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Foreign Investors' Motivations: the ENI approach

The ENI Group

ENI is a group of Companies operating mainly in the fields of energy (oil and gas) and chemicals. While the Holding Company is fully owned by the Italian Government, the Group operates worldwide, according to the logic of free market competition. This entrepreneurial approach was recently stressed by the change of the legal status of the Holding from Corporation to joint-stock Company. Major privatisation plans are under way.

The Group employs about 130.000 people; in 1992, it has produced 25,7 million tons of oil and 17,5 billion cu.m. of natural gas, marketed or used as petrochemical feedstock 55,8 million tons of refined products, and distributed 47,8 billion cu. m. of natural gas.

While Italy attract the largest share of ENI's activities, about 36% of the proceeds are made abroad; and foreign direct investment account for a similar percentage of total investment. In 1991, ENI invested abroad 2820 trillion liras (well over 2 billion dollars), about 73% of which in oil and gas upstream, the balance being mainly refined product marketing, chemical plants and natural gas transportation facilities.

Motivations for FDI in ENI's main investment sectors

The reasons which lead a Company to invest abroad are widely different in different sectors. Hence, this paper discusses separately FDI's motivations in the four sectors which have absorbed the bulk of ENI's FDI:

- oil upstream;
- natural gas;
- oil downstream;
- chemicals.

For each sector, a brief description of its unique features will be given, and traditional and new factors affecting FDI will be discussed.

Oil upstream

Overview

Crude oil transport systems have attained an exceptional level of efficiency; hence, oil flows rather freely even to remote markets, and a small difference in the price of the barrel is sufficient to cover long haul shipping costs. Fundamentally, therefore, the market is global, and the same crude can be found in Europe, in the States and in Japan.

The consequence is that oil exploration and production (E. & P.) is a global business: not just the Major International Companies, but even many relatively small independents operate worldwide, ready to move and explore wherever the prospects are good. The total amount of oil reserves held by a Company is, in actual fact, far more important then their geographical location.

Traditionally, upstream and downstream operations were integrated: the same Companies produced, transported and refined crude oil, and sold the products. But, since the 1973 crisis, National Oil Companies have taken over, in full or in part, upstream activities in most oil exporting countries, and vertical integration has gone astray. The consequence has been the emergence of two groups, producers and consumers, with diverging interests, often opposed in a climate of harsh confrontation, which have led to the various oil shocks and countershocks.

The basic task of the oil upstream industry is to find and develop enough oil to mantain the supply/demand balance. The real main limiting factor is finance. Oil E.& P. is an investment-intensive business; and, as E.& P. moves to more difficult locations, the real cost of extracting the marginal barrel of oil increases. The upstream sector will therefore need very large investments: for the next decade, 170 billion constant dollars per year is a reasonable estimate. This is a tremendous amout of money to be raised, especially in the present environment of international finance.

Major Oil Companies could contribute to raising such funds, given adequate contractual conditions; but, as was said before, in several OPEC states the upstream activity is a monopoly of the National Oil Companies.

Investment motivations: the traditional factors

Upstream Companies have radically changed their investment policies and motivations in the last quarter of century.

When the oil business was still integrated, the basic policy of an oil company was to keep a reasonable balance between supply (its reserve base and production capacity) and demand - the volume of products it could sell on its downstream market.

After the first oil shock in 1973, and up to the early eighties, the main concern was safety of supply. A large majority of experts was convinced that the days of "cheap" oil were over, and that the price of the barrel would have continued to increase; demand was rigid, and the oil companies felt that they could always pass the burden of higher prices to the final consumers - provided they could have enough products to sell. With the expectation of higher and higher prices and continued shortage, costs were not much of a problem, and E. & P. investments soared.

After the oil countershock in the early eighties, when the oil price plunged to less then 10 dollars per barrel, the market settled to what presently looks to be a reasonable degree of stability. The general perception is that availability is no more of a problem: price is the only question. Companies, in making investment decisions, have come to rely almost exclusively on economics. Economics depend from the geological prospects (i.e. the likelyhood to make a good find), and the contractual conditions (oil entitlements, taxes, duties, royalties). The best combination of these two elements is now the basic motivation for any upstream investment.

ENI was originally set up by the Italian Government with the basic aim to assure a safe and competitive supply of oil and gas to the Country, breaking what was at the time a monopoly of the Major Internationals. The "mission" to assure Italy's oil supply continued in the years of oil shortage. When the oil price collapsed and the supply became a question of price, this mission lost importance, and ENI' upstream activity became business oriented, with investment decisions made on the same ground as by all other international oil companies.

