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## CHAPTER 5

# A NOTE ON PRODUCTION SHARING IN RUSSIA

### Abstract

Russia's huge natural resource base together with large injections of foreign capital and technology have held out the promise of boosting economic activity in the extraction industry, particularly in the oil and gas sector. However, a necessary condition for such a partnership to go ahead is the establishment of a sound and comprehensive legal framework including one enabling production sharing agreements (PSAs). Despite their importance for the economy, this legislation remains incomplete and burdened by obstacles which have actually increased the risks to potential investors. More generally, the failure to create an internationally competitive PSA regime illustrates many of the difficulties which have held back the reform of the Russian economy. Although there is strong internal resistance to foreign involvement in Russia's natural resource sectors, PSAs with foreign participation would seem to be one of the few feasible options available in the short to medium term to spur economic recovery. Among other things, their attraction is that large foreign investments would help to overcome the shortage of finance which has constrained activity in the fuels and other sectors of the Russian economy.

### 5.1 Introduction

The application of production sharing agreements – contracts between companies and the government which regulate the extraction of natural resources – is of particular interest in the Russian context because of the country's enormous mineral wealth. Its recoverable oil deposits account for 5-17 per cent and natural gas for some one third of world reserves, respectively.<sup>342</sup> There are also huge exploitable deposits of metal ores and precious stones. Complementing this is a large extractive industry with considerable experience (particularly in the

production of hydrocarbons), an extensive pipeline network, a large pool of qualified (and relatively low cost) labour and a capacity to produce a broad range of oilfield equipment.

Despite these advantages, the annual production of crude oil has fallen sharply, from some 500 million tonnes around the turn of the decade to less than 300 million tonnes in 1995-1998 (chart 5.1.1). The production of natural gas has also fallen although the decline has been much less. In part, lower output has been due to the lack of investment, the volume of which has declined by 65 per cent and 75 per cent for gas and crude oil, respectively, since 1990 (chart 5.1.1). Nonetheless these two sectors continue to play a key role in the Russian economy. They account for some 10 per cent of GDP,<sup>343</sup> 15 per cent of capital investment and 44 per cent of export earnings.<sup>344</sup>

In the early 1990s, there was growing foreign interest in developing Russian natural resources. Discussions began between the Russian authorities and international oil companies on reaching PSA-type agreements (although at the time there was no applicable legislation). By the mid-1990s, some \$40 billion of foreign investment had been committed to such projects.<sup>345</sup> Russian estimates of potential investment (mostly foreign) in a broader range of projects were of the order of \$60-\$80 billion<sup>346</sup>. These deals held out the prospect of large inflows of FDI<sup>347</sup> and increases in oil production, tax revenues and foreign exchange reserves. However, PSA projects have been held back by the lack of a comprehensive legal framework.

<sup>342</sup> The share is for 1992.

<sup>343</sup> In 1997 natural gas accounted for 18.9 per cent of total Russian exports, crude oil and petroleum products for 25 per cent, and coal and coke for 1.8 per cent.

<sup>344</sup> UNECE, *East-West Investment News*, Spring 1995, pp. 16-24 and Summer 1995, pp. 7-14. The \$40 billion includes only large foreign investment projects (i.e. over \$10 million), the bulk of which involved PSA-type arrangements. Some of the investments were to be carried out over periods of 25 to 40 years. Only a small part of the investment commitments materialized.

<sup>345</sup> See [5].

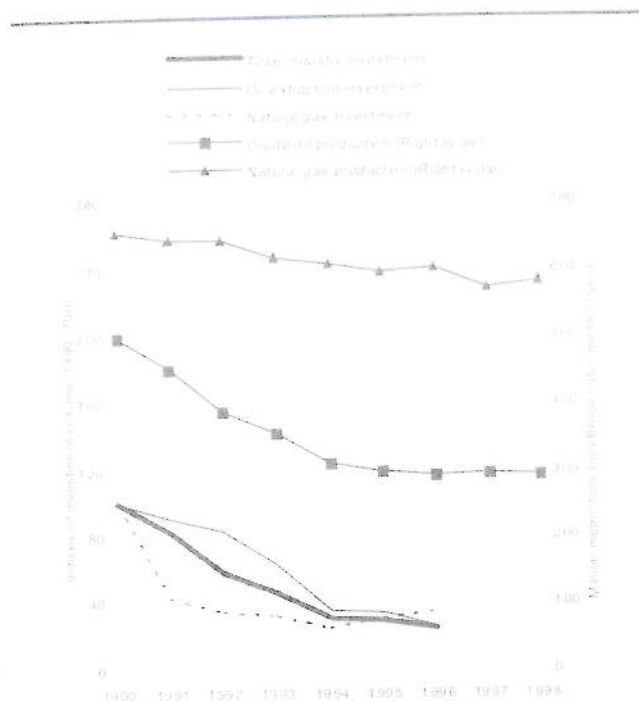
<sup>346</sup> By the end of 1997, Russia had received cumulated FDI inflows of \$14.3 billion, less than the \$15.5 billion attracted by Hungary in 1997 (4.2.6 and 4.2.7). On a per capita basis, the stock of Russian FDI is relatively modest.

<sup>347</sup> Independent industry assessments of proven oil reserves are about 50-60 billion barrels (5 per cent of world reserves). However, Russian figures on a slightly different definition of reserves are about 200 billion barrels (17 per cent of world reserves). There is general agreement that Russia possesses about 50,000 billion cubic metres of natural gas reserves (one third of world reserves). There is every reason to expect future additions from new discoveries and from existing fields when new technologies become widespread. T. Scanlan, "Energy perspective: some personal observations of the 1990s in Russia and the Ukraine", NATO Colloquium 1997, Economic Developments and Reforms in Cooperation Partner Countries; External Economic Relations with Particular Focus on Regional Cooperation (Brussels), 25-27 June 1997.



CHART 5.1.1

**Investment and output of the Russian Federation oil and gas industry, 1990-1998**  
(Indices, 1990=100, million metric tons and billion cubic metres)



Source: Russian European Centre for Economic Policy, *Russian Economic Trends* (Moscow), various issues; national statistics and UN/ECE secretariat estimates of investment volume.

Note: Production estimates for 1998 are based on January-June rates.

The sections that follow briefly review a number of issues: PSAs and their use in the international oil and gas industry; the introduction of PSA-related legislation in Russia; some potential macroeconomic implications of PSAs; and the prospects for PSAs in the light of recent developments in Russia and the international markets.

## 5.2 PSAs and their international application

Production sharing agreements are arrangements between governments (acting on behalf of the state as the owner of the mineral resources) and one or more investors (i.e. domestic and/or foreign production companies) which govern exploration and production rights.<sup>348</sup> These contracts are intended to provide a predictable legal and tax regime and are internationally recognized in law. In the Russian context they typically involve deposits of petroleum and natural gas, but projects to extract metal ores and other minerals have been proposed as well.

Aside from PSAs, other types of exploration and production (E&P) agreements between the state and investors include concessions, also referred to as tax/royalty agreements (T/RAs), which involve leases or licences. Risk-service contracts (i.e. pure-service contracts) are a third type of agreement used in the extraction sector.<sup>349</sup> A difference between PSAs and concessions is the mechanism used to allocate the benefits of the project between the state and investors. Taxation rules applying to PSAs are based on mineral rent collection principles, i.e. the taxation parameters for individual PSA projects are negotiated between the state and the investor. On the other hand, T/RAs are operated under the general taxation rules of the country (i.e. taxation rates are the same for all projects and all mineral industries).

PSAs have at least three major advantages, which seem to explain their popularity in emerging market economies (see below). First, they encourage an efficient development of individual natural resource deposits over the lifetime of a project. Second, the host government gets a share of output (i.e. revenues are collected "in kind", for example, in the form of petroleum, which can be sold abroad for foreign currency. This may be particularly attractive if the future convertibility of the local currency is uncertain. By contrast, under a concession arrangement, the project pays taxes to the host country in local currency. Finally, the host country usually plays an active role in a PSA project, especially if it involves a joint venture between, say, the state oil company and the foreign investor (in this case the state may be particularly interested in the transfer of technology, managerial skills, know-how, etc.). Under a T/RA, however, the role of the host country generally remains passive, although, in this case too, benefits other than fiscal revenues may also accrue.

