Rating criteria for upstream oil & gas sector

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Executive summary

The beginning of this century witnessed increased activity in the Indian exploration and production (E&P) space due to the rapidly increasing prices of hydrocarbons and the introduction of the New Exploration Licensing Policy (NELP), which provided an equal platform to public and private sector companies in the E&P of hydrocarbons in India. This led to entry of several private players into the domestic E&P sector. In 2016, the Hydrocarbon Exploration Licensing Policy (HELP) replaced NELP, and altered the system from profit-sharing to revenue-sharing. HELP was launched to sustain production growth and attract foreign investment. It provides a uniform licensing system to cover all hydrocarbons.

CRISIL's analysis of E&P players broadly covers business, financial, and management risks. The analysis of the business risk profile covers operational and marketing risks. For CRISIL, the primary criterion for rating companies engaged in E&P of hydrocarbons is the sensitivity of their performance to volatile global hydrocarbon prices. Other parameters include the risks associated with estimates of hydrocarbon reserves, the estimated cost of tapping them, their size, location, and diversity, as well as the ability of the player to consistently replace exploited reserves. Ability to effectively exploit reserves is also a critical input. CRISIL follows the standard criteria used for all manufacturing companies while assessing the financial and management risk of an E&P player.

Scope

Though the broader criteria of manufacturing companies[1] applies to entities in the E&P sector, this article[2] gives a brief insight into industry-specific risk factors, which impact the operations and financial flexibility of an E&P operator.

Business Risk

An E&P player faces several risks while conducting its business. Some of these pertain to its operations while it explores and develops hydrocarbon reserves, and, once production starts, shifts towards marketing of the output and its profitability. CRISIL analyses each aspect of these risks while rating entities in this space. These have been briefly discussed below:

Diversity of fields

The diversity in fields provides a hedge against disruption in production in any one field. Geographical diversity provides a hedge against operational risks, as well as local demand-supply and evacuation risks.

Ratio of oil and gas

If a company's portfolio of producing fields contains a concentration of either gas or oil, its performance will be vulnerable to swings in the price of that commodity. A balance in the reserve and production profile between these commodities will provide a hedge against volatility in the price of either.

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[1] *The detailed criteria is on the CRISIL website under the "Criteria and Methodology" section – Rating Criteria for Manufacturing and Services Sector Companies" and "CRISIL's approach to financial ratios"*

[2] *For accessing the previous published document on " Rating Criteria for Upstream Oil and Gas Sector" kindly follow the below mentioned link: https://www.crisil.com/content/dam/crisil/criteria_methodology/energy/archive/CRISIL-Ratings-crieria-upstream-oil-gas-sector_2007.pdf*

Operator's credentials

A company's track record and experience in producing oil and gas and in developing reserves are key factors in the rating decision. Capabilities are indicated by the oil and gas reserves that a company currently manages, and the trends in its oil and gas production across its operational areas around the world.

Percentage of proven reserves that are developed

The higher the proportion of proven reserves developed, the lower the capital requirement (and the lower the risk) associated with bringing additional production on-stream.

Reserve replacement prospects

In the E&P business, a healthy portfolio of producing, developmental (short- to medium-term), and exploratory (medium- to long-term prospects) fields ensures a strong business position. In such a portfolio, cash flow from producing fields could help fund capital required for development and exploration.

A company's reserve replacement ability, that is, success in replacing reserves, is measured in terms of its finding, development, and acquisition (FD&A) costs. As this measure can be skewed in a given year, the average FD&A cost over three to five years, and the trends in the cost are used to assess how economically a company adds to its reserves.

Marketing risk

Prices of oil and gas

The single-most important factor affecting an E&P company's cash flow is oil and gas prices. Given the volatility of oil prices, CRISIL stresses the cash flow for different pricing scenarios to determine their sensitivity to such movements. The price of gas is either benchmarked to a basket of fuel oil prices with a floor and ceiling set in the contract, or is based on a formula submitted by the field operator subject to review by the government. As with oil, CRISIL also stresses the cash flow to determine sensitivity to gas prices.

