

# “Will Uzbekistan’s oil and gas industry benefit from international listing?”

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## SECTION 1. Macroeconomic processes and regional economies management

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### Will Uzbekistan's oil and gas industry benefit from international listing?

#### Abstract

Uzbekistan's oil and gas industry is experiencing declining production due to the depletion of existing oil and gas fields and aging production infrastructure. A multi-level organizational structure at Uzbekneftegaz is another reason for low efficiency of the industry, which causes the problems of increased bureaucracy, increased tax burden and inefficient allocation of resources. Partial privatization of Uzbekneftegaz can be an efficient tool in attracting alternative financing without putting the burden on the state budget and not ceding government control. Being listed on the international market, Uzbekneftegaz will have to follow internationally accepted corporate governance standards. This will have a positive impact on the efficiency and productivity of the industry.

**Keywords:** oil and gas, Uzbekistan, Uzbekneftegaz, initial public offering.

**JEL Classification:** G38.

#### Introduction

From the beginning of the transition in the 1990s, Uzbekistan has implemented its energy policy as a part of socio-economic reforms focusing on achieving energy independence. The government has been highly supportive of its core industries, particularly in oil and gas industry. The country increased production of liquid hydrocarbons; as a result, it could satisfy not only domestic needs, but also started exporting them.

This has been achieved through completion of a number of projects, such as bringing the Kokdumalak petroleum condensate field online, building the Bukhara refinery, and the installation of sulfur scrubbers at the Mubarek Natural Gas Refinery. To improve the management and efficiency of the oil and gas industry, the national oil and gas company Uzbekneftegaz was founded and was, subsequently, reorganized as a national holding company. Since 2000, Uzbekneftegaz has been attracting foreign investments and developing oil and gas industry in the country.

Alongside the positive results, the industry has been experiencing negative trends lately. Although Uzbekistan can fully satisfy its needs in gas and even exports it, a falling tendency in the production can be observed. The situation is worse in the oil and gas condensate sector. The country has to increase the import of oil as a result of a sudden decrease in production.

The development of the oil and gas industry is crucial for the economic growth of Uzbekistan. To maintain strategic goals, the industry needs an efficient management structure that can provide timely decisions, better performance of the projects and efficient use of resources. However, the existing multilevel management structure creates problems of increased bureaucracy, increased tax burden and inefficient allocation of resources.

An international Initial Public Offering (IPO) was proposed to solve the existing problems in the industry through partial privatization of Uzbekneftegaz. In this way, the government can attract additional financing for its projects in international stock markets. Partial privatization will remain the controlling power for the government. Furthermore, acceptance of the international corporate governance rules will improve the efficiency of the management.

This paper is organized as follows. Section 1 introduces Uzbekistan's oil and gas industry development. Section 2 presents the current structure of Uzbekneftegaz. Section 3 discusses the industry challenges and potential solutions. The final section provides concluding comments.

#### 1. Uzbekistan's oil and gas industry development

The oil and gas industry is one of the main industries of the economy of Uzbekistan. The country possesses huge reserves of hydrocarbon resources. According to the Institute of Geology and Exploration of Oil and Gas Fields (IGEOGF), 63.1% of the Uzbekistan's territory holds potential for oil and gas development (Abdullayev, 2013). The area with proven oil and gas reserves in Uzbekistan expands to 203.7 thousand sq. km. The main oil and gas regions of the country are

Ustyurt, Bukhara-Khiva, Southern-Western-Gissar, Surkhandarya and Ferghana (Figure 1). 78.7 thousand

sq. km area of Khorezm and Syrdarya regions has perspectives for oil and gas exploration.