Traditionally there have been three major types of PSA models applied worldwide. The first was the so-called "Indonesian" model, which dates from 1966 and has been widely adopted. This was followed by the "Peruvian" and the "Libyan" models.<sup>350</sup> The most recent is the so-called "Russian" model, which is characterized by four "levels" (chart 5.2.1):

- the investor pays royalties to the state (the rate is equal to 6-16 per cent of gross output);
- the investor receives "cost oil" to cover expenses;
- "profit oil" is split between the state and the investor on the basis of a negotiated formula which takes into account the characteristics of the project; usually a sliding scale is included to deal with the impact of changes in the world price of the commodity;
- the investor pays a profit tax on his portion of profit oil (the maximum rate is 35 per cent).

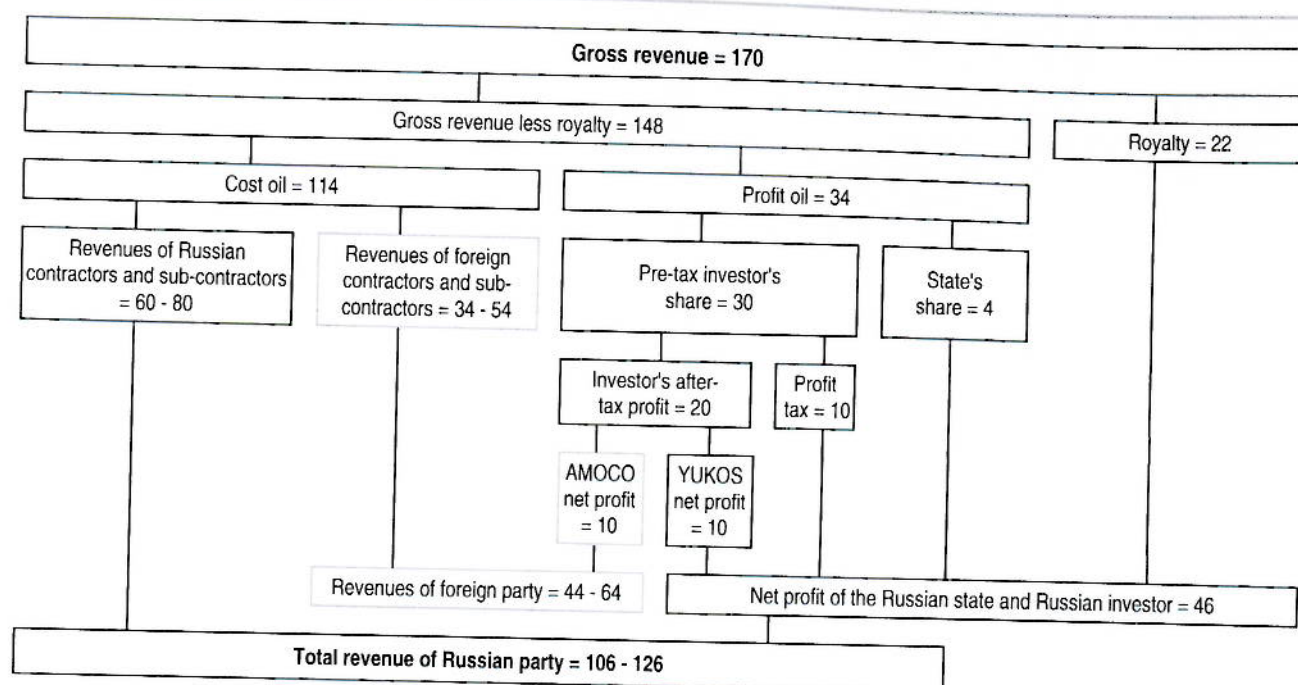
<sup>349</sup> The different types of international petroleum and mining agreements are surveyed in [1-6].

<sup>350</sup> Descriptions of these are found in [4, 8].

<sup>348</sup> Ownership of the natural resource deposits remains in the hands of the state.



CHART 5.2.1  
Financial structure of the Priobskoe PSA project  
(Billion dollars)



Source: Based on July 1996 estimates of A. Konoplyanik, direct communications to UN/ECE secretariat.

Note: The numbers refer to the value and partition of output over the lifetime of the project.

PSAs and concessions (T/RAs) are the two most widely used types of E&P agreements in the world, accounting for 52 and 62 agreements, respectively, out of a sample of 116 (table 5.2.1). In the developing countries, PSAs tend to be as, or more, important than T/RAs. However, PSAs are the dominant arrangement in the largest oil producing countries (i.e. those whose output exceeds 600,000 barrels per day).

### 5.3 State of development of PSA projects in Russia

International interest in natural resource extraction in Russia using PSAs dates from the 1970s when negotiations began on access to hydrocarbon deposits in Sakhalinskaya Oblast (Sakhalin-1). Discussions on further deals picked up in the 1990s when economic reforms in Russia improved the foreign investment climate. In a matter of a few years, tens of large projects were under discussion (table 5.3.1) and they promised to boost the prospects of the oil and gas sector. Much of the investment was to be made by foreign companies.

However, by mid-1998 only three PSA deals had been signed, all involving foreign partners: Sakhalin-1, Sakhalin-2, and Total/Khariaga. The Khariaga PSA has not yet gone ahead as a number of problems (especially transportation) remain to be sorted out. Only Sakhalin-2 is slated to start production in the near future, in mid-summer 1999. The total production of hydrocarbons

envisaged during the lifetime of the project is 140 million tonnes of crude oil (1 billion barrels) and 408 billion cubic metres of gas. Total investments are projected at \$10 billion, of which some \$600 million had been made by mid-1998 (including \$65 million to the federal, regional and local authorities in the form of bonuses and other payments).<sup>351</sup>

The main reasons given for the dearth of PSA-type investments have been the absence of adequate legal guarantees for project financing,<sup>352</sup> the lack of a stable investment climate<sup>353</sup> and unfavourable tax treatment. In several cases these factors have led to the cancellation of deals after negotiations were completed.<sup>354</sup> However,

<sup>351</sup> The Sakhalin Energy Investment Company planned to invest another \$400 million by the end of 1998, \$502 million in 1999 and \$806 million in 2000 (including bonuses to the Russian Federation). Project details are available in [12].

<sup>352</sup> These issues are discussed in [13, 14].

<sup>353</sup> For example, when discussion on PSA projects started in the early 1990s, there were no fees for the use of Russian subsoil. Such fees were first introduced in the law "On the Subsurface" (February 1992). This law underwent many changes, including to the fee system.

<sup>354</sup> For example, the Elf-Aquitaine PSA was cancelled because the agreement failed to receive an adequate grandfather clause (i.e. exempting the PSA from the existing licensing (T/RA) and taxation regimes) from either Russia's executive branch or from the legislature. However, interest in the agreement also waned because exploration results were disappointing.

TABLE 5.2.1

## International petroleum agreements: distribution of production sharing agreements and concessions in the 1990s

	Type of agreement			Total	No private participation
	Concessions (tax/royalty agreements)	Production sharing agreements	Risk-service contracts		
<b>Africa</b> .....	20	22	–	42	–
Countries with major oil production .....	3	8	–	11	–
Countries without significant oil production .....	17	14	–	31	–
<b>Europe</b> .....	14	3	–	17	–
Countries with major oil production .....	10	1	–	11	–
Countries without significant oil production .....	4	2	–	6	–
<b>Far East</b> .....	9	9	–	18	–
Countries with major oil production .....	3	5	–	8	–
Countries without significant oil production .....	6	4	–	10	–
<b>Latin America</b> .....	11	10	2	23	2
Countries with major oil production .....	4	3	2	9	2
Countries without significant oil production .....	7	7	–	14	–
<b>Middle East</b> .....	6	8	–	14	3
Countries with major oil production .....	3	7	–	10	3
Countries without significant oil production .....	3	1	–	4	–
<b>North America</b> .....	2	–	–	–	–
Countries with major oil production .....	2	–	–	–	–
<b>Total</b> .....	62	52	2	116	3
Countries with major oil production .....	25	24	2	51	3
Countries without significant oil production .....	37	28	–	65	–

Source: A. Konoplyanik, "What's used where: PSA or equity tax/royalty?", Association of International Petroleum Negotiators, *Advisor*, No. 134 (London), January 1995, p. 9.

project-specific factors have also played a role. For example, in the cases of the Elf/Volgograd-Saratov and the TPC/Timan-Pechora projects, the local authorities' support for the projects waned (among other things they considered the contractual territory to be too large), access to the Transneft pipeline system could not be guaranteed (this problem has held back the Total/Khariaga project as well),<sup>352</sup> and demand for petroleum in the intended west European market was less than had been anticipated in the early 1990s. By contrast, the Sakhalin projects have been able to go ahead due to their location near the (until very recently) dynamic Asian markets for oil, the support of the local authorities and the absence of transport

constraints (see below).<sup>353</sup> Sakhalin-2 has also received the financial support of the EBRD and other multilateral agencies.