Operational risk

Reserve risk

Estimated oil and gas reserves of a field will critically determine its production life and profile. An independent estimation of reserves by a reputed agency through advanced valuation techniques, such as three-dimensional seismic surveys, increases the level of confidence in the estimate. A large reserve implies benefit of economies of scale and superior operational flexibility. The quality of reserves is important as lighter oils command a premium over heavy oils.

Purchaser's creditworthiness

India has deficient supply of oil and gas. As long as this continues, the government is likely to stipulate that private sector E&P players sell their oil and gas production to entities nominated by it. The nominees' ability to clear dues on time will have a bearing on an E&P company's liquidity. Hence, the creditworthiness of these nominees constitutes a key input in the rating decision.

Evacuation arrangements

Appropriate evacuation arrangements for the offtake of oil and gas are essential for smooth operations. In general, a pipeline from the field to the delivery point is the cheapest and most reliable mode of transport for both oil and gas. In the case of offshore oil, tankers are also a reasonably reliable mode of transport. The availability of adequate pipeline capacity over the life of the field, therefore, needs to be studied.

Political risk

On many occasions, governments tend to influence the E&P business through policy decisions. For instance, the government controls gas prices, which constrains the pricing flexibility of E&P companies. Export embargoes imposed by the government preclude companies from realising the full price potential of their products in the global market. At times, the government instructs E&P companies to share the under-recovery of cooking fuel and transport fuel. A company's ability to manage these constraints is a critical determinant of the rating.

Profitability

CRISIL evaluates the E&P operations' profitability and sensitivity to price fluctuations. As mentioned earlier, a balance between oil and gas production provides some level of stability to cash flow if the price of either commodity declines. The cost structure of operations is also analysed. A number of factors are considered, including:

- Location of proven reserves: The closer the proven reserves are to the market, the lower the transportation cost.
- All-inclusive production cost: A company's production efficiency is compared to the industry average and to that of other producers in the region. CRISIL also takes into account anticipated volume increase, if any, as these will help bring down the cost of production per barrel.
- Overheads: The player's overheads are compared, on the basis of production per unit, with those of other producers.

The upstream oil and gas sector was decontrolled under the NELP regime, where fields were allocated based on competitive bidding. The system continues under HELP. The field development plans of winning entities are evaluated to ascertain the terms of cost recovery, investment multiples, and the share of profit from petroleum to ascertain the profitability and cash flow of production from HELP fields.

In general, the analysis aims to identify factors that result in lower cost than the industry average as these will indicate an ability to withstand downward movement in price.

Financial Risk

CRISIL analyses the financial risk profile of an E&P entity by understanding the accounting policy followed by the company, its capital structure, and ability to raise funds. These have been elaborated below:

Accounting quality

Oil and gas companies have the option of following the full cost method of accounting or the successful effort method of accounting. The choice made by the company has a significant bearing on its profitability. CRISIL, in its assessment of the financial risk profile, factors in the accounting policy followed and its impact on financial statements.

Capital structure and funding

A company's capital structure has a significant bearing on its financial performance. To mitigate risks associated with exploration, CRISIL prefers that a higher proportion of equity be employed to fund ventures that have a large number of exploratory wells, and hence, a higher risk profile. A capital structure skewed in favour of equity is also far more resilient to price downturns.

Typically, an E&P company requires substantial capital if a number of its fields are in the exploratory or developmental stage. The company's ability to raise the required capital will have a significant bearing on its rating. A large proportion of producing wells not only generates cash flow to support exploratory and developmental operations, but will also considerably enhance ability to raise capital (debt and equity) from the markets. The company's track record in raising funds and its parentage are other indicators of its financial flexibility.

Management Risk

For the analysis of the management risk profile of E&P companies, CRISIL follows the standard criteria used for all manufacturing companies. This criterion is presented in detail in our publication, 'Rating Criteria for Manufacturing and Services Sector Companies'.

Conclusion

Thus, in CRISIL's opinion, the key determinants of the credit quality of companies in the E&P sector include:

- Price of oil and gas
- Size and quality of reserves, ability to constantly replace exploited reserves
- Diversification in portfolio of assets
- Mix of hydrocarbons
- Cost structure

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