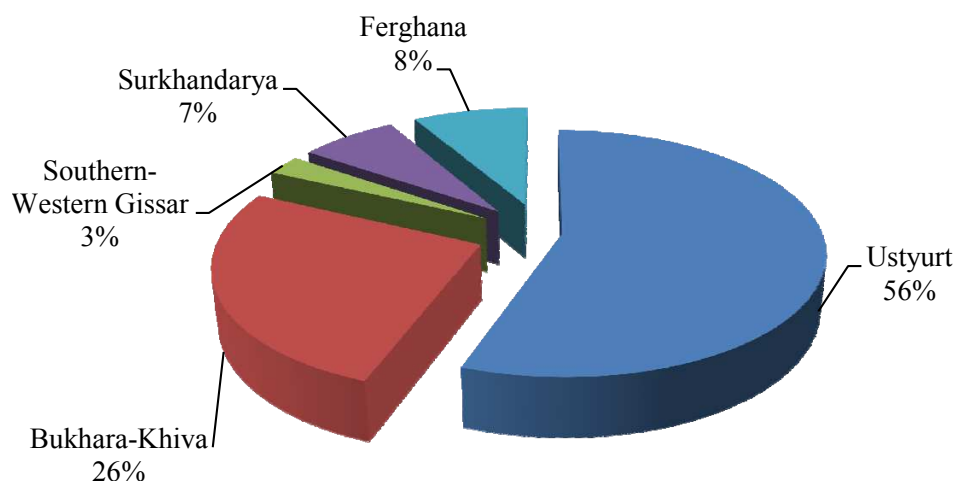


Fig. 1. The share of regions in the total area of proven oil and gas reserves

### 1.1. Trends in the oil and gas condensate sector.

**Reserves.** According to British Petroleum's (BP) 2014 Statistical review, Uzbekistan's oil reserves were estimated at 600 million barrels in 2013. Most of the oil fields are located in the Bukhara-Khiva region. Due to the discovery of the Kokdumalak deposit in the region, Uzbekistan experienced a significant increase in oil reserves by the mid-1990s. However, since 1997, the reserves replacement ratio declined from 1.18 to 0.51 by 2009, while the permitted minimum ratio estimated by the country as no less than 2.0 (Center for Economic Research (CER), 2013). Today, the growth of oil reserves does not compensate its production.

**Production and consumption.** Uzbekistan sharply increased its oil production from 2.8 million tons in 1991 to 7.6 million tons in 1995 (Figure 2). Hence,

the country stopped importing oil and achieved energy self-sufficiency. In 1998, production of liquid hydrocarbons was at the peak of 8.2 million tons. But it did not last long and, since 2011, consumption has exceeded the production level of oil and gas condensate, turning the country into a net importer of oil. In 2013, production fell by 7.1%, while consumption grew by 2.1% in comparison with the previous year.

Having the same reserve levels with neighboring Turkmenistan, Uzbekistan produces significantly less oil and gas condensate (EIA US, 2012). For instance, in 2013, Turkmenistan produced 11.4 million tons which is 3.9 times higher than the Uzbekistan's output. The decreasing level of oil production in Uzbekistan is due to the low level of investment and outdated technology.

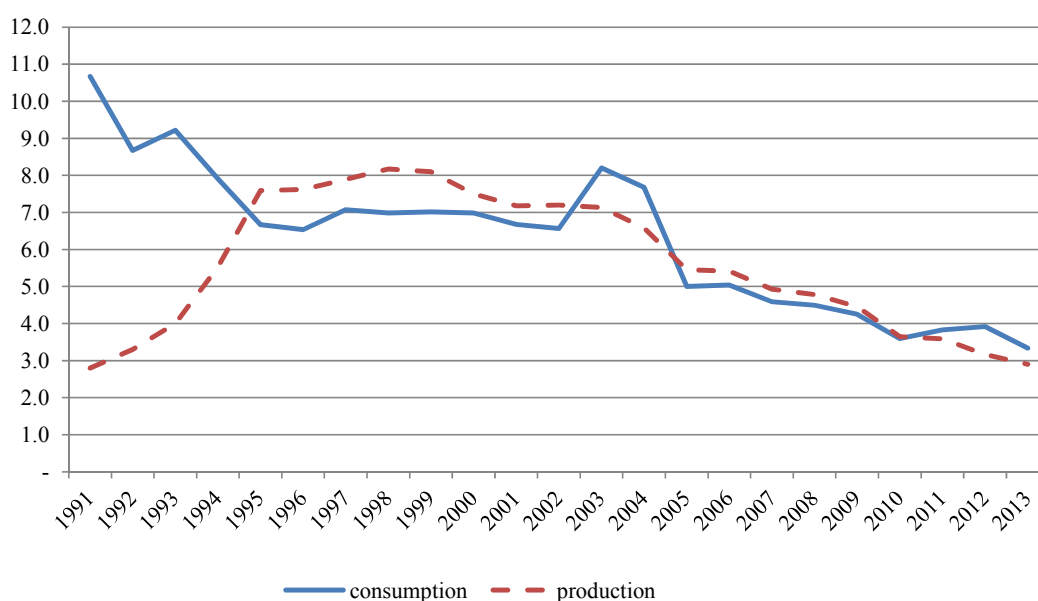


Fig. 2. Production and consumption of oil and gas condensate in Uzbekistan (million tons)

Source: British Petroleum, 2014.

**Refining.** Oil and gas condensate are processed and refined by the state joint stock company Uzneftmahsulot at its refineries located in Ferghana and Bukhara.

The Ferghana refinery is one of the leading companies for the production of fuels and lubricants in the Central Asian region. It was launched in 1958, and its total production capacity is 8.7 million tons of fuel and lubricants a year (“Neftyanaya promishlennost”, 2014). As the Fergana Refinery started using crude oil containing a high level of sulfur since 1995, a new diesel hydrosulfurization complex was built in 1999. The complex, worth USD 200 million, was installed by two Japanese companies Mitsui and Tayo Engineering with the financial support provided by the European Bank for Reconstruction and Development and Eximbank of Japan (Ferghana refinery, 2014).

The Bukhara refinery, with an annual refining capacity of 2.5 million tons of oil and gas condensate, was built in 1997 (Bukhara oil refinery, 2014). In 2016, Uzbekistan plans to complete the construction of the second line of the Bukhara refinery which will produce petroleum, diesel fuel, jet kerosene of Euro-3 standard (“Uzbekistan do 2016 goda”, 2013). Preliminary construction cost is USD 475 million, which will be financed by Uzbekneftegaz loans from the Fund for Reconstruction and Development of Uzbekistan, foreign loans and investments (“Uzbekistan do 2016 goda”, 2013).

