BOPCOM—11/17

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Production Sharing Agreements

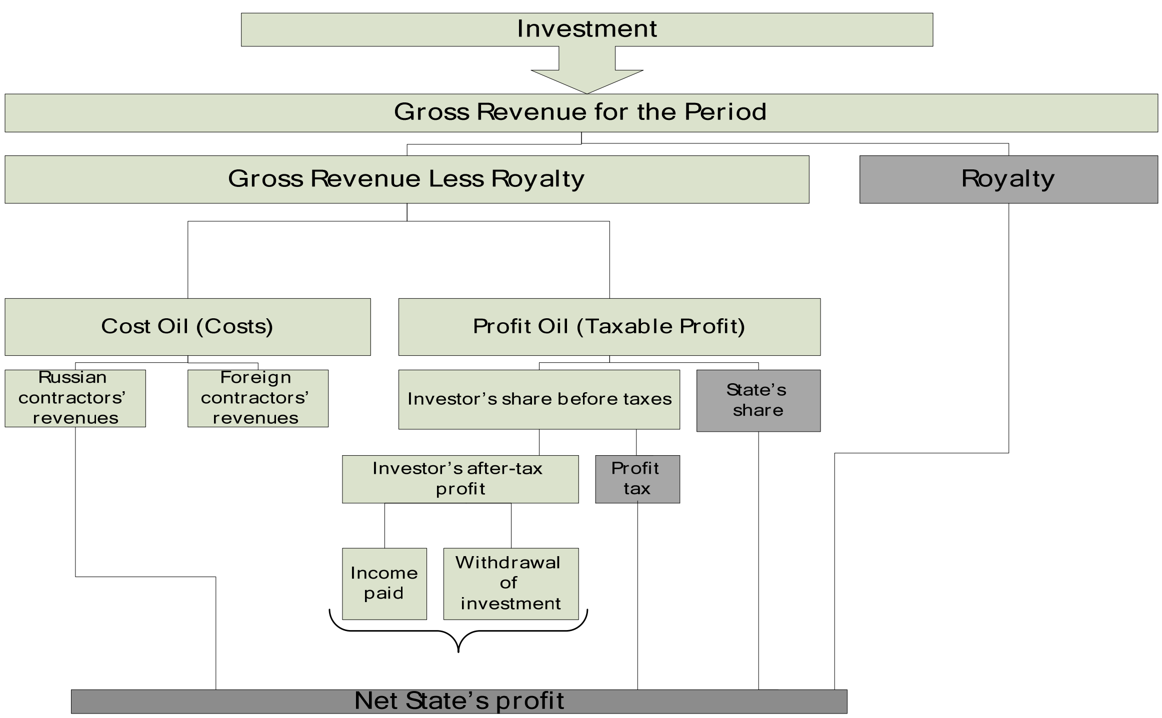
Prepared by the Central Bank of Russia

Introduction

1. Production sharing agreement (PSA) is a contract between one or more investors and the government in which rights to prospection, exploration and extraction of mineral resources from a specific area over a specified period of time are determined. According to the terms of a standard PSA[1], the government hires the investor(-s) as a contractor for the extraction of mineral resources, but the government still retains ownership of the resources. The investors administer the business at their own expense and risk sharing with the government part of the production output in accordance with the agreement. *Usually* a scheme of financial relations between the investors and the government at the production stage of PSAs is as follows.

CHART 1

PSA's Financial Mechanism-Legal Approach



Based on A. Konoplyanik's charts as represented in a number of his articles dedicated to PSAs in Russia.

2. After the gross revenue of the PSA project for the period is determined, it is divided into two parts: royalty expenses and gross revenue less royalty expenses. The investor pays royalties to the government at the rate which depends on the project and on the volume of oil production. Royalty, therefore, becomes a part of total net revenue of the state from the

[1] According to the Federal Law No. 225 of 30 December 1995 "On Production Sharing Agreements", PSA is an arrangement between government and one or more investors which governs mineral resources exploration and production rights. The investors are to implement all specified works at their own account and risk. The procedure of output allocation between contracting parties is also set out in the PSAs.

project. Gross revenue less royalty expenses, in its turn, is split into cost oil (covering costs) and profit oil (taxable profit). The investor receives cost oil to cover expenses. The expenses that the investor bears are equal to the value of goods and services supplied by Russian and foreign contractors. Investors are to pay corporate profit taxes on their share of profit oil production. Profit oil is divided between the investors and the government on the basis of the negotiated formula in the PSA. Thus, the government share of the profit oil is also included into the Russian party's net profit. Investors' after-tax profit is divided into income paid and withdrawal of investment.

