'The biggest impact will be increased pressure on prices. While the demand for LNG in Asia should rise over time, the US should be able to maintain relatively low prices for its LNG, due to existing infrastructure and a good domestic supply of gas. This probably means that prices for LNG in Asia will drop over time, and buyers will be able to negotiate better deals'.

The opportunity for US gas companies is not confined to Asia: there are opportunities globally for competitively priced gas. 'I believe that through more competitive pricing, the US can also make inroads into Europe', says Troner. 'Better prices should mean that US LNG can compete not just with LNG from Algeria and Qatar, but can go up against Russian pipeline gas, too'.

When seeking a short-term opportunity, investors do not see gas as an attractive option – but companies with knowledge and experience of gas still find it an interesting long-term prospect.

Not all opinions on the current gas situation in the US are so favourable, however: looking specifically at new projects in the US, it is clear that the situation is not as good as it was before the price slump. 'Although the US has been one of the main growth areas for gas production around the world in recent years, production growth has slowed down and reversed earlier this year. Rig counts and production have started to recover only tentatively towards the end of 2016', explains Boersma. 'Going forward, increasing LNG exports and pipeline exports to Mexico, growing domestic gas use and recovering oil prices should all be highly supportive of US natural gas production. But pipeline capacity bottlenecks in the most prolific Marcellus/Utica sites in the Northeast indicate that the vast production potential of US shale can be held up by various above-ground issues from time to time'.

THE SELL SIDE

Gas might be increasingly attractive for buyers, but how does it look for sellers? Compared with oil, gas tends to be regarded by the industry as a longer-term commitment, according to Troner. 'No one expects to become rich from a gas project by tomorrow morning', he explains. 'It's always a longer-term play, with a more complex set of contracts, and more interfacing of various aspects. Sometimes you can cheat in oil and skip a step or two, but gas is progressive and done in stages, and it's very rare to be able to skip any of them'.

So when seeking a short-term opportunity, investors do not see gas as an attractive option – but companies with knowledge and experience of gas still find it an interesting long-term prospect. Indeed, a significant minority of ACCA's survey respondents said that gas was an attractive option: 40% said that even with a lower per-unit cost, gas was more attractive to them than oil, and 39% said that their business was looking for new gas projects as a result of falling oil prices. As both oil and gas tend to occur in the same geological formations, and frequently in the same reservoirs, there are no major geopolitical advantages to pursuing gas over oil. It must therefore be assumed that the attractiveness of gas outlined by the survey respondents reflects an attempt to hedge against the low oil price.

2. Changing roles for finance professionals

With the marketplace evolving rapidly, there are four key areas for accountants in the gas sector to consider: pricing, M&A, costs and sustainability.

PRICING

Increased price pressure will almost always create a tough time for finance professionals and, for companies in the LNG business, accountants will have a key role to play as existing contracts are renegotiated and new contracts are drawn up. This increased pressure is reflected in the survey: nearly half the respondents (47%) either agreed or strongly agreed that their job was becoming more complex as a result of the fall in the oil price.

For example, in December 2015, Petronet LNG, an Indian LNG importer, managed to renegotiate its 1999 contract with Qatari producer RasGas (Hindu Business Line 2015). From an original offtake price of US$12 to $13 per mBtu, the price was slashed under the new terms to just $6 to $7 per mBtu. The company also avoided paying a financial penalty for lower offtake in 2015, when it took only 68% of its agreed 7.5m tonnes. Upon announcing the deal, India's petroleum minister, Dharmendra Pradhan, said of the country's relationship with Qatar, 'we're now moving from the relationship of a buyer and a seller to long-term partners'.

In this environment, as long-term gas contracts are renegotiated by buyers, project finance decisions are under much greater scrutiny. In all, times are more uncertain for the finance professional in the gas sector.

'It's getting harder and harder for finance teams to find viable projects, because benchmark prices are substantially lower than they used to be', says EY's Adi Karev. 'We are seeing increased rationalisation, consolidation, and a lot of divestment, all of which require substantial analysis and much more scrutiny by finance teams'.

MERGER AND ACQUISITION OPPORTUNITIES

Another consequence for finance teams in this new pricing environment is an increase in the amount of M&A work to be done. 'It should be easy pickings in North America, in terms of M&A potential', says Troner. 'A number of companies are coming to the end of the line in terms of access to credit, creating a number of great opportunities'.