Investment motivations: new factors

Upstream investments are for the long term: lead times take years, and the investment repayment period is quite long. The economic viability of an oil field development will depend on the course of the oil price in this long period. But the oil price has proved to be highly variable, and long term forecasts unreliable; decisions are hence made on uncertain ground. This is a serios source of concern for a sector which must attract a terrific amount of money to preserve the supply/demand

balance. Given the present context, market forces, if left alone, will work in fits and starts: low prices will discourage exploration; production will languish, leading to shortages; the price of the barrel will rise, feeding more exploration, and finally restoring the balance. But lead times are so long, that in the meantime price instability can become rampant. So, whatever can be done to promote market stability and an orderly development of the price trend is of paramount importance; but the problem is not an easy one to tackle.

Another factor affecting the oil upstream environment is the present trend to deregulation and privatisation. In actual fact, in oil upstream such trend is still limited to the former centrally planned economies - in practice, to CSI and China - and still to a very limited extent. Quite a few western oil companies (including Agip S.p.A., ENI' upstream arm) operate in China, while in CSI the situation is still unclear. Even in these cases, investment motivations are the ones discussed before, and there is no major change in the global framework; but a larger reliance on the free market could in the future play a major role in shaping a new and more stable context.

Trends and problems

A good share of the problems that the oil industry has to face comes from the disruption of vertical integration. Oil exporting countries have moved to regain control of their national ressources, and in order to do so they set up national oil companies and in some cases gave them a monopoly on domestic oil E. & P.

But the national oil companies have now developed into solid, efficient organizations which don't need the protective umbrella of a monopolistic regime. They have embarked or are now considering a strategy of downstream integration into the markets of the oil importing countries. At the same time, it may be expected that the governments of the oil producing countries will come to realize the potential benefits of allowing a plurality of companiess to operate in the domestic upstream, rather than relying only on a monopoly of the national oil company. Hence, it is reasonable to expect that in the coming years the oil companies that presently concentrate on downstream activities will get more of a chance to recreate their upstream integration and vertical balance.

The benefits of vertical integration - now with the full participation of the national oil companies - are potentially very important: better market management, end of the confrontation climate, technology transfer, and - most importantly - improved chances of raising the enormous financial resources needed to find and develop enough new oil.

Natural gas

Overview

Natural gas can be found with oil ("associated gas") or alone ("dry gas"). E. & P. is carried out by the same Companies which operate in the oil upstream sector; technology and investment motivations are quite similar. There is, however, one basic difference: long distance gas transport is terribly expensive, and the investments in transport infrastructure needed to take gas to a far away market largely overwhelm investments in the upstream phase.

Gas can be transported by pipeline, or it can be liquefied and shipped (at extremely low temperature) with purpose-made gas tankers. In both instances - especially in the second one - the investments required are enormous. Therefore, the wellhead value of natural gas is completely dependent on the location of the gas field: if the gas fields are remote, gas can even be completely worthless, as the price of transport would exceed its value on the final market. In the old times, this was the rule: gas in developping countries was just a by-product of oil E. & P., and oil companies did not attach any value to it. At present, of course, the situation has changed: there is a strong demand for natural gas in the world, and transport systems have remarkably improved. There are, however, huge quantities

of gas which are left in the ground, as it is impossible to transport the product to the consuming markets at competitive prices.

This state of affair has many consequences:
- natural gas is far more "radicated" than oil in its geographic location. The value of "remote" gas being minimal, the best solution is to use it in place, setting up distribution networks in the neighbouring cities, using it for elecricity generation, for energy-intensive industries, or as feedstock for petrochemical plants. Therefore, gas is less likely to be a hard-currency source for the producing country, but more likely to be a basis for industrial development;
- while no effort is spared in drilling for gas in industrialized (or industrializing) countries, there is obviously some restraint in searching for gas where a local market does not exist. If transport facilities must be created from scratch, only very large gas fields (which can feed a gas liquefaction plant) contitute a viable target;
- transport by pipeline is economically feasible only for relatively short distances, favoring the creation of regional networks; LNG (liquefied natural gas) can be shipped to greater distances, but the feasibility is always dependent from the distance, the process is very expensive, and needs a huge reserve base to assure the feedstock for all the life span of the plant;
- transport infrastructure are always "dedicated": they are made to supply a given customer for all their life. This link is absolute for pipelines, somewhat less for LNG; but the linkage is always strong. Hence, political stability and a reputation for contractual correctness are far more important than in the case of oil.

Investment motivations

Associated gas is a by-product of oil E. & P., although a far more appreciated by-product than it used to be. Drilling for dry gas entails an evaluation of economic producibility: whether gas can be used domestically, or if and how it can be transported to the markets.

Investment in transport infrastructure is determined by the need to service a growing demand. Italy's natural gas consumption is rising rapidly, with an average annual growth rate in the range of 5-6%; domestic production is static; a continuous increase in imports is therefore mandatory.

This situation is common to all Western Europe: taken as a whole, the region has a strong (over 200 billion cu. m.) but static and insufficient natural gas production, and its imports from the rest of the world are soaring: from 23 billions cu. m. in 1980 to 90 billion cu. m. in 1990, to over 100 billion cu. m. in 1992. Therefore, Italy can not count on its European neighbours for additional supplies.