Loading capacity of the refineries has been decreasing since 1998, from 73.7% to 50-55% in 2009 (CER, 2013). This is the result of a drop in oil production at the largest oil field Kokdumalak and increasing expenses for growing imports of oil and gas condensate that reached more than 1 mln. tons (CER, 2013). In 2012, the loading capacity at the Bukhara refinery was 67%, while, at the Ferghana refinery, it was just 33% (CER, 2013).

**Trade and transportation infrastructure.** Since 2003, Uzbekistan has imported crude oil from the Kumkol field of South Kazakhstan for refining at the Fergana refinery plant (“Uzbekistan pristupaet”, 2013) and exported the refined products. Due to the declining production, Uzbekistan has increased oil import from Turkmenistan (Uzbekskie NPZ, 2013).

Uzbekistan does not have a well-developed oil pipeline infrastructure. There is one major international pipeline which links Russia’s Tumen through Kazakhstan’s Shymkent, Uzbekistan’s Bukhara and Turkmenistan’s Chardjou. The pipeline is approximately 450 km in length (Ibpus, 2013, p. 130). The Fergana Valley oil pipeline connects Fergana and Altyaryk refineries. A pipeline from Angren to the Ferghana refinery is under construction. This pipeline will connect the refinery with the Bukhara-Khiva oilfields (Ibpus, 2013, p. 130).

As Uzbekistan is a double landlocked country, it has no sea ports. Railway and automobile are the main transportation infrastructure of oil products. All oil and gas facilities are connected to the railway system (Ibpus, 2013, p. 131). Currently, the government is investing significant funds in the modernization of the Uzbek part of the Transcontinental Highway, as well as the construction of the new railways connecting with China and northern Afghanistan (Ibpus, 2013, p. 132).

**1.2. Trends in gas sector. Reserves.** British Petroleum (BP) estimated Uzbekistan’s proven gas reserves at 1.1 trillion cubic meters in 2013 and ranks it the fourth largest in the Eurasia region followed by Russia (31.3 trillion cubic meters of gas reserves), Turkmenistan (17.5 tcm) and Kazakhstan (1.5 tcm). Uzbekistan produces natural gas from 52 fields with 12 major deposits, located in the Amu Darya Basin in the southeastern region and in the Central Ustyurt plateau near the Aral Sea in the western region of Uzbekistan. Mubarek and Shurtan are the largest gas fields. The fields also contain ethane, propane, butane and other components, and they can be used to produce polyethylene and polyvinyl chloride (Ibpus, 2013, p. 129).

**Production and consumption.** According to BP, in 2013, Uzbekistan was ranked as one of the top three natural gas producers in Eurasia and seventeenth in the world. Since 1991, natural gas production has increased by 64.12% from 37.9 bcm to its peak 62.2 bcm in 2008 (Figure 3). Production has been declining since then and dropped to 55.2 bcm in 2013, when production from Kokdumalak and Shurtan gas fields reached a plateau (EIA, 2012).

Uzbekistan consumes 84% of its gas production, and it is the largest user of hydrocarbons in the Central Asian region. One of the main consumers of natural gas is Uzbekenergo State Joint Stock Company that represents the power industry in Uzbekistan and is the key producer and supplier of electric power. It consumes 35% of gas supplied in the internal market (Ibpus, 2013, p. 133). Gas is the main fuel for the power plants of Uzbekenergo. The company has 39 power plants with total installed capacity 12.0 mln. kW. Another gas consumer in Uzbekistan is Uzkommunhizmat (Uzbekistan communal services) State Agency that delivers gas to the end users. Other gas consuming industries are chemical, metallurgy and mining.

Figure 3 shows that domestic gas consumption decreased from 50.9 bcm in 2002 to 45.2 bcm in 2013 as a result of the growing volumes of exported gas. However, the government is seeking ways to decrease domestic gas consumption through energy efficiency measures and increase gas export.