3. The revenue of the project is completely removed from it by investors and further new investments are to be made regularly to cover operating and other expenses.

4. The focus of this paper is on the difference between legal and statistical treatment of business and financial relations established among residents and non-residents with regard to PSAs in Russia. An overview of the PSAs ownership structure in Russia is also presented. In addition, the experience in statistical modeling of PSAs' financial statements is described.

PSAs from legal and statistical perspectives

5. According to the Federal Law, PSA companies operating on the territory of the Russian Federation are considered non-residents, and they are not registered as legal entities. However, for the BOP compilation purposes, they should be regarded as residents because their activities on the territory of Russia last far longer than one year while conducting numerous transactions on the domestic market (exercising mineral resource extraction, carrying out construction, etc.).

6. The PSA enterprises actively interact with resident companies and the government. But residents report their transactions with a PSA entity according to the legal status of the latter: as transactions with a non-resident. For example, all goods and services sold to PSAs by residents are treated as exports of goods and services in the reporting forms of the contractors. The taxes paid by the PSA companies in Russia are counted as taxes received from non-residents. The classification of such enterprises as residents for the BOP purposes makes it necessary to identify such transactions and to exclude them from the current account data.

7. Difference in residential status involves a difference in accounting rules. According to the Federal Law, PSAs are not subject to Russian accounting principles. Their books are kept according to the simplified rules. On the assets side of a PSA balance sheet there are fixed assets of the entity, and on the liabilities side there is a debt liability vis-a vis the investor (the so-called operator of the project) who has funded the acquisition of goods and services for the formation of the fixed assets. When extraction of mineral resources begins, all the revenue is used to repay the debt ("cost oil"), and only after it is repaid, the project will start earning profits ("profit oil"), part of which will be transferred to the government. This aspect looks quite questionable from the standpoint of accounting – when the debt is sank and the assets are depreciated, the enterprise's balance sheet reaches close to zero amounts but the production process continues, nevertheless. For statistical purposes, the accounting principles that are in line

with the IFRS are used, and the main changes involve the reclassification of the debt into an equity investment, continuous accrual of income on this equity and splitting of revenue from oil and gas sales into *withdrawal of equity* and *repayment of income accrued*. In other words,

- it is not the debt but rather the equity because the arrangement with the government states that the exploration is conducted at investors` own risk, and there is always a possibility that exploration turns out unsuccessful. In that case, no lost funds will be repaid to the investors, which is not characteristic of debt;
- investment generates income and, for the new investment, when no profit is being made yet, it should be imputed in the form of reinvested accrued income;
- slower redemption of liabilities (when only part of the revenue is accounted for as *withdrawal of capital* but not all of it) allows to keep the stock of the own funds until the closure of these long-term projects (which in Russia is forecasted to be the case in 40 years after the project's beginning).

For making the relevant adjustment, a special modeling technique has been developed. Methods used are based on the principles described in the international accounting manuals as well as in the US GAAP: Accounting Standards No. 69 "Disclosures about Oil and Gas Producing Activities" and No. 2010-03 "Extractive activities ─ Oil and Gas (Topic 932): Oil and Gas Reserve Estimation and Disclosures"[2].

8. Another pressing issue is collecting information on PSAs, as they are not required by Law to provide their reports in the same way as ordinary legal entities. According to the law, a considerable part of commercial information relating to PSAs is treated as confidential: the projects provide to the authorities simplified reports with the limited number of indicators. As an example to illustrate the problem, imports of services[3] by PSAs that are Russian statistical residents may be used: neither the PSAs themselves provide reports (because this type of activities is not included in mandatory reporting), nor the banks (when the latter fill out the ITRS forms they treat such financial flows as the flows between two non-residents). So, for quite a few BOP items, the transactions of PSAs have to be estimated using available data sources. Calculations are based upon information obtained both from official sources (like reports of the Ministry of Energy based on PSAs' reports or materials of the PSA's budgets) and also from international business media reports, oil companies, analytical agencies and other sources.

