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Oil-sector investment in the Former Soviet Union (FSU) has been delayed in the short-term by political, geographical and cultural barriers; however, in the long-term, new solutions will lead to an increase in exports and revenue. FSU oil investment is important because oil is the main source of revenue for many FSU states. Presently, massive reserves, largely undeveloped, exist in Russia and a few Central Asian States, namely Kazakhstan, Azerbaijan, and less so in Turkmenistan. The fall of the Soviet Union has caused financial and political instability in the FSU; but increased oil exports could help curb that effect in these oil-rich states.

In the short-term, the FSU and the international actors that wish to invest there are faced with the lingering Soviet legacy, which affects virtually all aspects of business and life. The FSU states are left with outdated technology, untrained managers, and a chaotic legal and political system. Since the USSR was a centralized state, various parts of production were located in different republics, and similarly, oil and gas pipelines were linked throughout the USSR. This barrier of geography is now causing huge problems, especially for non-Russian states. Overriding all of the obstacles is the legacy of xenophobia, especially pervading the higher levels of government in Russia. Many officials distrust the foreigners who are "taking over" the development of their main source of hard currency. These developments are to be expected after the fall of an empire and a different way of life.

Despite this dismal picture it will be argued that firms and states are finding long-term ways of overcoming it, and it will be only a matter of time before huge development projects come on line and the states of the FSU begin to bring in more revenue. The foreign oil companies may be encountering problems, but in most cases the difficulties have not diminished their enthusiasm for investing in the area. Many who shun large developments are going ahead with small projects or technical help. Others are investing in Kazakhstan, a more stable country than Russia. Other countries of the world are also joining in with support, mostly in the form of large loans. The result of all the contributions is that exports are rising and more success stories are being reported.

BACKGROUND

The oil fields in the FSU region were some of the first huge fields to be developed. In the 18th century after oil had been discovered in Azerbaijan, the maneuvering by Britain, Russia, and Turkey for the oil-rich state was called the "Great Game".¹ Then in the late 19th and early 20th centuries, especially around the 1870's, there was rapid expansion of the Azeri oil industry, largely by the Nobel and Rothschild families. By 1900, Azerbaijan was producing the most oil in the world.² The Azeri fields' output was half of the world's production.³ In Russia, oil was discovered in Western Siberia, production there rapidly expanded under the Soviets, and the USSR became the world's largest oil producer. In 1989 the Soviets were producing close to 12.5 million barrels per day,⁴ but oil had already been their main source of hard currency revenue for years.

The USSR exported mainly to Eastern Europe in order to subsidize the region and maintain its sphere of influence there. Thus it sold only 30 percent of its oil at world market prices.⁵ OPEC was actually founded as a result of the low prices because the oil companies cut prices of Middle East and Venezuelan oil in response to the flood of cheap Soviet oil into the world market.⁶ Several oil-rich countries decided to form a cartel so the companies would no longer have that influence and the cartel could shore up prices. The USSR greatly benefited from the price increases, as oil was its main revenue source, and this allowed the Soviets to mask their decline.⁷ However, after the 1973 oil crisis, non-OPEC oil development began to expand rapidly; thus OPEC could then only shore up prices through quotas, and its influence decreased. "Its share of the world oil market fell from 63 percent in 1972 to 38 percent by the end of 1985."⁸ The decreasing prices were a factor in the necessity for perestroika because the decline in revenue accelerated the fall of the Soviet empire.⁹ After the fall of the Soviet Union, the Newly Independent States of the Former Soviet Union (NIS) had to raise their prices. Thus OPEC and the FSU have always been intertwined and this relationship continues today.