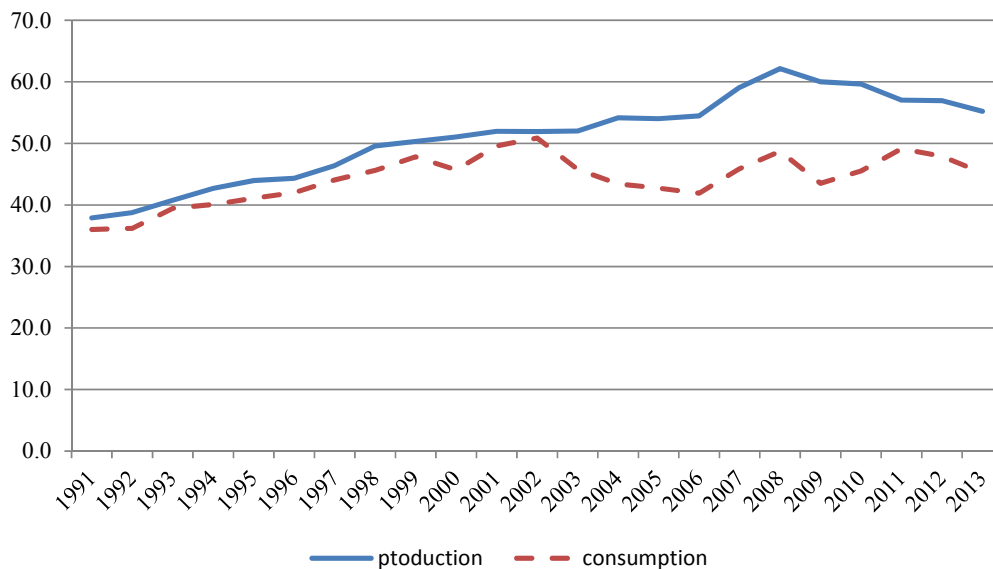


Fig. 3. Production and consumption of natural gas in Uzbekistan (billion cubic meters)

Source: British Petroleum, 2014.

**Refining.** Uzbek natural gas contains high level of sulfur that needs to be removed through processing. Natural gas is refined in three plants: Mubarek Gas Processing Plant, Shurtan Gas Processing Plant and Shurtan Gas Chemical Complex.

Mubarek Gas Processing Plant (Mubarek GPP) is one of the world's largest gas processing plants. The plant was built in 1971, and its annual production capacity is 30 bcm of gas. Mubarek GPP produces stable gas condensate, liquefied hydrocarbon gases and technical sulfur. These products are distributed in domestic, as well as foreign markets.

Shurtan Gas Processing Plant's (Shurtan GPP) annual processing capacity is 20 bcm of gas. It has four operating facilities of propane butane mixture. These facilities can process 6 bcm of gas and produce 104 thousand tons of liquefied gas 44 tons of stable gas gasoline (Uzbekneftegaz, 2014).

Shurtan Gas Chemical Complex (Shurtan GCC) is located in the Guzar district of the Kashkadarya region, in the south-west part of Uzbekistan. It was constructed in 2001. Annual natural gas processing capacity of the complex accounts for 3.9 bcm. It produces 3.5 bcm of pure methane, 125 thousand tons of UzClear polyethylene, 100 thousand tons of liquefied gas, 100 thousand tons of stable gas condensate and 1.5 tons of granulated sulfur (Shurtan GCC, 2014). Shurtan GCC exports 60% of produced polyethylene to European, Asian and CIS countries (Shurtan GCC, 2014).

A gas-to-petrochemicals project on construction of Ustyurt Gas Chemical Complex (Ustyurt GCC) on the Surgil gas field started in 2008. The plant is expected to be commissioned in 2016. It will process 4.5 bcm of

gas and produce 400 thousand tons of high-density polyethylene and 100 thousand tons of polypropylene annually (Uz-Kor Gas Chemical, 2014). The project is developed by the joint venture Uz-Kor Gas Chemical owned by Uzbekneftegaz and Kor-Uz Gas Chemical Investment Ltd., which is owned by Kogas (45%), Lotte Chemical (49%) and STX Energy (6%). The company will extract natural gas from onshore fields and sell petrochemical products to domestic and international markets. Total cost of the project is estimated at USD 3.9 billion which is financed by shareholders, Asian Development Bank and other development and leading banks of Europe and Asia with a 16-year maturity. In 2014, Ustyurt GCC was awarded Deal of the Year 2013 in the Oil and Gas sector by the Global Infrastructure Journal. Construction of Ustyurt GCC was recognized as the largest petrochemical project in the CIS region with the largest multi-sourced and longest tenor financings ever-raised around the world.

#### Trade and transportation infrastructure.

Uzbekistan is the net exporter of natural gas which is one of the main export commodities that generate foreign exchange earnings. In 2013, the country exported about 20% of its gas production. Uzbekistan exports gas mainly to Russia and, the recently emerged buyer, China. An insignificant volume of gas is sold to the regional countries of Kazakhstan, Kyrgyzstan and Tajikistan. Uzbekistan also serves as a transit country for Turkmenistan on shipment of gas to Russia and China. It has nine long distance gas pipelines with 13.6 thousand km, and the length of gas distribution network is more than 125.4 thousand km (Eshmuratov, 2013). Gas transportation network covers all regions of Uzbekistan and has access to the neighboring countries Turkmenistan, Kazakhstan, Kyrgyzstan and Tajikistan.

The Central Asia-Center gas pipeline system (CAC) was commissioned in 1969. The length of the pipeline is 2000 km with the annual capacity of 90 bcm. The main route system runs from Turkmenistan via Uzbekistan and Kazakhstan to Russia. Uzbekistan exports its gas to Russia through this pipeline. Also, this route makes Uzbekistan a transit country in delivering Turkmen gas to Russia.