Prior to 1992 and the enactment of PSA legislation, PSA-type projects, such as those listed in table 5.3.1, were negotiated mainly under ad hoc procedures. For example, ELF's project (initially set up as a joint venture and later as a PSA) moved ahead on the basis of permissions and approvals issued by the government and/or various agencies at different stages of the negotiations. The complexities of the process are reflected in the fact that the cover page of one of the project documents collected 47 different stamps of approval of governmental agencies. In most of these projects, the terms of the draft agreements have evolved, first to incorporate the provisions of the Presidential Decree on PSAs and then to conform with the evolving PSA-related legislation. This process has been facilitated by a regular dialogue between the drafters of PSA legislation and the oil companies, especially those comprising the Petroleum Advisory Forum.

<sup>352</sup> The export of oil from Russia depends on access to the pipeline system, which is operated by Transneft (the state oil transportation company). There have been capacity constraints, and as a result, uncertainty over pipeline access has been a major risk for project financing deals (Transneft does not usually provide grandfathering clauses for the lifetime of a PSA project, which can be 25-40+ years). Those PSAs which did not require access to existing pipelines were usually negotiated faster than those which did. An additional risk is excise taxes on oil pipeline throughput, which may be increased in times of budget pressures. (The draft 1998 budget envisaged additional revenues of R2,124 million (\$350 million) from this source.) Russia's

in export routes to western Europe are through the Baltic states (spills, etc.) and various Black Sea terminals (Novorossiysk, Tuapse, transport-related fees from western Siberia to Novorossiysk can

<sup>353</sup> Own \$25 per tonne (until recently almost one quarter of the current the state.

<sup>354</sup> The economics of the blocks initially included in the Sakhalin-1 project proved to be poor. However, the potential profitability of the venture was much improved with the issuance of a government ordinance in 1993 which added blocks containing potential hydrocarbon reserves.



TABLE 5.3.1

Production sharing agreements in the Russian oil and gas industry on which negotiations were initiated prior to the PSA law

Region	Investors		Project conception	Field/contract territory	Contract stage as of today
	Foreign	Russian			
Sakhalinskaya Oblast (Sakhalin - 1) .....	Exxon (USA) Sodeco (Japan)	Rosneft Sakhalinmorneftegaz	1976	Chaivo, Odoptu and Arkutun-Daginskoye fields, Sakhalin shelf (Sakhalin-I project)	PSA was signed on 19 June 1995, and came into force on 11 June 1996
Sakhalinskaya Oblast (Sakhalin - 2) .....	Sakhalin Energy Development Co.: Marathon Oil (USA), Mitsubishi, Mitsui (Japan), Royal Dutch/Shell (Netherlands/UK)	No Russian partners at the moment; Rosneft to start negotiations to take the share of MacDermott (USA) which recently left consortium	1988	Piltun-Astokhskoye and Lunskeye fields, Sakhalin Shelf (Sakhalin-II project)	PSA signed on 22 June 1994, and came into force on 22 June 1996
Sakhalinskaya Oblast .....	Mobil Oil, Texaco (USA)	No Russian partner at the moment	1993	Kirinski block, Sakhalin shelf (Sakhalin-III project)	Preparation of PSA and feasibility study
Sakhalinskaya Oblast .....	Exxon (USA)	No Russian partner at the moment	1993	Western Odoptinsky and Ayashky blocks, Sakhalin shelf (Sakhalin-III project)	Preparation of PSA and feasibility study
Nenetsky Autonomous District, Arkhangelskaya Oblast .....	Timan-Pechora Development Company: Texaco, Exxon, Amoco (USA), Norsk Hydro (Norway)	Rosneft Arkhangelskgeoldobicha	1990	Timan-Pechora oil and gas province, the area of 17,500 sq. km including Trebs, Titov, Varandetskoye and other fields	Completion of PSA negotiations
Nenetsky Autonomous District, Arkhangelskaya Oblast .....	Total (France)	None	1991	Timan-Pechora oil and gas province, Kharyaginskoye field (sites 2 & 3 of high sulphurous crude)	PSA was signed on 20 December 1995, and will come into force after the licence is received, agreement with "Transneft" is signed, normative acts on PSA come into action
Nenetsky Autonomous District, Arkhangelskaya Oblast .....	BHP (Australia)	Gazprom, Rosshelf	1994	Prirazlomnoye oil field, Pechora Sea shelf	Work on the feasibility study is underway, negotiations on PSA have started
Komi Republic .....	KRA Petroleum Limited (Australia)	Komineft (KOMITEK)	1995	Usinskoye field (deposit of high density oil)	Preparation of feasibility study and PSA. Economic and ecological expertise has been passed, as well as Central Commission on fields development
Vologradskaya Oblast .....	Elf-Neftegaz (France)	Interneft	1990	Site of the area of 6,500 sq. km on the south-western side of Pre-Caspian basin	PSA negotiations were completed in 1992. Without waiting for PSA law to be adopted, Elf-Neftegaz company announced termination of agreement related work in July 1995
Khanti-Mansiysky Autonomous District, Tyumenskaya Oblast .....	Amoco (USA)	Yuganskneftegaz (YUKOS)	1992	Priobskoye oil field	Work on technical and economic parameters of the project, negotiations on terms of the PSA are underway
Khanti-Mansiysky Autonomous District, Tyumenskaya Oblast .....	Royal Dutch/Shell (Netherlands/UK)	Evikhon	1992	Western Salym, Upper Salym and Vadelupskoye field	Preparation of PSA and feasibility study, work of the feasibility study is underway
Khanti-Mansiysky Autonomous District, Tyumenskaya Oblast .....	Urais-ARA (Netherlands)		1992	Khulturskoye and Slavinskoye fields	Preparation of PSA and feasibility study
Tyumenskaya Oblast .....	Norsk Hydro (Norway), Phibro Energy, Anglo-Suisse (USA)	Varyeganneftegaz (SIDANKO)	1992	Golden Mammoth field	
Kaliningradskaya Oblast .....	RVE-DEA, Weba Oil (Germany)	Rosneft, Kaliningradmorneftegaz (Lukoil)	1993	D-6 field on the Baltic Sea Shelf	Preparation of PSA

(For source see end of table.)

TABLE 5.3.1 (concluded)

## Production sharing agreements in the Russian oil and gas industry on which negotiations were initiated prior to the PSA law

Region	Investors		Project conception	Field/contract territory	Contract stage as of today
	Foreign	Russian			
Republic of Sakha-Yakutiya .....	OMV (Austria)	Takt	1991	Parts of Kempendyayskaya basin (14,000 sq. km) and Nepsko-Botyobinskoye anticlinal zone (7,000 sq. km)	Postponed
Yeniseysky District, Krasnoyarsk Krai .....	Symskaya Exploration Inc. (USA)	Yeniseygeophysica, Yeniseyneftegazgeologia	1993	Symskaya area	Preparation of PSA and feasibility study
Turukhansky District Krasnoyarsk Krai .....	Royal Dutch/Shell (Netherlands/UK)	JV "Eniseineft" (Russia/UK), Eastern Siberian Oil and Gas Company	1993	Vankorskoye oil and gas field	Feasibility study has been prepared. PSA is under preparation for negotiations

Source: A. Konoplyanik, "PSA legislation of Russia", a paper presented at the Third International Conference on Northeast Asian Natural Gas Pipelines (Seoul, Republic of Korea), 4-7 November 1997.

## 5.4 Russia's PSA law

### (i) Background and objectives of the initial version

The difficulties of concluding PSA-type agreements in the absence of a satisfactory legal framework was one of the factors which gave impetus to the creation of a PSA law. Early in the transition, it had become evident that major changes were required in the management of Russia's subsoil resources. In particular, a clear and stable legal framework,<sup>357</sup> a tax regime more supportive of development, and an alternative to the existing licensing system were all needed to place Russia on an equal footing with other major oil producing countries. More generally, the Russian government recognized the need to improve the investment climate.<sup>358</sup> The passage of a PSA law (and complementary new tax legislation) was seen as an element of a broader development strategy which would create conditions under which the oil and gas sectors, in particular, would become an engine of growth. PSAs were expected not only to serve as a channel for FDI (with its accompanying technological, financial and management resources), but also to help revitalize the domestic equipment industry, stimulate the development of new technologies, and encourage the conversion of military production capacity to supply equipment for oil and gas extraction. Such a strategy would also have major implications for employment and the balance of payments.