9. The funds transferred to the Russian economy by operators of PSAs are regarded as foreign investment but not being subject to the Federal Law on foreign direct investment, whereas in the international accounts PSAs are a type of direct investment enterprises.

PSA as a direct investment enterprise

[2] These standards are used for financial reporting of Russian oil and gas companies (for example, joint-stock company "LUKoil").

[3] No special efforts are required to record the goods imported by PSAs. They are covered in the Customs statistics that uses General System. Accordingly, all goods crossing the customs border are included.

10. PSAs in the Russian Federation are represented by three projects: Sakhalin-I, Sakhalin-II and Kharyaga, and all of them involve foreign companies (see Table 1).

TABLE 1

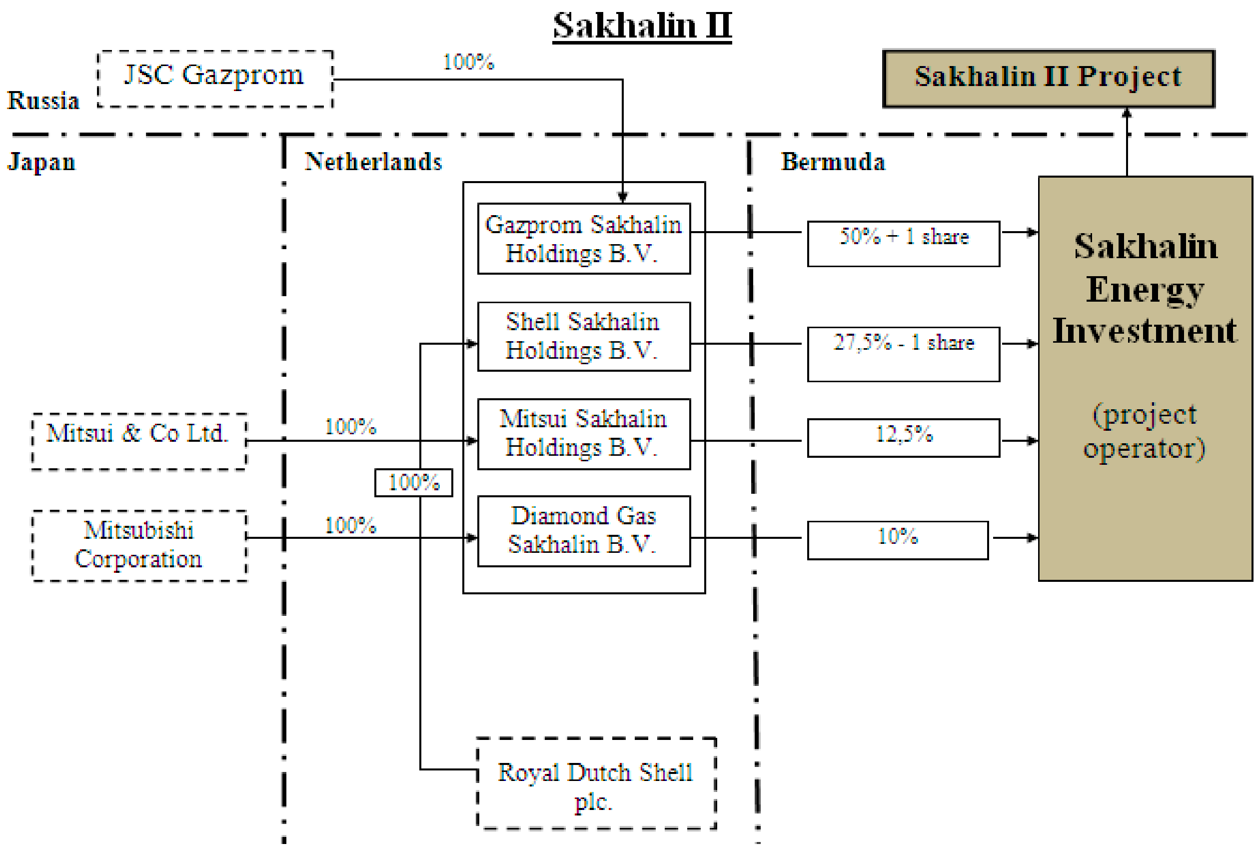
PSAs in the Russian oil and gas industry