The Central Asia-China gas pipeline connects Turkmenistan and Xinjiang region of China through Uzbekistan. Uzbekistan exports its own gas and transits Turkmen gas to China. The pipeline was built in 2009.

The Bukhara-Tashkent-Bishkek-Almaty pipeline is Uzbekistan's main route for natural gas export. Through this route, Uzbekistan delivers gas to Kyrgyzstan and the southern part of Afghanistan. The pipeline was commissioned in 1971, and its annual capacity is 22 bcm.

The Bukhara-Urals pipeline runs from Turkmenistan through Bukhara region of Uzbekistan and Kazakhstan to Russia. The pipeline

was commissioned in 1966 with the length of 4664 km and a total capacity of 21 bcm. However, due to the deterioration of the Uzbekistan part of the pipeline, the capacity does not exceed 7 bcm. Due to increasing volume of Turkmen gas, Uzbekistan had to reopen it in 2001 (Ibpus, 2013, p. 131).

## 2. Current status and structure of Uzbekneftegaz National Holding Company

Since Uzbekistan's independence, the government has tried to improve the organizational structure of oil and gas industry. In 1992, the Uzbek state concern of the oil and gas industry Uzbekneftegaz was formed and later the same year it was transformed into a national corporation. In 1998, it was reorganized to the holding company with vertically integrated three levels of the management system. The first level of the system is represented by Uzbekneftegaz National Holding Company. The second level includes six major joint stock companies owned by Uzbekneftegaz. The third level consists of more than 190 enterprises owned by the companies of the second level (Figure 4).

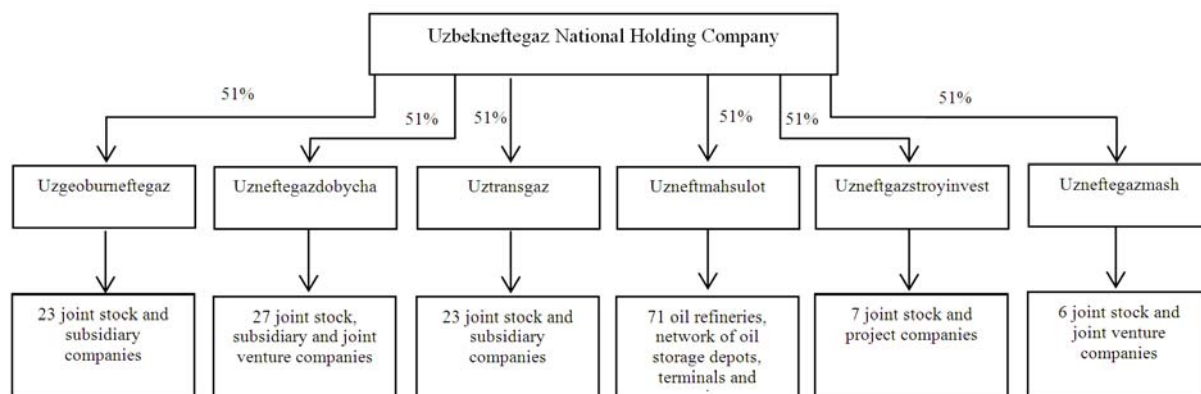


Fig. 4. The structure of Uzbekneftegaz National Holding Company

Source: Uzbekneftegaz, 2014.

Uzgeoburneftegaz Joint Stock Company is involved in exploration, prospecting and drilling oil and gas wells. The company includes 23 joint stock and subsidiary companies.

Uzneftegazdobycha Joint Stock Company is responsible for development of oil and gas fields, extraction of oil, gas and gas condensate and processing of natural gas. The company unites 27 joint stock, subsidiary and joint venture companies. Uzneftegazdobycha produces commercial oil, flammable natural gas, liquefied hydrocarbon gas, stable gas condensate, sulfur technical gas, granulated polyethylene, plastic pipes, polyethylene film, details for drip irrigation systems and aluminum composite panels.

Uztransgaz Joint Stock Company is responsible for gas transportation, underground gas storage,

management of gas transportation facilities and distribution of gas to domestic consumers and external markets. The company includes 23 joint stock and subsidiary companies.

Uzneftmahsulot Joint Stock Company is involved in processing crude oil and gas condensate, production and distribution of petroleum products and liquefied gas. The company is the owner of the Ferghana, Altyaryk and Bukhara oil refineries, as well as the network of oil storage depots, terminals and stations

Uzneftgazstroyinvest Joint Stock Company is involved in construction, rehabilitation and maintenance of oil and gas production, processing and transportation facilities. The company includes seven joint stock and project companies.

Uzneftegazmash Joint Stock Company is involved in production and engineering of machinery and equipment for the companies of oil and gas and other related industries. The company operates six joint stock and joint venture companies.

Moreover, Uzbekneftegaz supervises the following companies:

Uzlitineftegaz Joint Stock Company is Uzbekistan's scientific research and project institute of oil and gas industry.

IGEOGF Joint Stock Company is the institute of geology and exploration of oil and gas fields.

Neftgazdepozit Liabilities Limited Company is the securities custodian company.

