

## Long-term investment planning in oil and gas sector: trends, risks and opportunities (the case of NOC «KazMunaiGas»)

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**Abstract:** The company's strategic development challenges and opportunities were summarized based on the consolidated, operating and financial statements of NOC «KazMunaiGas» using SWOT-method. The conceptual scheme of the VIOC's strategic management and the system of long-term development targets, adapted to the peculiarities of oil and gas sector of Kazakhstan, are proposed.

[Salpek B.S., Arystanbayeva S.S. **Long-term investment planning in oil and gas sector: trends, risks and opportunities (the case of NOC «KazMunaiGas»).** *Life Sci J* 2013;10(11s):189-192] (ISSN:1097-8135). <http://www.lifesciencesite.com>. 32

**Keywords:** Oil and gas complex, investment, vertically integrated oil company (VIOC), SWOT-analysis, strategic management.

### 1. Introduction

The volume of national oil companies' activity (hereinafter - NOC) considering many companies and industries, global operating activities and volume of attracted capital influence greatly the socio-economic development of the oil producing countries of the world, including Kazakhstan taking the 12<sup>th</sup> place in the world's by hydrocarbon reserves. The topicality of research related to the issues of improving the development strategies of NOCs reflects in methodological and scientific-practical terms the key part assigned by the state to backbone companies of oil and gas sector of the national economy.

### 2. Material and Methods

Subject area of the development of oil and gas sector as a whole, as well as the problems of investment planning are adequately rendered in numerous publications of foreign and domestic scholars such as M. Al-Monif, S. Abramov, V. Bogdanov, K. Lokatelli, H. Mato, R. Cherdabaev, A. Cherepovitsyn, V. Yakunin and others [6, 7, 8, 9, 10]. It should be admitted that many issues of scientific and practical nature, especially those ones regarding shaping strategies of particular NOCs remain unsolved, thus determining the need for this study.

The present paper aims at developing recommendations to improve the methodology of integrated investment planning of NOCs based on the analysis of development strategy of the national oil and gas company "KazMunaiGas" (hereinafter - the "KMG").

### 3. Results

The deepening of economic globalization stimulates cross-country competition at the investment markets. In these conditions Kazakhstan seeks to maximize efficient use of high potential of its oil and gas industry. Major foreign and joint companies

perform well in the sectors of production, transportation and processing of hydrocarbons, but the special status of NOC "KMG" is related not only to economic, but also to social and political aspects of its operation.

In "KMG" 100% of shares belong to the state fund "Samruk-Kazyna", the company formed through the merger of NOC "KazakhOil" and "Oil and Gas Transport" to provide the country's interests in the oil and gas sector. The main lines of "KMG" business are the following: 1) participation in the implementation of the state policy in the oil and gas industry; 2) effective and efficient development of resources; 3) representation of state interests through share holding in oil and gas contracts; 4) monitoring of exploration, development, production, processing, sale, transportation of hydrocarbons, design, construction, operation of oil and gas pipelines [1].

Moreover, "KMG" is entrusted with the functions of executive body of the Ministry of Oil and Gas of the Republic of Kazakhstan on the construction, planning, design, storage and transshipment of oil and gas, as well as on the use of facilities of oil and gas transportation infrastructure [3]. The Company is assigned an important part in the implementation of the Programme on the Development of Oil and Gas Sector for 2010-2014, particularly: 1) providing the market with oil products and natural gas; 2) increasing the depth of oil and gas recovery; 3) diversifying the export routes for oil and gas transportation; 4) increase in export volume of petrochemical products; 6) ensuring labor and environment safety [2, 4, 5].

In oil and gas recovery NOC "KMG" owns 44 oil and gas fields with total area of 837.4 km<sup>2</sup> and provides 65% of oil transportation, 100% of the gas transportation, 50% of the tanker transportation,

operates petroleum refineries in Kazakhstan and Romania; it is engaged in the sale of oil, gas and refined products, research and investment projects [5]. In other words, organizationally "KMG" is in fact a state vertically integrated oil company (VIOC).

Analysis of the main operating performance

(Table 1) reflects the rapid growth of the company in the medium term. Vertical integration has increased the "KMG" potential and strengthened its competitiveness. Along with this, the factors reducing the effectiveness of NOCs investment projects have affected it at the growth stage.

Table 1. Operating performance of NOC "KazMunaiGas" in 2007-2012 \*

Indicator	2007	2008	2009	2010	2011	2012
Proved oil reserves at the end of the year, <i>million tons</i>	611,3	706	781,4	791,3	778,6	794,9
Remaining reserves of natural gas at the end of the year, <i>billion m<sup>3</sup></i>	236,5	343,2	374,6	395,6	394,9	399,5
Oil and gas condensate recovery, <i>thousand tons</i>	16690	18511	18701	21971	21105	21877
Gas recovery, <i>million m<sup>3</sup></i>	3532	3786	4332	4912	4850	4790
Transportation of oil by pipelines, <i>million tons</i>	50,8	60,65	64,18	65,83	66,87	69,89
Maritime transportation of oil, <i>thousand tons</i>	2280	2869	7363	7082	5887	5745
Transportation of natural gas by pipelines, <i>billion m<sup>3</sup></i>	114,2	116,7	91,1	99,4	110,5	106,5
Raw hydrocarbon processing, <i>thousand tons</i>	47125	10993	12758	15144	15326	15690
Average number of employees as of December 31, <i>person</i>	52 829	54768	57087	64660	83302	н/д