Project	**Project operator**	**Investors**	**Field/contract territory**
Sakhalin I	Exxon Neftegaz Ltd. (Bahamas)	• Exxon Neftegaz Ltd. (Bahamas) (a subsidiary of Exxon Mobil (USA)) - 30% • Consortium SODECO (Japan) - 30% • JSC Rosneft (Russia) acting via its affiliates RN-Astra (Russia) - 8,5% and Sakhalinmorneftegaz-Shelf (Russia) - 11,5% • ONGC Videsh Ltd. (India) - 20%	Chayvo, Odoptu and Arkutun-Dagi fields
Sakhalin II	Sakhalin Energy Investment Company Ltd. (Sakhalin Energy) (Bermuda)	• Gazprom Sakhalin Holdings B.V. (Netherlands) (a subsidiary of JSC Gazprom (Russia)) - 50% + 1 share • Shell Sakhalin Holdings B.V. (Netherlands) (a subsidiary of Royal Dutch Shell plc. (Netherlands/UK)) - 27,5% - 1 share • Mitsui Sakhalin Holdings B.V. (Netherlands) (a subsidiary of Mitsui and Co., Ltd. (Japan)) - 12,5% • Diamond Gas Sakhalin B.V. (Netherlands) (a subsidiary of Mitsubishi Corporation (Japan)) - 10%	Piltun-Astokhskoye and Lunskoye fields
Kharyaga	Total Exploration Production Russie (France)	• Total Exploration Production Russie (France) (a subsidiary of concern Total (France/Finland)) - 40% • Norsk Hydro Sverige A.B. (Sweden) (a subsidiary of Statoil Hydro (Norway)) - 30% • JSC Zarubezhneft (Russia) - 20% • Nenets Oil Company (Russia) - 10%	Kharyaga field (part of Timan-Pechora basin)

The structure of ownership is quite interesting. In most cases, foreign and Russian companies operating in the oil and gas sector initially set up an SPE, sometimes in an offshore center, which holds an interest in a PSA operator. As they say it - "An operator is founded by a consortium of oil companies". Two of the operators in the preceding and the following charts are located in the off-shore islands. Partial round-tripping and pass-through funds are identifiable.

CHART 2

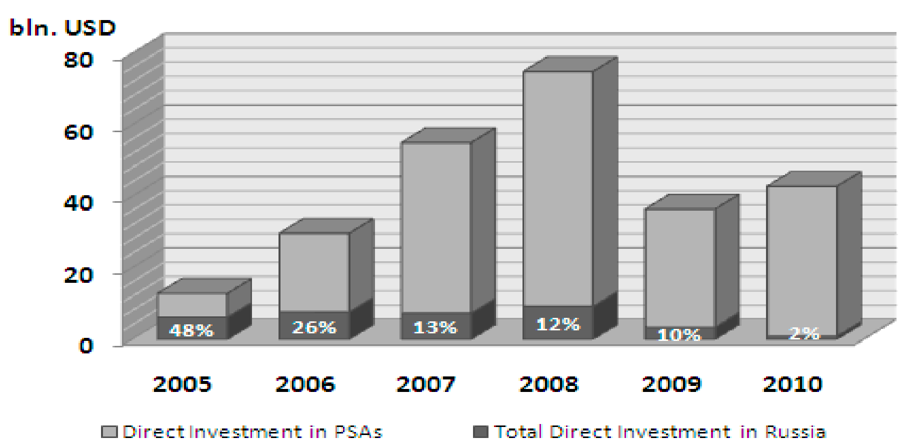
Sakhalin II Project: Structure of Ownership



11. The foreign direct investment in the PSAs in the oil and gas sector of Russia has been rather significant for many years. It has decreased lately not only in relative terms but also in absolute terms because the projects have reached the planned production capacity, and the high level of output supported by high prices provided enough revenue not only for distribution of profits but also for withdrawal of investments.