Indeed, a third of the survey respondents said that their business is actively involved in M&A discussions in order to capitalise on the attractiveness of current gas pricing, whereas just 15% said they were not. More than 50 oil and gas producers in the US entered bankruptcy between January 2015 and April 2016 (Gopinath and Schneyer 2016) and, although no data is available on whether these companies were predominantly focused on oil or gas deposits, for many, it will be a mix of the two.

Nonetheless, the expected M&A wave has yet to hit, it seems. 'In North America, arguably the global epicentre of gas production over the past 15 years, many people expected a big wave of M&A at some point, given current prices, which have led to financial trouble for many small and mid-scale producers, midstream companies and service providers', says Boersma. 'However, we haven't seen a lot of activity so far. It may very well be that the old rules of consolidation amid crisis do not apply to US shale, but we'll have to wait and see what happens going forward'.

COSTS

Investors may be more cautious about investing in high-capital-expenditure gas projects until the price of oil rises. Successful financial planning will be the key to finding the necessary funding.

Accountants will be called on to assess the viability of new gas projects in the lower-price environment. Those such as FLNG projects, which looked like a good deal in the context of rising Asian gas demand and continued high prices, may look less viable in the new landscape. It will be up to accountants to judge the long-term merits of such projects.

Given the current situation, companies are taking steps to ensure that projects already underway will remain competitive despite lower prices. In March 2016, ENI, the Italian energy company, announced that it had achieved 'very significant cost savings' as a result of engineering design changes on its Coral FLNG project off Mozambique (Natural Gas World, 2016). This has been achieved by increasing the production capacity of the vessel from 2.5m tonnes/year to 3.4m tonnes. The company has yet to announce its final investment decision on the project.

In times of high prices, companies have the luxury of thinking about the long term and investing in unproven reserves that

> 'Philosophically, we seem to be moving to more of a buyer's point of view – and this is something the gas sector, and finance professionals within it, will have to adjust to'.

boost the business's asset book but may be tricky to extract. When prices are down, such projects become less attractive, and companies tend to focus on assets that can bring a quick return. 'In difficult times, cash flow becomes more important than reserve replacement', says Troner.

'Companies are still focused on replacing their reserves, but the most desirable assets today are quality reserves that will be commercially viable in the shortest possible horizon,' explains EY's Karev.

Evaluating these options has become a critical part of the work of finance teams today. 'I would think that we are going to see a very different LNG market by 2020 than we have now', says Troner. 'Philosophically, we seem to be moving to more of a buyer's point of view – and this is something the gas sector, and finance professionals within it, will have to adjust to'. While prices may not necessarily fall, industry experts seem confident that the clauses built into long-term supply contracts will increasingly favour the buyer.

SUSTAINABILITY

Much like many other sectors, the oil and gas industry is now embracing integrated reporting, (<IR>), the method by which companies report not just on short-term performance data, but also on mid- and long-term value creation. This creates a new dimension of reporting for accountants, and also gives oil and gas companies opportunities for displaying to shareholders their sustainability efforts, including the long-term implications of a move to cleaner fuel sources such as gas.

Macroeconomic factors will also have an impact on sustainability, and this is a clear concern for accountants: 74% of those surveyed said they were either concerned or extremely concerned that geopolitical instability would affect gas prices. The UK's recent vote to leave the EU, for example, will certainly affect the assessments that accountants must now make into the viability of gas investments in the British North Sea. Likewise, geopolitical tensions in the Middle East will affect sustainability assessments of both new and current projects in that region.

The pipe to China

China's gas market is expected to grow rapidly. In 2015, the country consumed 35% more gas than projected in the 2010 International Energy Outlook by the Environmental Impact Agency (EIA) (Clemente 2016). If China ever reaches the level of gas use per capita seen in the US, it would mean that another 294bn cubic feet per day (bcf/d) would be needed to match demand (Hellenic Shipping News 2016)[3] – more gas than Italy produced in total in 2014 (EIA Beta n.d.).[4] China has its own shale gas reserves, but domestic production in China is costly – shale development is two to four times more expensive in China than the US.