The main states that produce oil and gas today are Russia, Azerbaijan, Kazakhstan, Turkmenistan,

and Uzbekistan; however, in 1993 only Russia and Kazakhstan were net exporters of crude oil.¹⁰ Since these countries' economies are in shambles, foreign investment is necessary for development. Russia, Kazakhstan, and Azerbaijan are the main states that have attracted oil investment and Turkmenistan has received some natural gas investments as well. Russia, of course, dominates the scene being eighth in the world in proven reserves¹¹; however, many additional reserves likely exist. Russia also has about 50 trillion centimeters of proven gas reserves in 70 major fields.¹² The main oil fields are in Western Siberia, and while many of these have been depleted by the Soviets, new ones are being developed, especially by joint ventures with foreign companies. The Timan Pechora Basin near the Arctic Circle probably contains about 2 billion barrels, and Texaco and other companies are appraising the area.¹³ The White Nights joint venture with Conoco in Siberia has been exporting oil since July 1991.¹⁴ The Polar Lights joint venture with Chevron is also developing a large field in Siberia, and a US-Japan group is working in Eastern Siberia.¹⁵ Sakhalin Island in the Far East also contains large resources, primarily offshore, and new technology is being developed to refine oil in the Arctic Seas that should expand development there.¹⁶ Presently a consortium including Exxon, Mobil, and Texaco has won rights to develop the area.¹⁷

Kazakhstan ranks second among the FSU states in oil reserves, but ironically more oil companies are clamoring to develop there and in other southern FSU states rather than in Russia because of the stable authoritarian governments. Conservative estimates place Kazakhstan's proven reserves at about 15-16 billion barrels, but there are likely to be additional reserves.¹⁸ Others say there could be as many as 25 billion barrels¹⁹, but whatever the estimate, Kazakhstan ranks among the worlds' leading producers in terms of reserves. The potential for development is tremendous and they have already signed contracts with over 40 foreign companies.²⁰

The largest Kazakh field is the Tengiz field, holding about 2.5 billion barrels, which could produce 700,000 barrels per day.²¹ Chevron has already won rights to develop Tengiz in a 50/50 joint

venture, called Tengiz Chevroil, and the venture is already exporting. Another area with huge potential is the Caspian Sea off of the coast of Kazakhstan, which is largely undeveloped and might hold more oil than Tengiz.²² A seismic study is currently being done to determine the size and location of reserves.²³

Azerbaijan also has significant reserves in three huge fields: Azeri, Chirag, and Guneshli. A seven-member consortium led by British Petroleum (BP) finally won a contract called the 'Deal of the Century', signed in January 1995 to develop the fields.²⁴ However, Azerbaijan also borders the Caspian and presently produces 80 percent of its oil in the offshore fields.²⁵ Turkmenistan has huge gas reserves, therefore calling itself the "second Kuwait".²⁶ Uzbekistan also has gas resources in the Karshi Steppe.²⁷ It is difficult to estimate the size of the reserves in many of these places, and governments have tended to exaggerate. Akif Narimanov, the chief geologist for Azerbaijan's national oil company stated, "We are well acquainted with the geology of the region . . . [and] we believe that . . . reserves as stated by Turkmenistan are exaggerated."²⁸ Whatever the exact total, it is clear that Russia and some of the Central Asian states have reserves comparable to those of several OPEC countries.

THE SOVIET LEGACY

The communist command system of the Soviet empire left behind technological, cultural, political, and geographical obstacles that are hindering the process of foreign investment and development in the area. The command economy placed emphasis on rapid production, not on quality; technology was not updated as that would require changing or disrupting the system. The Soviets continued to produce the maximum amount their technology would permit. The mindset of the managers, who were rewarded for these practices, lives on today. A 1992 study revealed that the Russian oil monopolies exhibited "almost complete disregard for savings and rational use of materials, energy, and labor resources."²⁹ In 1994, a European Union multinational team evaluated Siberian oil and gas fields and found "an inefficient, bureaucratic, and centralized system for exploration, production, and transportation using equipment that is 40 years out of date, with people and procedures showing little or no respect for the natural environment."³⁰ The Soviet legacy has affected not only the managers, but also the workers. Now that the system has fallen apart, many refineries and fields cannot pay their workers, especially with the decrease in domestic demand. The result is that in some industries workers are threatening to hold strikes which could disrupt the reforms.³¹ Thus the FSU managers lack the skill to make the transition from communism to capitalism, and the workers are left with no paycheck.