\* Source: consolidated statements of NOC "KMG" (indicators of 2012 are calculated on the basis of data for the first 9 months) - <http://www.kmg.kz/investors/reports/>

Combining production, all stages of transportation and processing, manufacturing and distribution of the final output, "KMG" invested sound capital with long-term of return (having attracted foreign credits), that resulted in increased fixed charges and reduced returns of assets in mining, industrial and transport infrastructure. In the economic crisis and recession the above-mentioned affected the stability of the financial situation of the company (see Table 2, Figure 1): average annual income growth rate (15.2%) is significantly behind the cutting of production costs' indicator (24.2% ), pointing to the problem of own capital formation, and forced to seek external financing through the issuance of medium-term bonds. The company's profitability over the same period have almost halved - from 32.3% to 18.2% [5].

Table 2. Financial performance of NOC "KazMunaiGas" for 2007-2012, bln. tenge \*

Indicator	2007	2008	2009	2010	2011	2012
Total revenue, including:	1482906	2022475	1955526	2252197	2781728	2884890
Revenue from sales of products and services	1414326	1885606	1589549	2098942	2627062	2392603
Total Expenditures, including:	905167	1678475	1765068	2065663	2684430	2350786
Cost of goods sold and services provided	643343	1199360	1050463	1409001	1837719	1516523
Corporate income tax expense	271079	200287	178603	132 675	153130	141594
<b>Net profit</b>	<b>292093</b>	<b>298291</b>	<b>110904</b>	<b>305309</b>	<b>422498</b>	<b>430834</b>

\* Source: consolidated statements of NOC "KMG" (indicators of 2012 are calculated on the basis of data for the first 9 months) - <http://www.kmg.kz/investors/reports/>

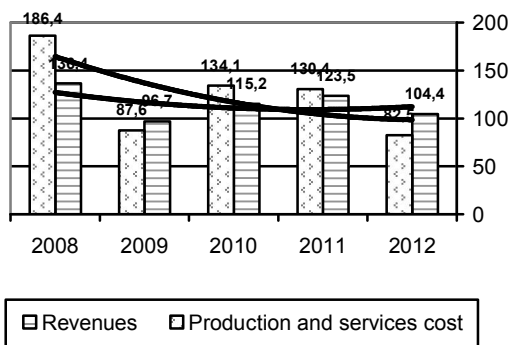


Figure 1. Cost of Products / Services Figures Growth and "KMG" Revenue in 2007-2012, %

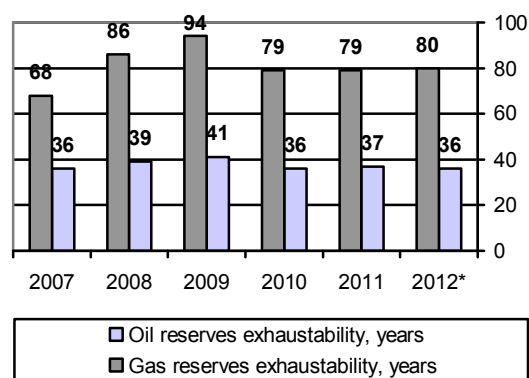


Figure 2. Long-term evaluation of "KMG" oil and gas reserves, years

Situation assessment in oil and gas recovery marked another major issue in the strategic development of the company - inadequate supplies of raw materials (Fig. 2).

In terms of the company's investment policy the investment in the development of new deposits did not increase its oil reserves (at the level of 2007), and the growth of gas reserves has been slow (growth rate +2%). Since capitalization of vertically integrated companies, reflected by stock quotes, is based in the first place on the estimation of long-term oil and gas reserves, "KMG" weak source of raw materials reduces its investment attractiveness.

The large-scale expansion has led to accelerated growth of the headcount of staff (up to 80 thousand), resulted in the increase of fiscal and social burden on the NOC budget, reducing its already weak performance, efficiency and return on assets (Figure 3).

SWOT-analysis is a complex tool to assess the situation in order to identify the problems of development in NOC "KMG" strategic examining (Table 3).