The present PSA law has its origins in Presidential Decree 2285<sup>359</sup> which was promulgated on 24 December 1993.<sup>360</sup> In July 1995, a PSA law was passed by the State Duma, the lower chamber of the Russian Parliament. The law had been initiated and drafted by an independent group of domestic experts, headed by Dr. A. Konoplyanik,<sup>361</sup> working under the State Duma Committee on Natural Resources. Subsequently, it was modified by the Conciliatory Commission, which consists of representatives of the Federation Council (the upper chamber of the Russian Parliament) and the Duma. On 30 December 1995, the President of Russia signed the law "On Production Sharing Agreements" (hereafter, the "core" PSA law) and it came into force on 11 January 1996.

The law was a major step forward in that, for the first time, it provided a legal basis for PSAs,<sup>362</sup> guaranteeing the terms for the lifetime of the contract and making possible the application of project financing principles. The new law also created an alternative to the existing licensing (T/RA) regime. In fact the two legal frameworks are intended to exist side by side, giving investors a choice and thus stimulating a more efficient exploitation of the country's natural resources. Each regime is regulated by its own "key" laws: the PSA regime by the law "On PSAs..." and the licensing (T/RA) regime by the law "On the Subsurface..."<sup>363</sup> and the applicable tax legislation. The parallel approach requires the establishment of a clear boundary between the areas of application of the two management systems, a task which is not yet complete (see below).

<sup>357</sup> For example the existing licensing system failed to provide guarantees for the repayment of investments in a given project, an omission which essentially precludes the application of widely used project financing techniques.

<sup>358</sup> The licensing system in place failed to attract foreign investors, and as a result Russia received little FDI, particularly when compared with the huge potential for investment in natural resources. In recent years, the government had high hopes of attracting FDI. At the 1998 World Economic Forum (Davos), March 1998, the then Prime Minister V. Chernomyrdin predicted that annual foreign investment would reach \$20 billion (including \$10 billion in FDI) by the year 2000.

<sup>359</sup> Presidential Decree 2285 of 24 December 1993, "On Production Sharing Agreements in the Use of the Subsurface".

<sup>360</sup> A detailed history of the PSA law is available in [9-11].

<sup>361</sup> The former Deputy Minister for Fuel and Energy of the Russian Federation.

<sup>362</sup> The PSA law represents the first application of civil law principles to mineral resources management in Russia.

<sup>363</sup> The T/RA licensing regimes controlling use of the subsurface are governed by the laws "On the Subsurface" and "On the Continental Shelf", and the draft law "On Oil and Gas", among others.



TABLE 5.4.1

**Taxation system applying to oil production in the Russian Federation under the concession (T/RA) system**  
(Roubles per tonne and per cent)

<i>Tax</i>	<i>Incidence</i>	<i>Rate</i>
Excise Tax .....	Differentiated by enterprise as function of costs	700 to 80 000 roubles per ton, average 55 000 (9.5 \$/ton)
Transportation Fee .....	Roubles per tonne-km Differentiated by pipeline segment	54 000 roubles/ton/km Average fee from W. Siberia to Black Sea \$ 23-\$24/ton
Royalty .....	Per cent of well-head value per ton before Excise Tax and Transportation Fee Fixed at time of licence award as function of geology and cost conditions	Fixed rate in range of 6 to 16 per cent 8 per cent average rate
Geology Tax .....	Per cent of well-head value per ton before Excise Tax, Transportation Fee and Royalty Credit available for qualified expenditures if incurred	10 per cent maximum
Asset Tax .....	Per cent of net fixed assets	2 per cent
Road Tax .....	Per cent of gross revenues	1 to 2 per cent
Social Funds .....	Per cent of gross revenues	3 per cent
Environmental Local Taxes .....	Per cent of prime cost	5 per cent
Income Tax .....	Per cent of net income	Up to 35 per cent = 13 per cent (federal) + up to 22 per cent (regional)
Value Added Tax .....	Per cent of value added	20 per cent

Source: A. Konoplyanik, "Russian strategies for the development of the energy sector: the role of the state and private companies under two political scenarios", a paper presented at the International Seminar on Science and Technology for Development: The Role of the State and the Role of Private Companies (Sao Paulo, Brazil), 23-24 October 1997.

Note: All rouble values are in old roubles.

The PSA approach has involved the introduction of different means of taxing natural resources, which are more supportive of the oil and gas sector and, more generally, of economic development. The existing Russian tax system consists of dozens of taxes, duties and other forms of revenue (table 5.4.1). There are at least three types of fiscal disincentive to energy investments:

- *the structure of taxes and their administration:* there are numerous taxes, most of which have their own administrator and are collected at different levels of government (i.e. the federal, regional and municipal); the system lacks transparency;
- *tax incidence:* many taxes are levied on the basis of gross revenue rather than net profit, creating little incentive to reduce costs and otherwise improve economic efficiency;
- *tax rates:* effective tax rates are often high and there is a tendency for them to be increased. In consequence, the sum of costs and the total tax obligations of a company may exceed its gross revenues.

On average, taxes on oil amounted to \$50 per tonne in 1997, or nearly 50 per cent of the domestic price of crude oil. The burden on Russian oil companies is reflected in the example of Lukoil, which has estimated that its various tax obligations amount to 67 per cent of the selling price of its oil (compared with 25-35 per cent in other countries). In addition to inhibiting investment, high taxes encourage tax evasion (the risk of prosecution for non-payment of taxes is less than the risk of bankruptcy resulting from compliance with the tax code).

Thus the current tax system tends to create a vicious circle of non-payment and low tax revenues which prompts the state to increase energy taxes, thus further discouraging investment.

The PSA law aims to deal with these problems by substituting a system based on rent collection principles for the taxes in table 5.4.1 and by placing the tax obligations of individual projects on a contractual basis (thus removing an unpredictable element of the current taxation system). In the Russian case this involves five types of payment to the state: bonuses, rentals, royalties, a share of the "profit oil", and a profits tax (chart 5.2.1). The division of "profit oil" between the state and the investor is decided through negotiation, taking into account the particular features of the project. The investor seeks a share of the profit oil that yields an appropriate internal rate of return on his investment. The government is believed to allow an internal rate of return of 15-18 per cent. In principle, the application of the PSA regime to a given project results in a larger tax base than if developed under current tax rules (see below).<sup>30.1</sup>

## (ii) Obstacles to projects under the PSA law

The PSA law of January 1996, mediated by the Conciliatory Commission, was a compromise between the original draft law, passed by the Duma in July 1995, and the views of the Federation Council. The

<sup>30.1</sup> The state aims to maximize the discounted cash flow of the project by optimizing the production profile of the deposit.



modifications introduced into the law by the Conciliatory Commission, which on the whole reduced its investor friendliness, reflect a variety of concerns and views held by the legislators: for example, that state control over the country's natural resources should be maintained for reasons of national security; that Russia has considerable experience in mineral extraction (especially in the oil and gas sector) and thus should be able to manage without foreign expertise and technology; that the operation of foreign companies in Russia will be detrimental to Russian companies, a number of which aim to become major international players; that the application of rent collection tax principles linked to PSAs (especially the negotiations over profit splitting) will increase the risk of corruption; that the new tax regime will result in a loss of tax revenues; and that the international oil companies will import most of the required equipment and services, thus depriving residents of income and holding back the development of the domestic equipment and service industries.

Several modifications reflected in the January 1996 PSA law have lengthened the process of obtaining PSA approval and thereby have increased costs and risk:

*First*, the PSA law requires that both the particular area (parcels of subsurface) and each project agreed with the government be approved through additional legislation.<sup>365</sup> In practice this necessitates the passage of "lists" of proposed blocks through three readings by the State Duma, adoption by the Federation Council and signature by the President.<sup>366</sup> The degree of control which the legislature exercises under the PSA law over the granting of mineral rights to private investors distinguishes Russia's PSA law from those of most other oil producing countries.<sup>367</sup> In general, approval of petroleum agreements is left entirely to the authority of the executive branch of government.