CHART 3

Share of Investment in PSAs in Total Direct Investment in Russia

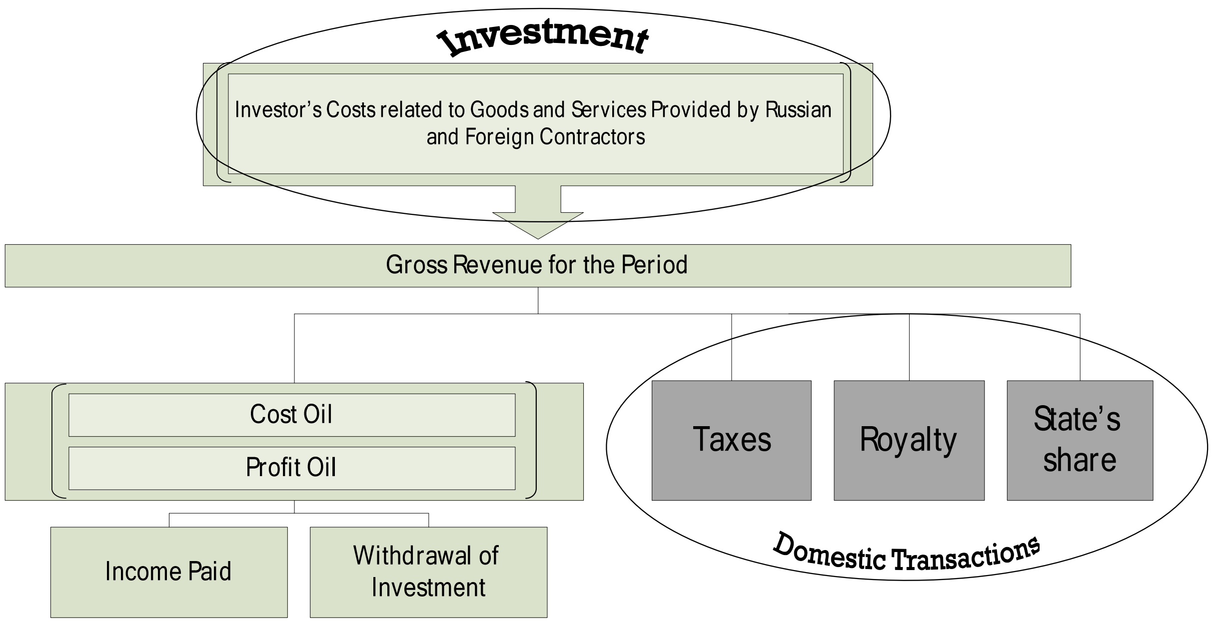


Statistical modeling of PSA's financial mechanism

12. The usual scheme of financial relations of PSAs described in the Introduction to this paper focuses on settlements between the investors and the government. From the international accounts perspective, the relations between the PSA and the government are domestic transactions, and the main task is to adapt the scheme to the IFRS requirements.

CHART 4

PSA's Financial Mechanism-Statistical Approach



13. The challenge here is to split part of gross revenue that belongs to the investor into *income paid* and *withdrawal of investment*.

14. The starting point of the modeling is to determine the *internal rate of return* on investm*ent in the* proje*ct and its net present value*. The discount rate of 15 percent[4] per annum (*0.0004 percent per day)* has been derived as the internal rate *of return as of* the contract date computed as a ratio of future gross revenue to future property acquisition, development and production costs with tax expenses, and taking into account the timing of future cash flows, and assuming that this discount rate remains fixed. Net present value is calculated as future stream of net cash flows based on the 15 percent discount rate.