As a result, China is now the world's third-largest LNG importer after fellow Asian giants Japan and South Korea. From 1.2 bcf/d of LNG in 2010, China now imports about 2.7 bcf/d. This accounts for about 15% of total national gas demand and over 7% of the global LNG market (Hellenic Shipping News 2016).[5]

Unlike Japan, however, China has the option of buying gas via pipeline. In May 2014, China signed a $400bn deal with Russia for a major gas pipeline project (Reuters 2016b),[6] following on from the successful completion of a multibillion-dollar crude oil pipeline in 2011.

The deal marks a strategic pivot by Russia towards Asian markets, following political pressure from its traditional gas customers in the West linked to developments in Crimea. 'Russia is a key global gas producer, and its pipeline network should make it a key competitor in the race to supply China with the gas it needs', says Karev. 'It's not there yet and it's going to cost billions of dollars to do it, but once the pipeline is in place, the price per unit will be substantially cheaper than LNG alternatives.'

3 Hellenic Shipping News, 'China's Rising Natural Gas Demand, Pipelines, and LNG', 26 April 2016 <http://www.hellenicshippingnews.com/chinas-rising-natural-gas-demand-pipelines-and-lng/>, accessed 4 June 2017.

4 EIA Beta, 'Dry Natural Gas Production 2014', (undated) <https://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=3&pid=26&aid=1>, accessed 4 June 2017.

5 Hellenic Shipping News, op. cit.

6 Reuters, 'Exclusive: Russia Likely to Scale Down China Gas Supply Plans', 15 January 2016 <http://www.reuters.com/article/us-russia-china-gas-exclusive-idUSKCN0UT1LG>, accessed 4 June 2017.

3. Outlook for LNG

Asian markets currently account for 70% of the world's LNG demand (Dawson 2016),[7] which should make that continent a natural area for LNG providers to focus on. And in the days of high oil prices, capital-intensive LNG projects for Asian offtake made a lot of sense; today, however, many of these planned projects seem unlikely to be financially viable. Almost half of the ACCA survey respondents (48%) said that high-cost gas projects such as FLNG had become much less viable than they once were. So what does the future of LNG look like in these uncertain times?

'Major projects are looking less attractive in the current price environment, but we have to keep in mind that the vast majority of their capacity has been locked into long-term contracts, at a time when the pricing environment was a lot more favourable from the seller's point of view', explains Boersma. 'What we are seeing as a result of the price slump is buyers going back to their suppliers and trying to renegotiate their terms.'

SPOT THE DIFFERENCE

While LNG has traditionally been bought on long-term contracts, today, the spot market seems set to grow as supply increases. 'Many of the projects in the US have a larger allocation for the spot market than we have traditionally seen,' explains Berterottière. 'Because of the relatively low price of US LNG, operators there seem optimistic about arbitrage opportunities through the spot market.'

The ACCA survey seems to confirm this trend towards a growing spot market for LNG: 46% of respondents said that they were concerned about a growing reliance of buyers on the spot market; 52% said they were concerned that falling spot prices for LNG will affect long-term supply agreements.

'The reason that the LNG price has been relatively stable in the past is because it has been indexed to the oil price through long-term contracts', explains Karev. 'With the arrival of cheap LNG from the US, there is a price differential in the market for the first time – it's therefore inevitable that arbitrage activity will increase, and the spot market will strengthen'.

It certainly looks like a buyer's market for now. This should make those who deliver gas through pipelines concerned about their own long-term off-take agreements: half of ACCA's survey respondents said they were either concerned or extremely concerned about the increasing competitiveness of LNG versus pipeline gas. Demand for LNG could still rise: the number of LNG-importing countries has almost doubled in the past 10 years to 30. Low gas prices could very well end up creating a demand for more gas – all over the world.

7 Dawson, C., 'Global Demand for LNG Drops on Weak Demand in Asia and Increased Production', *Wall Street Journal*, 13 January 2016 <http://www.wsj.com/articles/global-demand-for-lng-drops-on-weak-demand-in-asia-and-increased-production-1452675600>, accessed 4 June 2017.

Appendix

There were a total of 413 ACCA members who responded to the oil & gas survey questions in the first half of 2016.The job roles of this group are outlined in the table below.