<sup>365</sup> To facilitate the approval process, an administrative arrangement has been decided under which a special commission of the Duma (consisting of the representatives of all political parties) agrees on proposed PSA projects before they are recommended for approval to the Plenary session of the Duma. It has been suggested that under this procedure potential PSA investors are better placed to prepare their projects for inclusion in a list, thus boosting the prospects for their projects.

<sup>366</sup> This procedure is obligatory for any PSA proposal relating to "plots on the continental shelf (in the exclusive economic zone of Russia) on which negotiations have already been completed, plots where the state is deemed to have special strategic interests, and any agreements concluded without a tender or auction". These requirements cover virtually all the existing and planned PSAs in Russia. Initially excluded from the procedure (but now included – see below) were agreements applying to onshore areas concluded on the basis of a tender or an auction. (But even these PSAs might be related to the "State's special strategic interests" and thus would require approval through federal legislation.)

<sup>367</sup> Only a few countries require legislative approval of specific agreements, and in these cases the procedure appears to be significantly less onerous than under Russian law. This is the conclusion of a study of the petroleum laws of 42 producing countries undertaken by the Petroleum Advisory Forum (PAF) for the Drafting Group of the Russian Federation State Duma Committee on Natural Resources. Otherwise there is substantial similarity between Russia's PSA law and those of other countries [17].

In accordance with the PSA law, in 1996 the government proposed a list of 250 blocks for development under the PSA regime, of which 213 contained oil and gas deposits. The Duma considered this "prospective" list too large, and thus created a "current" list of only 26 projects. Of this group, only seven blocks have been approved by the passage of the law "On List..." No. 1 (table 5.4.2).

*Second*, an amendment to the law raises the possibility that a PSA agreement can be modified "on demand from one of the parties if there has been an essential change in circumstances, in accordance with the Civil Code of the Russian Federation".<sup>368</sup> It has been observed that the language of the legislation raises the risk of an arbitrary interpretation of the definition of "essential change in the circumstances". In general, international contracts address the issue of risk from "essential change" (e.g. due to unexpected changes in prices) by introducing a sliding scale for the sharing of profits (i.e. any potential modification of the profit split due to changes in market conditions is specified in the agreement and thus does not require a revision of the terms).

*Third*, PSAs are legally obligated to purchase at least 50 per cent of their machinery and service requirements from domestic suppliers, regardless of price. In the initial conception of the law, the aim was to increase the domestic content of PSA projects by promoting the competitiveness of local suppliers (see section 5.5). The flow of benefits (measured by the discounted present value) from each PSA was to be maximized (by lowering costs and boosting production as much as possible). To this end, investors would have to buy domestic goods and services only if the price and quality were equivalent to that offered by foreign suppliers.<sup>369</sup> The considerable variations in the geology and climate of Russia imply a great diversity in the equipment and skills required by PSAs. Thus, whether or not the 50 per cent local sourcing obligation is a threat to viability will depend on the specific project.<sup>370</sup> (The requirements would not appear to have deterred the Sakhalin-2 project which relies on local sources for 70 per cent of the equipment.)

The modifications of the original draft law have been criticized as increasing risk<sup>371</sup> and raising the *ex ante* internal rate of return sought by potential investors. Of course, granting a higher internal rate of return would cut

<sup>368</sup> The title of the corresponding article of the PSA law is "Stability of the Terms of the Agreement".

<sup>369</sup> In international (PSA) contracts, it is common for the foreign partner to agree to train local workers in order to achieve a minimum level of local labour in a project.

<sup>370</sup> The possible negative impact of this preferential treatment has been examined in [10, 11].

<sup>371</sup> For example, while an investor must negotiate a PSA with the government, the latter does not possess the right to sign the PSA (the government can only sign the PSA after the negotiations are over and it has been approved by the Duma). The government can recommend approval to the Duma, but the Duma has no obligation to give it, and may even demand the renegotiation of terms.



TABLE 5.4.2  
Lists of subsoil blocks to be developed under PSA legislation

Name	Location	Licence holder
<b>Blocks approved under Federal Law No. 1</b>		
<b>Oil, gas and condensate</b>		
Samotlorskoe oil/gas/condensate field .....	Khanti-Mansiysky Autonomous District	Chernogorneft, Nizhnevartovskneftegaz
Krasnoleninskoe oil field .....	Khanti-Mansiysky Autonomous District	Krasnoleninskneftegaz (Kondpetroleum), Khintimansiyskneftegazgeologiya, Yugraneft
Romashkinskoe oil field .....	Tatarstan Republic	Tatneft
Prirazlomnoe oil field .....	RF continental shelf (Barents/Pechora Sea)	Rosshelf
Sakhalin onshore (8 fields) .....	Sakhalin Region	Rosneft-Sakhalinmorneftegaz
<b>Gold</b>		
Kuranakhskaya group of fields .....	Sakha Republic (Yakutia)	Kuranakhskaya gold-extracting company
<b>Iron-ore</b>		
Yakovlevskoe field .....	Belgorod Region	Yakovlevsky mine
<b>Blocks waiting approval under draft Federal Law No. 2</b>		
<b>Oil, gas and condensate</b>		
Kharampurskoe oil field .....	Yamalo-Nenetsky Autonomous District	Purneftegaz
Lugenetskoe gas/condensate field .....	Tomsk District	Tomskneft (Vostochnaya oil company)
Usinskoe oil field .....	Komi Republic	Komineft
Udmurtia bidding area (12 fields) .....	Udmurtiya Republic	Samson International Ltd.
Uvatsky project (8 fields + 12 plots) .....	Tyumen District	Bidding
Fedorovskoe oil/condensate field .....	Khanti-Mansiysky Autonomous District	Surgutneftegaz
Salymsk group (3 fields) .....	Khanti-Mansiysky Autonomous District	Evikhon (+ Shell)
Timan-Pechora block N 15 (including Yuzhno-Lyzhskoe and Severo-Kozhvin'skoe oil fields) .....	Komi Republic	Parmneft
Komsomolskoe oil/gas/condensate field .....	Yamalo-Nenetsky Autonomous District	Purneftegaz

Source: A. Konoplyanik, "Razvitiye zakonodatel'nogo i investitsionnogo protsessov v usloviyakh deistviya Federal'nogo zakona 'O soglasheniyakh o razdele produktii'", a paper presented at the Third International Conference: Osvoenie shel'fa arkticheskikh morei Rossii (RAO-97) (St. Petersburg), 23-26 September 1997 and "Development of legislative and investment process in Russia under the federal law on production sharing agreements", a paper presented at the 11th Annual APS Conference: Middle East Strategy to the Year 2010, Forum International (Nicosia, Cyprus), 6-8 October 1997.

the state's share of the profits and the economic benefits to the country. On the other hand, the failure to compensate investors for increased perceptions of risk is likely to reduce interest in these ventures.

The significant time and costs involved in the PSA process may limit the application of the regime to projects of a certain size. Very big projects in which the large fixed costs involved in the preparation and legislative approval of a project can be widely spread over a large output are still likely to be viable. However, this may not be the case for medium-sized projects (which, however, might still be attractive under the T/RA concession and associated tax regimes). The PSA approach may also be viable for the exploitation of small fields, provided they are packaged into a single large project which can attract adequate financing. This is possible if all the small fields lie within the jurisdiction of a regional authority.<sup>172</sup>

<sup>172</sup> In general, the development of a site on a PSA basis is subject to the "two keys" principle applied to the management of the Russian

### (iii) The remaining legislative agenda

Although the "core" PSA law has become part of the Russian legal code, its application depends on the enactment of complementary, enabling legislation.<sup>173</sup> This PSA-related legislation would have to progress in four related areas to live up to its potential.

Firstly, changes and amendments to the existing legislation are necessary, i.e. to the 12 existing laws

subsurface, i.e. mineral rights can be granted to an investor only with the approval of both the federal and regional authorities. However, where only small fields are concerned, recourse may be made to agreements on the sharing of jurisdiction between the federal and regional bodies, in which case only the approval of the latter is required. With this approach, the disadvantages of developing small fields may be partially offset by a much easier and less costly approval process (i.e. avoiding federal legislative approval). Its feasibility was demonstrated in the Udmurtia Republic where 12 deposits were combined into a single project and opened for tender.

<sup>173</sup> Since the PSA law came into force, no production sharing agreement has been signed by the government, and thus none has been submitted to the Duma for approval.