Neftgazinvest Subsidiary Company monitors implementation of investment projects.

Uztashqineftegaz Open Joint Stock Company is an executive company of the Interdepartmental Tender Committee of NHC «Uzbekneftegaz».

Uzneftegazsvyaz Subsidiary Company is responsible for installation, reconstruction and management of telecommunication facilities of the companies in the oil and gas industry.

### 3. Industry challenges and potential solutions

**3.1. Current problems of the industry.** The oil and gas industry plays a crucial role in maintaining the growth of Uzbekistan's economy. In 2012, the share of oil and gas reached 5.1% in GDP, 18.3% of industrial production and 23% in export (Center for Economic Research (CER), 2013). The industry has a major impact on transportation, electricity, machine building, metallurgy, chemistry, science, non-ferrous metallurgy, oil refinery, utilities and construction (CER, 2013). Considering the importance of oil and gas in the economic development of the country, it is important to maintain the efficient work of the industry.

Today, Uzbekistan's oil and gas industry faces two major challenges, i.e., declining production and inefficient management, that need to be addressed to ensure sustainable growth. Declining production has become the result of depletion of oil and gas from the brownfields and deterioration of the infrastructure and equipment (Table 1).

To overcome the existing problem, Uzbekistan's government is supporting the industry development by realizing several large scale projects. However, it still needs significant investments:

- ◆ to discover new oil and gas fields by starting greenfield projects in the domestic market, as

well as by participating in the energy projects in the foreign markets; and

- ◆ to upgrade the infrastructure and technology.

Inefficient management is another obstacle that holds back the industry development. Multilevel organizational structure at Uzbekneftegaz creates such problems as:

- ◆ increased bureaucracy;
- ◆ increased tax burden;
- ◆ inefficient allocation of resources.

Table 1. Issues in the oil and gas industry of Uzbekistan

Issues	Brief explanation
Declining production	Reason: <ul style="list-style-type: none"> <li>◆ depletion of oil and gas from the brownfields;</li> <li>◆ and deterioration of the infrastructure and equipment</li> </ul>
Inefficient management	Reason: Multi-level organizational structure that creates such problems as: <ul style="list-style-type: none"> <li>◆ increased bureaucracy;</li> <li>◆ increased tax burden;</li> <li>◆ inefficient allocation of resources.</li> </ul>

The existing multilevel system of governance in the industry is the reason for the bureaucratic management and conflict of interests between the holding company and its subsidiaries. The managing personnel of the first and the second levels duplicate the same functions with the government officials responsible for the oil and gas sector. In the three-level management system, the managers of the second level at Uzbekneftegaz perform the same function of the first level managers at the subsidiaries. This is the reason for the excessive number of managing personnel which also delays the decision process. The third level companies that perform main operations are managed poorly, as the holding company cannot coordinate the third level companies directly (CER, 2013). Moreover, the inefficient system of financing and absence of financial independence does not let Uzbekneftegaz provide timely financing of exploitation and capital needs (CER, 2013). Because of the delays in approving the proposals on imports of necessary products and technology, the efficiency of operations management decreases.

The existing management structure increases the tax burden on the industry. Taxes are levied three times on dividends formed from the same source of profit. The third level companies pay dividends to the shareholders from their net profit and pay 10% in tax. The shareholders having received dividends, form their net profit and transfer dividends after paying 10% tax to the holding company, which also pays dividends to its shareholders after the tax



payment (CER, 2013). Thus, triple taxation is used for the profit of the single entity.

An inefficient allocation of resources can be observed in the industry. While some companies have excessive labor and material resources, other companies suffer from their shortage. An increasing number of investment projects require constant support and control, which Uzbekneftegaz cannot provide on a fully and timely manner. As a result, many projects are delayed or poorly performed.

**3.2. Initial Public Offering as a potential solution.** International listing of Uzbekneftegaz can be an efficient way of solving the existing problems of the industry. IPO not only can satisfy the demand for capital in the long run, but also can increase the efficiency and productivity of the industry. Table 1 shows the comparison of costs and advantages of debt and equity financings by the capital structure theories and explains why listing is a necessary process for Uzbekneftegaz.

Table 2. Comparison of equity and debt financings by the capital structure theories and their application to Uzbekneftegaz