Another technological barrier is that of geography. The Soviet command system was designed to scatter the various parts of production throughout the different republics. That practice has become a problem now that the republics are independent states. For example, Azerbaijan made 40 percent of Soviet oil equipment.³² It is difficult to get the new states to cooperate in equipment transfers. Also, in Russia certain regions have become isolated. Since the collapse of the system, the Russian Far East has had serious trouble importing oil machinery and equipment because they used to get it from the center.³³ The new isolation hurts the Russian government as well because it no longer has control over trading activities in the Far East. That region is now trading oil for food and goods instead of new equipment.³⁴

So it is obvious that all the FSU states suffer because now there is no system to ensure that oil equipment gets to its proper place.

The whole oil industry in the FSU is pervaded by a general lack of technology. Only 14 percent of the equipment used meets world standards.³⁵ Infrastructure is seriously lacking, and domestic companies are having a difficult time developing the oil sector without foreign technology transfer. Azerbaijan has had to restrict oil development in the Caspian Sea to shallow waters because it does not have deep-water development technology.³⁶ Similarly, Kazakhstan was forced to open up the Tengiz field to foreigners because it encountered problems, such as deep oil at very high pressures, that existing technology did not resolve.³⁷

Refining especially suffers from being outdated. "The total value of refined products received from one barrel of crude is worth less than the unrefined barrel!"³⁸ Many of the refineries were built in the 1940's and 1950's and are now obsolete, even dangerous. Most produce inferior products. The main difficulty is that the refineries were built for domestic consumption, not for export to the West.³⁹ Now the refineries have few buyers in their own state that can pay, and they need to export the oil but cannot because they were not designed for foreign trade. Even if ports are developed, the refineries will need much Western upgrading.

Many FSU wells are also in need of repair. Of the 30,000 wells in Russia, one-fifth are idle because of a lack of spare parts.⁴⁰ Other technological problems abound. Water is seeping into many wells and the FSU does not have the technology to stop it. At many fields the top oil has been recovered, and it does not know how to drill deeper. Some well pumps are broken and there are problems in getting new ones.⁴¹ Blowouts occasionally occur, such as the one at the Min Bulak field in Uzbekistan in March 1992. In May, an American company was finally called in to stop it.⁴²

Pipelines throughout the NIS are in utter disrepair. An evaluation of the Russian gas pipeline system showed that a majority of the failures simply were caused by corrosion of the pipes in the

ground.⁴³ Also, the pipelines are turning out inferior oil. Siberian fields generally turn out superior oil that could fetch very high prices on the world market. However, during its trip through the massive pipeline structure, the high-quality oil mixes with the lower-quality crude oil; thus its value is lowered.⁴⁴ It has become known to the world what an effect leaks are having on the environment. Because the governments cannot afford new pipelines though, foreign investment will be needed.

The lack of technology resulting from the Soviet legacy is a problem for the FSU in all aspects of production from well to pipeline to refinery. The FSU cannot afford research and development, therefore foreign investments and technology transfers are going to be a necessity.

Cultural Barriers

What are the barriers to foreign investment left by the Soviet legacy? The first is cultural. Many of the enterprise managers and officials are loath to change a system they think works well. The nomenklatura elite bureaucrats of the USSR that remain have not altered their thinking. During Soviet times the 'oil generals' were the heads of the 32 oil production associations, which were supposed to meet certain targets. Now they are also the bureaucrats who must transform the Russian oil industry into a modern commercial sector.⁴⁵ A mutual cultural misunderstanding has developed between the foreign investors and the Russian officials. The 'oil generals' understand foreign investment to mean foreign exchange and technology transfer. They do not understand why the government was selling off their most valuable resource to foreigners, when it took so long to build up the sector.⁴⁶ General Korzhakov, one of Yeltsin's closest advisors, lectured Prime Minister Chernomyrdin that it was not in Russia's interests to accept large foreign loans.⁴⁷

Along with a clinging to the old system, 40 years of the Soviet presence has left a mutual distrust between the ex-Soviets and foreigners. This distrust is exacerbated by ultra-nationalists such as Vladimir Zhirinovskiy and Slavophiles such as Alexander Solzhenitsyn, who preach distrust of the West.