(other than the PSA law) which apply to the law "On the Subsurface..." (i.e. the law governing the licensing regime). This involves passage of the draft law "On Incorporation into the Legislative Acts of the Russian Federation Changes and Amendments which follow from the Federal Law 'On PSA'".<sup>374</sup> In effect, this will restrict the application of these 12 laws to non-PSA projects. The objective is to clearly divide the sphere of application of the law "On the Subsurface" from that of the "core" PSA law. Similarly, when PSA rules and norms apply to a project, they take precedence over those comprising the law "On the Subsurface". As regards taxation, a clear delineation of the spheres of application of mineral rent collection principles in the PSA law and the general tax principles applying to licensing arrangements will require changes and amendments to the laws relating to individual taxes (see above). The government introduced a draft law in May 1996 to make the necessary modifications which, with some redrafting, passed its first reading in the State Duma in June 1997.

The second task involves changes and amendments to the PSA law itself (i.e. to the "core" PSA law), to remove some of the obstacles to PSAs introduced into the January 1996 law. To this end, a draft law ("On Incorporation of Changes" and amendments into the federal law "On PSA") was passed by the Duma after the first reading in June 1997. Among other things, this draft law deals with issues such as the rights of regional authorities to decide PSA applications,<sup>375</sup> and the preferential treatment of local suppliers.

A third task involves the expansion of the list of blocks that can be developed under PSA rules. The law "On List..." No. 1 (7 blocks) was passed in July 1997, and draft law "On List..." No. 2 (9 blocks) was to be taken up by the Duma in the autumn of 1998 (table 5.4.2). The remaining 10 blocks on the "current" list are to be voted on in 1999 at the earliest. Even if all 26 areas are approved by law, the potential PSA projects which will go ahead will be considerably less than the number in the government's initial proposal.

The fourth task concerns the preparation and approval of the normative documents on PSAs. Under the legal system of Russia, laws are usually implemented through normative acts issued by the government. Two such documents are currently ready for governmental decision.

<sup>374</sup> The law "On Incorporation into the Legislative Acts..." involves changes and amendments to the following 12 laws: On the Subsurface; On the Continental Shelf of the Russian Federation; On the State Regulation of the External Trade Activity; On Foreign Investments in the RSFSR; On Custom Tariff; On Road Funds; On Fundamentals of the Tax System; On Tax on Property of Enterprises; On Value Added Tax; On Tax on Profit of Enterprises and Organizations; On Excise Taxes; and On the Custom Code.

<sup>375</sup> According to the draft law, regional authorities were to have the sole right to grant PSA rights to small oil and gas deposits (recoverable reserves of up to 10 million tonnes and 10 billion cubic metres, for crude oil and natural gas, respectively), provided there were no objections from the Ministries of Natural Resources, and Fuel and Energy.

## 5.5 The macroeconomic considerations

Supporters of the PSA law have argued that its application to the oil and gas industry could create an engine of economic growth. It has been estimated that development of the 250 sites initially proposed by the government would involve investments of some \$200 billion. Of this, the 213 oil and gas bearing areas would require investments of \$130-\$140 billion, a large part of it having to come from abroad.<sup>376</sup> The other \$60-\$70 billion would be invested in non-hydrocarbon mineral projects. Assuming investment cycles for projects in the oil and gas sector of 6-10 years implies annual expenditures of \$13 billion to \$23 billion, about 3-5 per cent of Russian GDP in 1996 or 1/5-1/3 of the global exploration and production investments of the international oil companies in 1996.<sup>377</sup> However, the potential investments in the blocks already approved or under consideration by the legislature (table 5.4.2) are more modest. Four of the oil and gas areas covered by the law, "On List..." No. 1, would require investments of \$28 billion [20, 21] and the nine comprising draft law "On List..." No. 2, \$16 billion [20, 21].<sup>378</sup> Together the two "lists" involve investments of some \$5-\$8 billion annually, which is very large compared with the current investment expenditures in the sectors.<sup>379</sup>

Investment in the oil and gas sectors usually has a large multiplier effect on the national economy. For Russia it has been estimated to be 1.9,<sup>380</sup> compared with 1.6-1.7 for Norway, 1.8-2.4 for Australia and 2.1 for the United States. This implies that an investment of \$100 in a Russian PSA oil project generates an additional \$90 of

<sup>376</sup> A. Konoplyanik, based on the data of the Russian Ministry for Fuel and Energy and the government's list of 213 deposits [15, 16]. This list covers some 38 and 7 per cent of Russia's assessment of reserves of oil and gas, respectively.

<sup>377</sup> Estimates of the investment requirements of Russia's oil and gas industry vary considerably, the differences reflecting different sites, assumptions about specific capital requirements, methodology, etc. For example, estimates made in the mid-1990s by the Russian government, the World Bank and others placed the investment needs of the industry in the range of \$3-\$6 billion to \$15-\$20 billion annually, mainly in the form of FDI [19].

<sup>378</sup> Many of the proposed PSA projects are located in areas where transport is not an issue: Sakhalin-1 and Sakhalin-2 have direct access to ocean transport, and they are relatively close to Asian markets which, until recently, were the fastest growing in the world. Oil from the Timan-Pechora area can be shipped via the Baltic states through the existing Transneft pipeline, or through Transneft's proposed Baltic Pipeline System which envisages oil terminals on the Russian coast of the Baltic Sea. However, the development of some large new PSA projects in western Siberia would require companies to construct their own pipelines to the nearest (but probably still very distant) oil tanker terminals. Hence, pipeline access is likely to remain an obstacle to new PSA projects in large areas of western Siberia.

<sup>379</sup> In 1996, annual investments of \$5-\$8 billion were equivalent to R26,000-R41,000 billion, which compares with total investment in oil and gas extraction of R45,000 billion.

<sup>380</sup> The estimates, based on six prospective PSA oil projects, are given in a joint study prepared by the Petroleum Advisory Forum and the Commission for Natural Resources of the Russian Academy of Sciences [17].



TABLE 5.5.1

Estimated impact of the production sharing regime on oil production and tax revenue  
(Dollars, dollars per tonne and tonnes)

	Acting tax system	Production sharing agreements	Ratio
<b>33 Fields (Draft law)<sup>a</sup></b>			
Cumulative production (billion tonnes) .....	0.3	2.6	8.0
Unit investments (dollars/tonne) .....	201	25.2	8.0
Total taxes (billion dollars) .....	18.4	63.4	3.5
Tax per tonne (dollars/tonne) .....	55.2	23.9	2.3
<b>5 Fields (List law No. 1)</b>			
Cumulative production (billion tonnes) ....	0.1	0.8	8.0
Unit investments (dollars/tonne) .....	150	18.8	8.0
Total taxes (billion dollars) .....	4.7	14.0	3.0
Tax per tonne (dollars/tonne) .....	48.1	18.0	2.7
<b>9 Fields (Draft list law No. 2)</b>			
Cumulative production (billion tonnes) ....	0.1	0.5	4.6
Unit investments (dollars/tonne) .....	158	33.8	4.6
Total taxes (billion dollars) .....	4.8	12.5	3.6
Tax per tonne (dollars/tonne) .....	47.0	26.2	1.8

Source: A. Konoplyanik, "Razvitie zakonodatel'nogo i investitsionnogo protsessa v usloviyakh deistviya Federal'nogo zakona 'O soglasheniyakh o razdele produktov'", a paper presented at the Third International Conference: Osvoenie shel'fa arkticheskikh morei Rossii (RAO-97) (St. Petersburg), 23-26 September 1997 and "Development of legislative and investment process in Russia under the federal law on production sharing agreements", a paper presented at the 11th Annual APS Conference: Middle East Strategy to the Year 2010, Forum International (Nicosia, Cyprus), 6-8 October 1997.

<sup>a</sup> Blocks included in the draft law of the government as of December 1996.

income in the economy.<sup>381</sup> Moreover, an evaluation of the several potential PSA projects involving foreign participation indicates that more than 70 per cent of project expenditures would remain in Russia, including 56 per cent of capital goods purchased, 80 per cent of operating expenditures and all transportation costs.<sup>382</sup> This would also be the case for almost 90 per cent of the direct and indirect income generated. Of the latter, the government (federal, regional and local) would receive 43 per cent, the non-government sector (including Russian investors) 44 per cent, foreign investors 7 per cent and other foreign businesses 6 per cent.