Natural gas being a regional business, possible supply sources are limited. Each additional source entails very large unitary investments, and a long-term linkage for huge gas volumes: each is a case by itself, which must be studied taking into consideration all long-term implications. The basic aim, obviously, is to make adequate volumes of natural gas available at the best economic conditions; but investments of this size are too complex and have too many implications to lay down simple guidelines.

Oil downstream and chemicals: some common features

Enichem, ENI's chemical arm, operates mainly in the field of base chemicals. Products are commodities, not specialties; the market makes the price; competition is on efficiency, on having the lowest production costs.

Oil downstream offers similar characteristics. There is no remarkable difference between the products sold by the various competitors; the fundamental question is efficency and cost shaving.

In oil upstream and in natural gas, we have seen that, although economics are always a prime factor, strategic considerations on safety of supply and supply/demand balance can have a strong weight in

making investment decisions. In oil downstream and in chemicals, instead, investment motivation are more straightforward and economically-minded: in a word, business.

These are the traditional motivations. As far as new factors are concerned, the main one - at least for ENI - is the development of the European Common Market. The Common Market affects the two sectors considered in different ways, but one point is common to both: the importance of logistic in setting up a cost-efficient structure. Both oil downstream and base chemicals handle huge volumes of products; therefore transport costs (of feedstock and of final products) are a significant component of the cost structure. The optimization of logistic in the new, larger market poses new problems, offers opportunities, and requires new investment.

Another new factor is the opening up of the East European markets.

The world is changing at a fast pace. We have concentrated on Europe here, but the change is brisk everywhere. Change may entail new investment opportunities: this will be the case if governments will put in place a stable framework for investment, and will move to minimize political risk through the adoption of appropriate legislation and regulations. It is important to create a new wave of of investment, so that each Company will feel that it *must* invest internationally in order to adapt to the new conditions and remain competitive.

Oil downstream: particular features

Oil downstream includes refining and marketing. In refining, there are at least two "new factors" worth noting.

The first is that oil substitution policies have led to lower consumption of industrial fuel oil (the so called "heavy end of the barrel"), which has been to a good extent substituted for by natural gas, nuclear power or other energy sources. On the other hand substitution is possible (at least for the time being) for the light automotive fuels - gasoline and gasoil. As a consequence, the "consumption barrel" (the product mix requested by the market) has become lighter and lighter. To lighten the barrel, refiners must rely on "conversion plants", like hydrocrackers. Therefore, refineries must be continually upgraded; and investments in conversion capacity are very large.

Second factor is increased environmental sensitivity, which demands cleaner refined products. There are no technical problems in getting cleaner products, but they obviously demand improvements in the processing plants; and such improvements are usually quite expensive.

Conclusion: just to keep the refining system updated and competitive, an oil company has to engage almost continuously in huge projects, which pose some financing problems in the present situation.

Base chemicals: particular features

The most important item in base chemicals cost structure is the feedstock; a production plant which can get feedstock at low cost has a strong competitive advantage.

Natural gas is an excellent feedstock for many petrochemical products; and, as was noted before, gas found in remote locations has little value, and can be made available to chemical plants at very low price. Gas in Middle East, in the CIS and in many other countries, can be used as a chemical feedstock.

Many technical and political reasons hampered for a long time the development of gas-based petrochemical plants; but the process is now in full swing, and may pose difficult restructuring problems to the entire European petrochemical industry, which is traditionally based on virgin naphta (a refinery product), and does not have cheap gas available. ENI has been particularly involved in developing gas-based production of oxigenated octane-boosters - MTBE and methanol - setting up world-scale plants in South America and in Middle East.

Another factor affecting the European base chemical industry is, as was said before, the progress of the single market, which leads to increased competition and new alliances, in order to reduce transport costs, share technologies and reach a position of preminence in the market.

To conclude, it's clear that in this sector things are changing at a fast pace, and Companies must commit huge technical and financial resource and continuously update their strategies in order to remain competitive.

Conclusions

ENI's main operating sectors are investment intensive; oil upstream and gas transport systems in particular require huge investments, whose financing poses difficult problems even at world scale. But in less demanding sectors as well, the brisk pace at which the business environment is changing requires major financial committements. ENI is a strong investor, being used to devoting to capital expenses a higher-then-usual share of its proceeds; but the situation is quite demanding, and even in ENI the weight of the financial constraint is felt more than in the past.

The quick pace at which the business environment is changing, coupled with a world that telecommunications are making smaller and strongly interconnected, requires investors to be flexible, able to promptly perceive any new development and seize new opportunities.

The world is getting more and more interconnected; and interconnection means that everything comes to depend from everything else. This implies complexity, sudden changes, difficulty of forecasting, uncertainity. The increased flexibility, sensitivity to changes, quick adaptation needed to tackle this kind of problems are relatively easy to achieve in "light" activities, in which investments are limited and lead times are short. In the fields in which ENI operates, fields with huge investments and lead times of several years, things are more difficult.