Added to distrust is an inability of both sides to understand the other's business relationships. Most FSU officials have lived in a communist system all of their lives and are unfamiliar with the day-to-day dealings of capitalism. As Conoco executive Constantine Nicandros explained, "The concepts of profit, return on investment, cost efficiency-- the common vocabulary of our business world-- are not easily translated into Russian culture or practice."⁴⁸ This lack of modern business knowledge even extends to the higher levels of government. As Robert Ebel of CSIS stated, "When the [Russian] Minister of Fuels and Energy does not know the difference between gross revenue and net profits, then the difficulties of doing business in Russia become more understandable."⁴⁹ However, the ignorance of business practices is not limited to the Russian side of the partnership. During the Soviet period since the command system often failed the local managers, many personal business relationships evolved in the quest for inputs for the industries. Nicandros admitted, "As foreign investors, we have often failed to appreciate the personal dimensions involved in Russian business relationships."⁵⁰

Thus the Soviet legacy has also left behind a cultural barrier to investment, consisting of mutual distrust and a lack of understanding of foreign business practices.

Political Barriers

A second set of results of the Soviet legacy comes under the heading of politics. The chaotic politics in the FSU are most exemplified by Russia, which lacks a clear chain of command and a national system of taxes and regulations.

The overriding political dilemma, the ambiguous power structure, stems from the collapse of the communist command system. Foreign investors will secure an agreement by one official, only to have it revoked by another-- a situation resulting from the Soviet legacy, as some officials support reform and Western help more than others. This difference in opinion becomes crucial in contract negotiations and regulations such as export quotas, a relic from the past. Some figures do not want such rules abolished

so soon. One said, "Why abolish a system that works so well?".⁵¹ So even when a decree is issued it is sometimes revoked. When Yeltsin removed export quotas, Gen. Korzhakov wrote to Prime Minister Chernomyrdin to disagree, and the decision was postponed.⁵² Sometimes lower levels simply refuse to implement high-level decrees. Analyst Daniel Yergin explained, "Even when the Kremlin moves to make life easier for foreign oil companies, as has happened quite frequently, there is a 'clay level' below government that frustrates implementation of decisions of taxation and other regulations that could really improve matters."⁵³ And finally, it is not always clear who is implementing the decisions. A Conoco executive complained of a "lack of clear delineation of responsibility among Russian decision-makers which makes it very hard to achieve progress in negotiations."⁵⁴

The executive's statement illustrates the myriad complications affecting negotiations, the first political barrier to investment. Russia is again the best example. Many companies have had trouble, the first being the White Nights and Polar Lights joint ventures in Siberia. White Nights had to go to court when the government attempted to take away its license awarded in 1990.⁵⁵ Another foreign consortium including Conoco had already been working on developing an Arctic gas field when the actual contract was awarded by Yeltsin to another consortium.⁵⁶ PetroCanada finally abandoned a Siberian project after two years of tortuous negotiations.⁵⁷ The development of reserves on Sakhalin Island have also encountered similar barriers. The final signing of the Sakhalin development deal was supposed to happen in April 1993, but it was delayed several times because of contract negotiation problems, and it was not finalized until June 1994.⁵⁸

Negotiations meet a similar fate in Azerbaijan where foreign companies are vying to develop the giant Azeri, Chirag, and Guneshli fields. A foreign consortium had secured a deal for all three fields, but the government was overthrown in a coup d'etat in June 1993 and all deals were revoked. A new contract was agreed on in October 1993, but it only included the Azeri and Chirag fields, not the Guneshli field.⁵⁹ In addition, this deal was not finalized until early 1995.⁶⁰ Azeri Socar, the national oil company in

Azerbaijan that took the Guneshli field out of the deal, had told British Petroleum that it would have the first chance for development on the field if was later opened it up. However, when Azerbaijan did open Guneshli the Russian company Lukoil was contacted first.⁶¹ In another case negotiations were broken after a \$75-million bonus was paid.⁶²

Kazakhstan is reputed to be an easier place to do business for Western firms, but it has also created its share of trouble for the foreign companies. Chevron began very early on to develop the huge Tengiz field in Kazakhstan, but the deal took three years to negotiate.⁶³ The contract was agreed to in May 1992 but was delayed twice until April 1993.⁶⁴ After negotiations were concluded, Chevron had to pay half the development costs that had already accrued and give Kazakhstan a bonus. However, Chevron was only to receive 20 percent of the profit.⁶⁵ The Kazakh government, like the others, has been very slow in creating a legal framework for joint ventures. In January 1995 the Kazakh parliament had still not approved such legislation from one year earlier.⁶⁶

All of these broken and delayed negotiations just serve to delay foreign investment. Much of the problem results from the overriding problems of culture and the ambiguous chain of command.

