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New Players New Models

Executive Summary

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The LNG business has evolved from its original security of supply based 'Established Model' that was based on fixed links between the LNG supplier and the LNG buyer. New players, and changes in the structure of the LNG market, have driven the LNG value chain model in use today to one where new and existing players can introduce an adaptive LNG chain where different linkages can operate independently of each other. This change has been made possible by the presence of high credit intermediaries that underpin offtake agreements. The question is - will these aggregators/portfolio companies/intermediaries have the financial and commercial capacity to underpin the next wave of LNG liquefaction capacity and what commercial models will underpin the next wave?

The path to a truly traded market from the established liquefaction model has several steps:

1. **The 'Established Model'**, used in liquefaction plant developments of the 1980-1990s, which was based around fixed linkages within the LNG chain. The 'Established Model' had a clear delineation of activities. The move to tolling agreements in the 2000s was the first step towards cargo optimisation and trading.
2. The innovation of the '**Cheniere tolling model**', introduced into the US market based on low cost US feedgas, saw US hub priced LNG with greater operational flexibility of LNG cargoes, but the structure was still based around long-term contracts.
3. **The 'Equity/Cost model'** seeks to secure equity investors to fund new liquefaction and supply equity LNG. As large equity investments still need to be made, it means that only large companies with large portfolios can be involved. This structure also requires medium to long-term contracts/equity offtake to underpin the large investments.
4. The end game '**Traded/Market**' model will negate the need for long-term contracts and enable full market flexibility. This model will enable the chain to be fully disaggregated, contracts to be fully flexible, and new liquefaction plants to be financed without any volume risk. All finance is underpinned by market based prices.

As the market changes towards a fully liquid business, the way that LNG is traded is also changing. The path towards fully traded LNG could well be unstoppable, the question is when will the 'Tipping Point' be reached. Increased volumes of LNG are available without contractual destination restrictions and, as a result, the volume of Pure Spot Trades (PST) has increased to 32 per cent LNG traded in 2018¹ and, by 2020, 70 cargoes/month will be supplied from the US with 24 different lifters and market

¹ The LNG Industry GIIGNL Annual Report 2019, GIIGNL, March 2019



liquidity starting to form. At the same time the volume of LNG traded by aggregators and traders is increasing as they act as intermediaries, securing LNG under long-term contracts or entering into long-term, tolling agreements, in both cases underpinning final investment decisions on new LNG capacity. End-user buyers are sourcing LNG through a portfolio of long, medium, short-term and spot cargoes to manage gas offtake risks and price exposure. That said, long-term contracts are still required to underpin investment in new LNG capacity but lenders have indicated that long-term contracts need only be 10 years. The amount of debt that can be raised will depend on the structure of the project, the sponsors and the quality of the capacity holder/offtaker.

Industry LNG outlooks estimate that an additional 150-170 mtpa LNG capacity will be required by 2030. Based on this volume estimate, the investment required over the period 2019-2025 in liquefaction, associated facilities and ships is in the region of \$150 bn. This equates to an average of \$18bn/year² and with an average gearing of 67 per cent then ~ \$12bn debt is required each year. This is approximately equal to the annual amount of third party debt (commercial loans, export credit agency debt, multilateral debt, shareholder loans, bonds and sovereign wealth fund debt) that has been raised over the period 2004-2017 (\$11.6bn/year). It can be concluded, therefore, that funding of the debt portion should be achievable if bankable projects are developed.

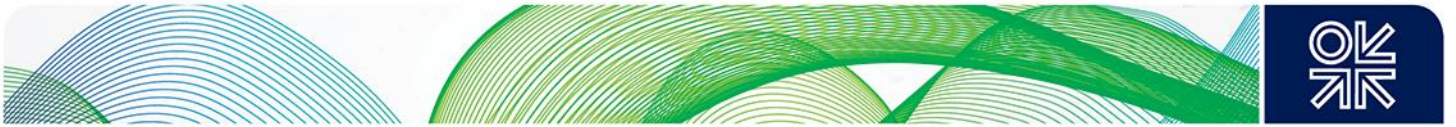
That said, third party finance to date has relied on long-term take or pay contracts from A+ buyers. Without a suitable financing package, there will be recourse to shareholders through additional equity requirements and this could limit the number and financial quality of companies which can develop projects. Banks say that they are flexible to changing contractual structures but are they? Immaturity of the spot LNG market still means that long-term commitments are needed, and banks are still not giving full credit to uncommitted short-term volumes. Lenders need to be comfortable with the risks to optimise debt packages. With greater flexibility of LNG contracts, sellers will have to adapt their debt packages to accept an increased amount of risk and give greater value to unsold project volumes, or volumes subject to greater volume flexibility as the increasingly liquid spot market means that these volumes can be sold at market prices. Recognizing the increased market liquidity for spot cargoes, LNG spot pricing indices and the ability of contracts to be hedged to lock in suitable margins, means greater value should be attributable to shorter LNG contracts and unsold LNG volumes. Lenders could also consider funding models where equity investments can be taken by the lenders, with increased risks packaged to be sold/syndicated to smaller investors. Such financing structures would support the equity investment models being proposed by projects (though the equity model may lessen the need for third party debt). This would explain the fact that three FIDs in 2018/19³ used equity based project structures.

The size of commitment sought by third party lenders to support the long-term offtake volumes for 150 mtpa of new LNG volumes, assuming an LNG price of \$6/MMBtu, is equivalent to ~\$46 billion/year and, at an LNG price of \$8/MMBtu, this rises to ~\$62 billion/year. The question is can companies afford this? Does this financial commitment limit smaller companies, without large balance sheets, to only to operating in the spot market?

Contractually there is a potential impasse between LNG buyers and sellers. Buyers are seeking greater price and volume flexibilities in order to manage their domestic gas demand uncertainties. Sellers, however, seek revenue stability to underpin the development of their new projects. This leads to the

² Assuming that the investment in liquefaction and associated facilities is required over the six years.

³ LNG Canada, Tortue LNG & Golden Pass LNG.



question, what are the possible evolutionary paths for LNG pricing and contracts that can match the requirements of both LNG buyers and sellers?

The market needs to see compromise between buyers and sellers on contracts. Lenders need to develop funding packages that support changes in the LNG market. Steps towards a market/traded LNG market have been taken although there is still a long way to go before a fully functioning traded market, but it is just a question of when, not if, it will arrive. New FIDs will happen, but with the absence of a fully liquid market and lack of availability of independent LNG pricing indices, long-term contracts or equity investment/offtake structures with high credit counterparties will still be required.