Table A1: Positions held by respondents

POSITIONS HELD BY RESPONDENTS	
Accountant/newly qualified accountant/sole practitioner	29%
Auditor	7%
Manager/senior manager	33%
Director/executive/partner	17%
CFO	13%

References

Apte, S. and Critchlow, J. (2011), *Are We on the Edge of a Truly Global Gas Market?*, <http://www.bain.com/Images/BAIN_BRIEF_Are_we_on_the_edge_of_a_truly_global_gas_market.pdf>, accessed 4 June 2017.

The Economic Times (2016) 'India first in Asia to buy shale gas from US' <http://economictimes.indiatimes.com/industry/energy/oil-gas/india-first-in-asia-to-buy-shale-gas-from-us/articleshow/51651182.cms>

Clemente, J. (2016),'China's Rising Natural Gas Demand, Pipelines, and LNG', 24 April <http://www.forbes.com/sites/judeclemente/2016/04/24/chinas-rising-natural-gas-demand-pipelines-and-lng/#73f0027e6a38>, accessed 4 June 2017.

Dawson, C. (2016), 'Global Demand for LNG Drops on Weak Demand in Asia and Increased Production', *Wall Street Journal*, 13 January <http://www.wsj.com/articles/global-demand-for-lng-drops-on-weak-demand-in-asia-and-increased-production-1452675600>, accessed 4 June 2017.

EIA Beta (n.d.), 'Dry Natural Gas Production 2014', (undated) <https://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=3&pid=26&aid=1>, accessed 4 June 2017.

EY (2014), *Competing for LNG Demand: The Price Structure Debate*, <http://www.ey.com/Publication/vwLUAssets/Competing-for-LNG-demand/$FILE/Competing-for-LNG-demand-pricing-structure-debate.pdf>, accessed 4 June 2017.

Gopinath, S. and Schneyer, J. (2016), 'As U.S. Shale Drillers Suffer, Even the Bankrupt Keep Pumping Oil', 1 April <http://www.reuters.com/article/us-usa-energy-bankruptcies-idUSKCN0WY3JU>, accessed 4 June 2017.

Hellenic Shipping News (2016), 'China's Rising Natural Gas Demand, Pipelines, and LNG', 26 April <http://www.hellenicshippingnews.com/chinas-rising-natural-gas-demand-pipelines-and-lng/>, accessed 4 June 2017.

Hindu Business Line (2015), 'Petronet Strikes Deal with Qatar's RasGas, to Get LNG at Half-price', 31 December 2015 <http://www.thehindubusinessline.com/news/qatar-agrees-to-lower-price-in-gas-deal-with-india/article8049876.ece>, accessed 4 June 2017.

Natural Gas World (2016), 'Coral FLNG "Very Viable" Thanks to Cost Savings – ENI' <http://www.naturalgasafrica.com/coral-flng-viability-cost-savings>, accessed 4 June 2017.

Reuters (2016a), 'Japan Jan average LNG spot price falls to $7.10/mmBtu', 8 February <http://www.reuters.com/article/lng-japan-spot-idUSL3N15O0GX>, accessed 4 June 2017.

Reuters (2016b), 'Exclusive: Russia Likely to Scale Down China Gas Supply Plans', 15 January 2016 <http://www.reuters.com/article/us-russia-china-gas-exclusive-idUSKCN0UT1LG>, accessed 4 June 2017.

S&P Global (Platts) (2017), 'Japan LNG Spot Cargoes Average Price in Feb up 1.2% to $8.5/MMBtu', 9 March <'http://www.platts.com/latest-news/natural-gas/tokyo/japan-lng-spot-cargoes-average-price-in-feb-up-27786887>, accessed 4 June 2017.

Shell Global (n.d.), 'Prelude FLNG' [website] <http://www.shell.com/about-us/major-projects/prelude-flng.html>, accessed 4 June 2017.

Thomas, K. (2016), 'Wood Mackenzie Predicts 17mta Increase in LNG Supply this Year', 28 January <http://www.lngworldshipping.com/news/view,wood-mackenzie-predicts-17mta-increase-in-lng-supply-this-year_41595.htm>, accessed 4 June 2017

World Maritime News (n.d., apparently pre 2016) , 'The Dutch Forge Ahead with LNG Bunkering Plans', <http://worldmaritimenews.com/archives/150593/the-dutch-forge-ahead-with-lng-bunkering-plans/>, accessed 4 June 2017.

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