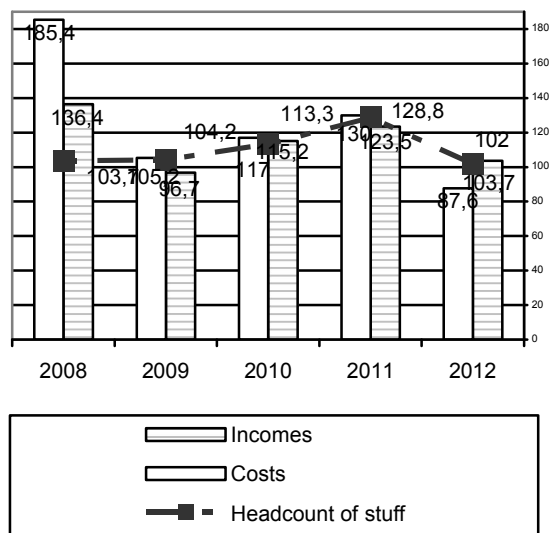


Figure 3. Growth of "KMG" Incomes, Costs and Headcount in 2007-2012, %

Table 3. NOC "KazMunaiGas" Prospect and Risks Assessment (SWOT-method)

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>- preferences when choosing production sites;</li> <li>- leading positions in oil and gas transportation;</li> <li>- favorable tax treatment;</li> <li>- aggressive policy of mergers and acquisitions;</li> <li>- Significant foreign currency earnings;</li> <li>- integration into international projects</li> </ul>	<ul style="list-style-type: none"> <li>- priority of the public interests to commercial ones;</li> <li>- capital-intensive asset structure;</li> <li>- relatively low technological level;</li> <li>- insufficient own supplies of raw materials;</li> <li>- non-diversified transit routes;</li> <li>- lack of depth of raw materials' processing</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>- comprehensive integration of assets;</li> <li>- diversification of production and processing of raw materials;</li> <li>- development of the Caspian shelf fields;</li> <li>- increasing the depth of hydrocarbons' processing;</li> <li>- access to alternative product markets;</li> <li>- improving the quality of corporate management</li> </ul>	<ul style="list-style-type: none"> <li>- threat of depletion of oil and gas available reserves;</li> <li>- political risks of the current regime;</li> <li>- market risks of drop in prices on the products of the industry;</li> <li>- financial risks of long-term loans;</li> <li>- risks of social commitments of the company;</li> <li>- risks of environmental degradation</li> </ul>

Investment strategic management as a cyclical process is based on the interaction of company's management with internal and external information environment shaping the space of possibilities and solutions (Figures 4, 5). The conceptual model of sustainable investment policy, taking advantage, compensating the weaknesses of the company, taking into account the risks and long-term projections, should combine environmental and social priorities, not only economic ones.

The "KMG" diagnostics allowed shaping a system of priorities for investment policy, focused on the long term development of the company given the major trends.

**4. Discussions**

Improving the quality of NOC "KMG" investment planning is one of the necessary steps towards transforming a national vertically integrated

company into transnational one. The investment strategy of the company entering the global capital markets provides the following priorities:

- choosing financial risk-resistant model with the optimal balance of loan to equity capital;
- diversification of the investment portfolio, increased economic efficiency of extraction of raw materials, increasing the share of products with high added value;
- increase of investment in expanding the source of raw materials, upgrading infrastructure, technology and research & development transfer;
- financing the development of the system of quality control of labor, environment and safety.

Updating the NOC "KazMunaiGas" investment strategy will favor the long-term growth in the value of its assets, and eventually a quick and successful solution of problems of long-term economic

and social development of the Republic of Kazakhstan in the next decades.

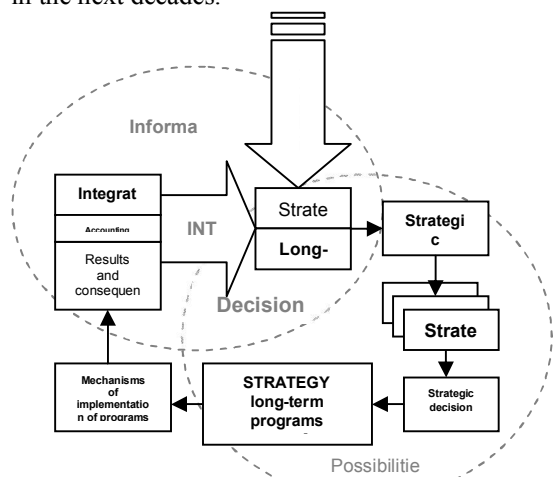


Figure 4. Concept of Strategic Management System of Vertically Integrated Companies (NOCs "KMG")

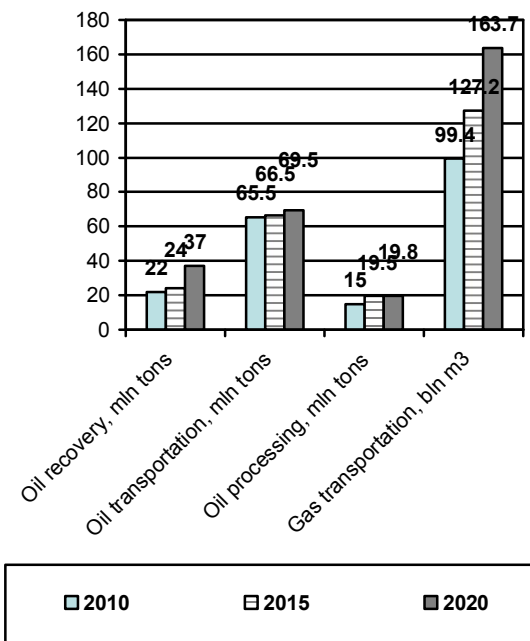


Figure 5. NOC "KMG" Development Indicators for 2010-2020

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10/9/2013

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