Application of the PSA law and the accompanying changes in tax legislation (see above) are expected to result in the expansion of oil output, the tax base and tax revenues (to all levels of government). It is estimated that recoverable reserves and cumulative production from a given deposit (i.e. over the lifetime of the project) would increase five to eightfold compared with that under the current T/RA and tax systems (table 5.5.1).<sup>383</sup> In

consequence, the tax base and revenues under the PSA regime are estimated to increase by 2.6 to 3.6 times.<sup>384</sup>

Since the oil and gas sector (and possibly other extractive industries) will increasingly need the most advanced engineering goods as exploration and production shift to the hostile operating conditions of Russia's far east and north (including the Arctic shelf), it has been suggested that large-scale implementation of the PSA law could help promote technological advances among domestic equipment suppliers. According to this view, the prospects for a high and stable level of investment demand generated by PSA projects could create the conditions for nurturing new technologies and provide an incentive for converting the military-industrial sector (which is the country's leading high-tech area) to the production of oilfield equipment. The potential use of naval shipyards to produce offshore drilling equipment is often cited as a possibility, and some projects of this type are already underway. For example, the Severodvinsk plant "Zvezdochka" near Arkhangelsk has been converted from the production of submarines to offshore oil and gas installations, and it is producing the first platform for the Prirazlomnoye oil field in the Pechora Sea. The project financing approach underlying PSA implementation facilitates the development of these domestic linkages.

## 5.6 Recent developments, prospects and policy choices

Despite some advance in PSA legislation, it nevertheless appears that, on balance, recent developments in Russia's domestic political and economic situation, as well as those in the international financial and commodities markets, have diminished the prospects for PSAs.

### (i) The stalling of PSA legislation

The new PSA law is a major step forward in providing, for the first time, a legal basis for production sharing agreements and offering an alternative to the concession-based system. In particular, the PSA law and proposed changes to related legislation promise a more stable legal base and a more favourable tax treatment, and also make possible the application of project financing techniques. In principle, they also hold out the possibility of increased and more efficient investment in the natural resource industries, and increases in both output and tax revenues.

Nonetheless, the potential application of the law appears to have been seriously circumscribed in comparison with the initial version considered in early 1995. In particular, the possibility of reopening the terms of the agreement under certain conditions and the very time-consuming requirement of legislative approval for

<sup>381</sup> Additional benefits to the economy may accrue if investments in the oil sector stimulate additional investment by domestic producers of oil field equipment. Estimates of the secondary impact of investment in the Priobskoye PSA are available in [18].

<sup>382</sup> See [17].

<sup>383</sup> See [20, 21].

<sup>384</sup> Ibid.



individual potential PSA sites and negotiated projects has increased the risk surrounding such agreements.

In July 1998, the Duma took up the PSA issue again, making some improvements, but on the whole there was no progress on key elements of the enabling legislation. Decisions were required on the draft law "On Incorporation into the Legislative Acts..." (namely, to modify the 12 laws applicable to the licensing system), enactment of which is essential for the application of the PSA regime to projects beyond the three already signed.<sup>385</sup> Also, there was no vote on draft laws to approve additional sites for development under PSA rules, which would have permitted further feasibility studies and the preparation of pre-financing arrangements. The Duma did approve, however, in the third reading, the law "On Incorporation of Changes and Amendments into the Federal Law 'On Production-Sharing Agreements'". (These changes still need to be approved by the Council of the Federation and signed into law by the President.) While there were some changes liberalizing the regime, the net result of this legislation was to further reduce the attractiveness of PSAs to investors. In particular, new conditions were added:

- in the interest of national security, restrictions were placed on the share of "discovered" reserves (20 per cent) and on the share of "reserves of strategic kinds of natural resources" (10 per cent) which can be developed under PSA principles;<sup>386</sup>
- all PSAs have to be approved under federal law;<sup>387</sup>
- the preferential rights of Russian legal entities as suppliers of goods and services to PSAs are strengthened:
  - at least 80 per cent of employees are to be Russian citizens. Foreigners can be employed only in the initial stages of a project and only if equally qualified Russian labour is not available;
  - at least 70 per cent of orders for equipment must be placed on Russian territory (instead of 50 per cent in previous drafts);
  - purchases of technology and high technology equipment are to be made on a competitive basis. However, Russian goods are to be given preference if they are comparable to foreign goods insofar as their safety of use, quality and timing of supply are concerned. Price, however, is not mentioned among the criteria.

<sup>385</sup> Sakhalin 1 and 2 and Total/Kharaga, which were signed before the core PSA law came into force in 1996, are "grandfathered" by an article of the PSA law.

<sup>386</sup> One potential source of ambiguity in the amendment (among others) is that "discovered" and "strategic kinds" of natural resources are not clearly defined in Russian legislation.

<sup>387</sup> The types of PSAs excluded from federal jurisdiction in earlier drafts of the legislation are discussed above. They pertain mainly to the rights of regional authorities over small fields.

As noted above, the potential impact of such restrictions will depend on the nature of each project. However, the latest amendments are a further retreat from the principles of the original draft law which sought to maximize the direct economic benefits from each PSA. Placing excessive demands on PSAs to support local labour and industry could raise costs and undermine the viability of many projects.

The problems of completing the PSA legislative framework have been compounded by the recent political changes in Russia. At the time of writing, the views of the new government towards foreign investments and PSAs are uncertain. Even if they are very favourable, and it is decided to push ahead with PSAs, the position of the Duma will remain crucial. But, however this turns out, it seems certain that recent political and economic events have greatly weakened investor confidence.

It is also uncertain how President Yeltsin's decree abolishing the 15 per cent ceiling on foreign ownership of Russian oil firms (August 1997) will be applied and how much interest it will evoke from foreign companies. In principle, it paves the way for the creation of consortia of Russian and foreign companies and financial institutions which could bid for companies being privatized. Such jointly owned companies might be in a better position to negotiate PSAs than foreign investors acting independently. Any participation of Russian companies in PSAs would increase their interest to strategic foreign investors.<sup>388</sup>

## (ii) In the shadow of world commodity markets

The prospects for PSAs have not been helped by the current weakness in world commodity prices. Prices are expected to remain low for some years and their recovery (whenever it begins) is likely to be modest.<sup>389</sup> Oil prices, which strongly influence the price of natural gas, fell from around \$24 per barrel at the beginning of 1997 to \$12-\$13 per barrel in the second half of 1998, their lowest level in 10 years. In the longer term, oil prices are expected to remain comparatively low, less than \$20 per barrel for the next decade, according to one recent study.<sup>390</sup>

Such an outlook has major implications for the Russian economy. First, already low international prices have led to sharp cuts in the export earnings,

<sup>388</sup> For example, Rosneft already participates directly or through affiliated companies in three major PSA projects in Russia (Sakhalin-1, Timan-Pechora and Khariaga). It has also started negotiations to replace MacDermott in Sakhalin-2.

<sup>389</sup> According to projections in *Commodity Markets and the Developing World*, summarized in World Bank, *World Bank News*, 27 August 1998. The price of gold, an important Russian export, is expected to remain low, in the range of \$200-\$300 per ounce, over the next five years (in 1998 dollars). *Financial Times*, 12 August 1998.

<sup>390</sup> According to the United States Department of Energy's *Annual Energy Outlook 1998*, cited in the *Financial Times*, World Energy Supplement, 10 September 1998.



profitability<sup>391</sup> and tax payments<sup>392</sup> of Russia's extractive industries (see chapter 2). There is little reason to believe that this situation will be quickly reversed. Second, the fall in international commodity prices has reduced the value of world mineral reserves. Thus any sales of the Russian state's mineral-related assets would yield considerably less revenue (and foreign currency) than would have been the case in 1997.<sup>393</sup> Third, recent decisions by oil companies to cut exploration and investment budgets (due to weak long-term oil price prospects) may affect planned projects in Russia as well.