	Equity financing	Debt financing	Applying to Uzbekneftegaz
Pecking order hypothesis	Costs: <ul style="list-style-type: none"> <li>Entrance of the external owners.</li> <li>Asymmetric information decreases the value of the company stocks.</li> <li>Transaction costs of IPO issue are higher than debt financing.</li> </ul>	Advantages: <ul style="list-style-type: none"> <li>Debt financing is safer than equity issue.</li> <li>Lower transaction costs of debt financing.</li> <li>More profitable firms tend to have lower debt ratios.</li> </ul>	
Trade-off theory	Advantages: <ul style="list-style-type: none"> <li>Equity is more attractive than the debt with the personal tax on interest income.</li> </ul>	Advantages: <ul style="list-style-type: none"> <li>Tax shield: debt is preferred over equity for corporate taxes.</li> <li>High profitability ratios should have lower probability of bankruptcy.</li> </ul> Costs: <ul style="list-style-type: none"> <li>A higher tax rate leads to higher debt ratios.</li> <li>Bankruptcy risk.</li> </ul> Costs of financial distress: <ul style="list-style-type: none"> <li>Direct (legal &amp; advisory fees, resources spent by management &amp; creditors, time).</li> <li>Indirect (missing other investment opportunities, assets sold for lower value, cut of necessary expenses, weakened position at the market).</li> </ul>	As oil and gas exploration projects are risky, it is preferred to attract equity financing. IPO will also open the doors to other types of financing and increases the rate of the company when it issues the debt.
Corporate governance	Advantages: <ul style="list-style-type: none"> <li>Clear role and responsibilities of the owners and management.</li> <li>Development and fulfillment of strategic priorities and plans.</li> <li>Integrity and ethical behavior.</li> <li>Retaining and attracting talented employees.</li> <li>Disclosure and transparency.</li> </ul>		As Uzbekneftegaz becomes a public company, it has to adopt corporate governance rules and guidelines. Governance often has a positive impact on the performance. The managers act in the best interest of the company and shareholders which leads to an increase in profits and a reduction in costs.

Contrary to the pecking order hypothesis and trade-off theory, Uzbekneftegaz will have a range of benefits from equity financing at the current stage:

- First of all, as oil and gas exploration projects are risky, equity financing is a safe way for capital attraction.
- Listing on the capital market will open up access to alternative sources of financing and help to minimize the burden on the government budget. Once a company is listed, it has the right to issue further shares, thereby again providing itself with capital for expansion.
- The listed company will become transparent which can increase the rate of the company when it issues the debt on capital markets.
- Partial privatization will be preferable for Uzbekneftegaz, as the government can capture significant benefits without ceding a majority of ownership and control.

The government of Uzbekistan has made several unsuccessful attempts to privatize 49% of Uzbekneftegaz since 2001. State assets in large enterprises offered to foreign investors were sold through tenders. However, this method of privatization was not effective due to:

- Bureaucratic approach in privatization process.
- Lack of transparency in price formation of the company.
- Insufficiency of information about the company, its financial condition and privatization process as a whole.
- Lack of investors.

Lately, the international IPO has become a popular form of privatization that can be applied to Uzbekneftegaz. Foreign investors can be attracted through issuing IPO at the international markets for a relatively higher price than in the domestic



market. This way of financing has a range of advantages including an enlarged investor base, greater liquidity, better valuation and larger market for trading shares. In a macroeconomic context, issuing IPOs at the international stock exchanges contributes to the inflow of foreign capital. Moreover, the government can only offer a part of its shares in the stock exchange and retain its control over the strategic companies. Many countries have foreseen these benefits of IPO for privatizing, and many state companies have gone public in international stock markets (Table 3).

Table 3. Issues and solution in the oil and gas industry of Uzbekistan

Issues	How can IPO solve the problems?
Declining production	Through IPO, the government can 1) attract additional financing through stock exchange; ◆ to discover new oil and gas fields; ◆ to upgrade the infrastructure and technology; 2) decrease the burden on the government budget; 3) improve debt financing terms; 4) get a higher price for a share and increase the company value.
Inefficient management	IPO process will result in the: 1) high level of transparency, 2) modification of the organizational structure, 3) improvement of communication, management and control system, 4) selection of the qualified key personnel and delegation of responsibilities.

According to Baker & McKinsey (2014), cross-border IPOs reached the highest growth rate by raising USD 32.4 billion globally in 2013, a 97% increase over 2012 and tripled the growth of domestic IPOs. Cross-border IPOs have always been dominated by companies from developing and emerging markets, as they prefer to list on stock exchanges with established investor bases and high liquidity (Baker & McKinsey, 2014). The advantages of IPO issue can be seen in successful cases of the companies in different sectors from different countries.

The Russian state oil company Rosneft raised USD 10.7 billion by offering about 15% of its shares on the Russian Trading System (RTS) and the London Stock Exchange (LSE) on July 14, 2006. Shares were sold at the highest forecasted price USD 7.55 and, as a result, the value of Rosneft reached USD 79.8 billion. Through bilateral deals, shares worth USD 2.6 billion were sold to strategic investors, such as British Petroleum (BP), Petronas and CNPC (Ernst & Young, 2009). Today, 69.5 percent of Rosneft shares belongs to the state, but it is planning to reduce its stake to 50 percent plus one share.

China's largest oil and gas producer and distributor PetroChina listed its shares on the Hong Kong and American Depository receipts at the New York Stock Exchange in 2000. It placed 10% of its shares by raising USD 2.5 billion. In 2007, the company floated its shares on the Shanghai stock exchange. The opening price of a share was CNY 48.6, which exceeded its IPO price of CNY 16.7 by 191 percent. Hence, PetroChina became the largest listed company by market capitalization in the world. The state decreased its share in PetroChina to 86.5%, and the company's market capitalization achieved USD 225.0 billion.