[4] In contrast to US GAAP-recommended 10 percent p.a. fixed rate of discounting future cash flows of oil and gas production enterprises of the US, the oil and gas projects in Russia average annual profitability is 15 percent. This issue is covered in detail by S.M. Lavlinskiy in *Techniques of developing the economic clauses of a production sharing agreement for oil and gas projects* // Studies on Russian economic development. - 2007 - Vol. 18, N 1. - P. 145-151

15. Quarterly information on investor's expenses, volume of *production and prices* is regularl*y available* to *the BOP:*

- *product of multip*lying the volume of production by current prices *represents estim*ated revenue;
- revenue is not divided i*nto cost and prof*it;
- from total revenue the government's share, taxes and royalty are deducted;
- income is computed as accruing on a continuous (daily) basis at a fixed rate of 15 percent per annum on the stock of investments;
- the revenue, net of the government part, is compared with the income accrued; if the value of the income is larger than the revenue, it is treated as *distributed profits*, and the difference is recorded as *reinvested earnings*. In such case, no redemption of investment is assumed; in the opposite, when the revenue is higher than the income accrued, *reinvested earnings* equals zero and *withdrawal of investment* is recorded;
- future cash flows take into account estimated dynamics of production costs on the basis of the latest approved PSAs budgets, market prices, taxes, supply contracts and proven oil and gas deposits' reserves;
- cumulated flows method is used when calculating stock at the end of period;
- the difference between the stock estimated under this method and the stock computed by discounting future net cash flows is showed as *other price changes* in the IIP.

16. Specific features of calculations:

- *Oil and Gas Prices.* Actual prices for hydrocarbons are applied for data calculations related to the past periods. Future oil and gas price changes adopted for modeling of future cash flows for the next 3 years are based on current projections made by the Ministry of Economic Development. As to the calculations for the period from the 4th year on, at the time of estimation the average actual price for the previous 12 months is used. As new information becomes available, previous estimates are revised.
- *Volume of production.* Monthly information on volume of PSAs' operators' production is regularly made available in 1-3 days after the beginning of the month following the reporting month. PSAs' productivity estimations covering the following 3 years are based on forecasted data received from the Ministry of Economic Development. Annual data for the period from the 4th year until the end of the projects' realization are taken from the approved PSA's tentative budgets. As soon as forecasts or budgets are revised, all data are adjusted in line with new information.
- *Investor's costs.* Data concerning actual investor's capital and operating expenditures for the reporting period are obtained quarterly from the Ministry of Energy[5]. Expenses of the future periods are estimated in accordance with projects' tentative budgets. The most detailed and relevant information concerning actual and future costs is contained in the

[5] The annual report of the Ministry of Energy is usually available with the time lag of 6-8 months after the reported period; data can be revised repeatedly after the first dissemination.

annual report of the Ministry of Energy. As soon as the report is received, information is updated in accordance with reported data.

- *Taxes and royalties.* Tax and royalty expenses are computed using the statutory rates for the period, for which calculations are accomplished. Rates are specified for each project. Future tax and royalty expenses are estimated with due regard to the prospective rates already set and the contractual rates specified within the frameworks of PSAs.
- *Additional indicators*. A number of additional specific indices are calculated. For example, regarding the export tariff, a share of gas supply on the domestic market, sales tax, etc.

17. Calculations are conducted on a quarterly basis which allows making regular adjustments to the past estimates taking into account market fluctuations.

TABLE 2

BOP Data: Investment in Russian PSAs (mln. USD)

	2007	2008	2009	2010	1H 2011	TOTAL
Income	**-8 586**	**-9 641**	**-5 584**	**-6 558**	**-3 896**	**-34 265**
Distributed profit	-5 260	-5 097	-5 412	-6 427	-3 896	-26 091
Retained earnings	-3 326	-4 545	-172	-131	0	-8 174
Direct Investment in Russia	**7 385**	**9 315**	**3 469**	**967**	**-452**	**20 684**
Equity capital	4 059	4 770	3 297	836	-452	12 510
Received	*5 558*	*7 135*	*4 703*	*4 706*	*2 561*	*24 662*
Withdrawn	*-1 499*	*-2 365*	*-1 406*	*-3 870*	*-3 013*	*-12 152*
Reinvestment of earnings	3 326	4 545	172	131	0	8 174

Conclusion

18. Regular work on Russia's PSAs' data estimation, adjustment, updating and revision is complicated and cumbersome. Nevertheless, it is worth pursuing, given the significance of PSAs for direct investment statistics.