The new situation is likely to intensify global competition for the reduced amount of funds available for investment in the oil and gas sector. This competition has been fuelled by the current record level of proven hydrocarbon reserves and their geographical distribution, which has given international oil companies a large choice of production sites.<sup>394</sup> For their part, the oil producing countries have required new investments to help protect their real income, which has been under pressure from the long-term decline in the price of oil. In Saudi Arabia alone, the investment requirements of the oil and gas sector (to 2020) amount to about \$135 billion (i.e. some \$5.5-\$6.0 billion annually).<sup>395</sup> The recent annual investment needs of the whole Middle East in this sector are estimated at some \$20 billion, half of which has to come from foreign sources.<sup>396</sup> In this situation, Russia's ability to compete for investment is weakened by a variety of factors: the inadequacy of the legal framework for mineral extraction; a perception of high country risk;<sup>397</sup> an

annual real rate of return of 15-18 per cent allowed for PSA projects, compared with around 20 per cent in the Middle East; and high development and production costs, due to geological conditions and distances from markets (see below). In contrast, the Middle Eastern countries can continue to offer more competitive rates of return because their costs are the lowest in the world.

### (iii) Tighter financing constraints

Since the onset of the Asian crisis, financial constraints on Russia have tightened amid increasing doubts that investments in natural resource projects can be financed without large flows from abroad. Significant funding through the federal budget is no longer an option,<sup>398</sup> and the fuel producers' internal funds appear to be insufficient. The latter were not enough to keep investment from falling sharply during the past decade; the requirements for modernization are therefore likely to be very high, in addition to the investments needed for new capacities.

Domestic capital markets cannot provide the necessary capital. They remain relatively underdeveloped and are unable to provide long-term lending, particularly in high-risk, long-payback ventures such as oil and gas projects.<sup>399</sup> Moreover, the 15-18 per cent internal rate of return to be allowed on Russian oil and gas projects has always been less than short-term interest rates, generally by large amounts. It was hoped that the steep fall in domestic interest rates in the first half of 1997 would encourage a shift of investments into real assets.<sup>400</sup> However, the defence of the rouble in early 1998 resulted in a sharp rise in interest rates (chart 2.3.2) and they stayed at high levels for the rest of the year. The collapse in Russian stock market prices (chart 2.3.9), among other factors, has discouraged Russian companies from seeking equity financing on local markets. Not long ago, a flurry of large new issues by Russian energy companies was expected to be issued on the international markets.

Russian oil and gas companies had been counting on foreign finance as their major source of capital. However, the general retreat of investors from emerging markets in the wake of the Asian crisis has triggered a sharp deterioration in conditions available to most borrowers on the international financial markets. Premia on emerging market debt have risen sharply (see chart 4.3.2) causing many potential borrowers to postpone or

<sup>391</sup> According to Mr. I. Mazalov, an oil and gas analyst with CentreInvest Securities (Moscow), most Russian production companies will be unprofitable in 1998. *Wall Street Journal*, 18 March 1998.

<sup>392</sup> In fact, prior to the depreciation of the rouble in August 1998, the oil companies were pressing the government for tax relief. As discussed in chap. 2, low commodity prices have contributed to the deteriorating budgetary situation of the Russian Federation.

<sup>393</sup> This is one reason why the bids for 75 per cent of Rosneft, a major Russian oil company, fell short of the \$2.1 billion and \$1.6 billion reserve (starting) prices under the auctions held in May and July 1998, respectively (see chap. 4).

<sup>394</sup> Between 1972 (just prior to the first oil price shock) and 1996 world reserves of oil increased from 28 years to 42 years at the existing rate of consumption. For natural gas, the comparable figures are 50 and 62 years, respectively. As a result, while "the international industry needs new oil and gas reserves, it is no longer preoccupied with scarcity...it has many more options of when and where and how to invest in new projects than ever before...". Scanlan, op. cit., pp. 3 and 8.

<sup>395</sup> The increasing competition for investment in the oil sector worldwide was one of the reasons behind the recent decision of Saudi Arabia to open discussions with United States oil companies about returning to participate in the exploration and development of new and existing oil and gas fields. *International Herald Tribune*, 1 October 1998.

<sup>396</sup> Most energy investment projects in this area used to be financed from government sources, but since the Gulf War (which involved huge indirect costs to these countries) project financing has become increasingly important.

<sup>397</sup> In its 1998 assessment of political risk (completed prior to the change in the Russian government in September), Investment Insurance International rated Russia as "Grade D: Medium-High risk" (on a scale ranging from "Grade A: Low risk" to "Grade E: High risk"). Other oil and gas producing countries with the same ranking are Algeria, Egypt and

Indonesia. Saudi Arabia, Kuwait, UAE, Oman and Qatar are rated as "Grade B: Medium-Low risk". The rating group considers the oil and gas and mineral extraction industries as the most exposed to risk [22].

<sup>398</sup> In 1991, the federal budget financed 9.2 per cent of energy investments compared to less than 1 per cent in 1997.

<sup>399</sup> Project lifetimes in the oil and gas industry are often 25-40 years or more.

<sup>400</sup> Average GKO yields fell from 32 per cent at the beginning of 1997 to 19 per cent at mid-year yielding an after-tax profit of around 16 per cent.



cancel new issues. Russian entities were affected as well, a \$3 billion loan for Gazprom, for example, being one of the casualties in early 1998. External constraints tightened further in the second half of the year, with the premia on Russian debt rising considerably further and international agencies cutting the country's credit rating.<sup>401</sup> In these circumstances, combined with the moratorium on rouble debt servicing, it will not be easy for Russian entities to regain access to the international markets.

#### (iv) Conclusions

Given the country's natural and human resources, the Russian oil and gas sector still appears to offer the greatest hope for increasing export revenues in the medium term. Given its size the sector has a key role to play in economic recovery (which the manufacturing sector is currently unable to match). However, it is doubtful that Russian oil companies will be able to finance the necessary investments on their own.

In this situation, accelerating PSA projects with foreign involvement and funding would seem to be one of the few available policy options. However, more progress is required to complete PSA-related legislation and, generally, to ensure that policies towards the extractive sectors are directed at improving their international competitiveness. Guaranteeing the stability of legal arrangements, and simplifying and shortening the process of approving sites for the PSA regime, are also important. By reducing project risks, foreign investors might be willing to lower their target rates of return and to increase their volume of investment.

The decline in international oil prices, however, has resulted in a new situation in which investment plans are being reassessed worldwide. Of course, any new projects will have to be profitable at the low prices now being projected.<sup>402</sup> This would seem to exclude many sites in Russia (which also involve high internal transport costs). However, some sites, in particular a number of the very large remaining oilfields, might still be profitable under the new conditions, and they would have to be approved for inclusion under the PSA regime.

Even if the creation of PSAs were accelerated, it is doubtful that the overall benefits would be as large as they would have been if they had gone ahead in the mid-1990s. Oil prices were higher then and there was a great deal of interest among the international oil companies in concluding agreements with Russia (table 5.3.1). If these had gone ahead, FDI flows would have been greater

(adding to foreign currency reserves) and oil production might have developed more favourably. This, and the application of the rent-based tax regime, could have increased tax revenues thus reducing pressure on the budget, cutting the government's need to borrow at home and abroad, and reducing the vulnerability of the country to external shocks.

Russia's current problems are systemic and deep-seated and certainly could not have been solved by large-scale recourse to PSAs. However, their successful application might have provided some breathing space to restructure and improve the competitiveness of other sectors. Difficult as it may be to develop mineral deposits in the hinterlands of Russia, it is still probably easier than turning around much of the manufacturing industry.

Failure to clear the way for PSA projects is an example of the difficulties that economic reform in general has encountered in Russia. The case is particularly significant since it involves a sector of the utmost economic importance and because the task involved – introducing a new legislative framework for which proven models are available elsewhere – is probably less challenging than other necessary reforms (e.g. creating new institutions). The initiative was strongly backed by the government, and the legislative process got off to a good start, but it eventually ran foul of conflicting interests. Even the onset of the financial crisis in late 1997 – which underlined the fact that Russia would need to rely more on internally generated revenues – did not spur completion of the legal framework. As a result, and after several years of delay, a system for the management and exploitation of mineral resources still needs to be put into place in order to put Russia on an equal footing with other oil producing countries.

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<sup>401</sup> In September 1998, Moody's and Standard & Poor's sharply downgraded Russia's long-term credit ratings to B3 and CCC-, respectively (see table 4.3.7).

<sup>402</sup> The development of some large oilfields in Russia would still seem to be profitable at a projected oil price of less than \$20 per barrel, depending on the deposit and location. Production costs are around \$2-\$3 per barrel (compared with \$1 or less in the Middle East), on-shore development costs, \$3-\$4 per barrel (off-shore costs are higher) and transport costs, \$3-\$5 per barrel. These estimates exclude any exploration of individual sites. According to Petroconsultants SA (Geneva).



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