As Uzbekneftegaz becomes a public company, it has to adopt corporate governance rules and guidelines. Practicing corporate governance is beneficial for a company, its shareholders and the economy as a whole for the following reasons:

- ◆ High level of transparency helps to attain the trust of the society, including investors and customers and make it easy to attract financing. It can also have a positive impact on the company valuation.
- ◆ Managers perform in the best interest of the company and stakeholders which can drive an increase in profits and a reduction in costs.
- ◆ The company tries to utilize the resources optimally; hence, it increases the efficiency and productivity.
- ◆ Due to the transparency, the company will reduce risks in its business mismanagement and corruption.
- ◆ By following corporate governance, the company can gain a good reputation among investors which will attract foreign capital in the economy.

Listing of a state company at the stock exchange is a significant type of corporate restructuring. While implementing the IPO process, a detailed and comprehensive analysis is required to be done, as a result, certain improvements take place at the company, such as reorganizing of the organizational structure, selection of the qualified key employees and delegation of responsibilities, improvement of internal reporting and control, as well as critical evaluation of the efficiency of the company.

A number of studies presented the positive impact of privatization on the firm performance due to company restructuring. Wolf and Pollitt (2008) studied a sample of 60 privatization events of 28 national oil companies from 20 countries between 1977 and 2004. Comparing the three years after with the three years before privatization, they observed that the return on sales increased by 3.6

points, total output by 40%, and capital expenditure by 47%, while employment intensity dropped by 35%. Social cost benefit analysis of the partial privatization of Norway's Statoil in 2001 conducted by Wolf and Pollitt (2009) showed a substantially positive net present value of, at least, NOK 166 billion (USD18.4 billion) in 2001, which amounted to 11% of Norway's GDP in that year. They showed that partial privatization can have significant benefits, especially if an ownership change is supported by additional restructuring measures, and that privatization can be structured with state involvement at several levels, with the goal to maximize the public share of benefits.

Bridgman et al. (2011), based on the Brazil's oil industry liberalization, suggest that changing the competitive environment can be a powerful force for improving productivity at state-owned firms. After reform in 1995, Brazil stopped the legal monopoly of Petrobras, but faced no effective competition. However, this led to a considerable increase in the productivity of the company, with labor productivity growth tripling as compared to the period prior 1995. Waddams Price and Weyman-Jones (1996) examined the effect of the 1986 privatization on the productivity of the twelve regions of British Gas; they found out that the rate of productivity growth increased significantly after privatization. Rossi (2001) analyzed the technical change in the post-privatization period in the gas distribution sector of Argentina and discovered that the sector, as a whole, improved its efficiency.

The experience of other countries in privatization can be applied to Uzbekneftegaz, as it can be attractive to investors for several reasons. First, Uzbekistan is a country with growth prospects. The country with a small financial system is less affected by crisis. Second, strategic companies are supported by the government that guarantees that they will not fail in the future. Partial IPO of Uzbekneftegaz can be an efficient tool in attracting alternative financing without putting the burden on the state budget and without ceding government control. Acceptance of corporate governance rules will have a positive impact on the company performance resulting in the improved efficiency and productivity.

## Conclusion

The oil and gas industry is crucial for Uzbekistan's economic growth. The industry is the main

contributor to GDP and export revenue. As oil and gas are important to the development of the economy, it is the major sector of the government's investment program. The oil and gas industry is run by the vertically integrated state-owned National Holding Company Uzbekneftegaz. The company controls the entire downstream and upstream activities in the country through its subsidiary companies.

Despite notable progress, Uzbekistan's oil and gas industry faces a number of challenges. Uzbekistan's oil and gas production has been declining, while consumption has been increasing. To meet increasing internal demand, it is necessary to explore and develop new oil and gas fields to replace the existing current oil and gas fields. Aging technology and infrastructure need to be upgraded. To solve these challenges, the industry needs significant investments. As the demand for capital will only grow in the long run, privatization of Uzbekneftegaz through IPO can open the doors to different ways of attracting the necessary financing. This would also minimize the burden on the state budget and attract financing from the private sector.

An IPO allows a company to attract a wide range of stock market investors to provide it with capital for future growth. Once a company is listed, it has the right to issue further shares, thereby providing itself with more capital for expansion. Besides, the listed company becomes transparent, which can increase the rating of the company when it issues debt securities in capital markets. These opportunities to raise large amounts of capital from the stock exchange, rather than searching and negotiating with individual investors, is a key incentive for many companies launching IPOs.

Another problem is the inefficient management of the industry which causes the problems of increased bureaucracy, increased tax burden and inefficient allocation of resources. As Uzbekneftegaz has multiple tasks and has to serve government, clients and investors, it needs a simplified management structure and direct control over the main companies. Listing of the company can also work as a mechanism for Uzbekneftegaz in increasing efficiency and productivity in the industry. The IPO process requires detailed and comprehensive analysis of the entire business. This will help to modify and improve the organizational structure, communication, management and control system.

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