The second political barrier comes in the form of taxes and regulations imposed by the various governments, especially in Russia. The massive tax burden has been the most serious and effective in making companies scale back or rethink their investments. When Conoco began negotiating its Ardalin joint venture it appeared as if it would only have to pay six main taxes, but later over seven more were added.⁶⁷ Other companies face similar lists of taxes, from a road tax or gasoline tax to the menacing Russian export tax.⁶⁸ The effects of overtaxation are serious, possibly leading to losses by firms. For example, taxes can double the price of crude oil from producer to refiner, in turn making it too costly for firms and reducing investment prospects.⁶⁹ A Conoco executive expressed the view of the firms:

There is no defined tax code, and multitudes of taxes are being invented by different entities which, if actually implemented, would exceed total revenues. So far, tax exemptions through decrees on a case-by-case basis have permitted some projects, including ours, to proceed. But that is not a very comfortable way to do business,

especially if and when the eventual general law differs from the decree. It is vital that investors be assured that taxes will not be confiscatory and will be at levels that permit reinvestment in new projects, coupled with appropriate returns on investment.⁷⁰

The most debated issues have been the value-added tax and the export tax. In May 1994, Russia threatened to impose a 23- percent value-added tax on all foreign loans to the oil sector.⁷¹ The plans were cancelled in August 1994 but are still debated.⁷² The most serious and hotly contested issue is the export tax. Phibro, a subsidiary of Salomon Inc. that began Russian oil development in 1991, has been the most victimized. The export tax was non-existent when Phibro began its White Nights venture, but around December 1991 they were assessed a \$5 export tax per barrel. One of the partners, Anglo-Suisse, was forced to cut back investments.⁷³ "The tax has added about 55 percent to the cost of producing crude oil in Western Siberia and has almost wiped out profit margins," complained Phibro director Mr. Labbe.⁷⁴ In July 1992 the Russian government had exempted all firms in business before January 1992, but by December 1993 the committee set up to give the case-by-case exemptions had not yet granted any. Phibro complained it would soon go bankrupt.⁷⁵ In February 1994 the project was forced to halt exports⁷⁶, but it was eventually granted an exemption.

The tax affects all projects. The legal process, even when exemptions are given, is extremely slow. In December 1993 Yeltsin had finally issued a decree exempting all foreign joint ventures from the export tax. Companies would have to pay the tax first and get their money back at a later date.⁷⁷ This ambiguous structure led to the continuation of this process even into July 1994. Then Prime Minister Chernomyrdin in July 1994 finally approved the legal process for a special commission to give case-by-case exemptions, but it took months for the commission to be set up,⁷⁸ and firms are still struggling with the tax.

Regulations also continue to be a menace, the most notorious being export licensing and export quotas, by which the government restricts how much oil from foreign joint ventures may flow through the pipeline. This practice stems from the late Soviet period, when the government first allowed direct

exports and many companies simply avoided the tax and licensing laws. Now the Russian government is trying to crack down and restrict exports or licenses to gain better control of the oil trade. Therefore it established the export quotas in early 1992.⁷⁹ The problem is that it is a lengthy and costly process for companies to obtain licenses and decrease exports. In the summer of 1993, the Russian government required foreign joint ventures to produce documentation for licenses, and exports were barred until the documents were shown and approved. The process took several months for some firms⁸⁰ Another vexing regulation forced exporters to exchange half of their hard-currency profit for near-worthless rubles.⁸¹

How do these barriers of negotiations and taxes relate to the Soviet legacy? They are a direct result of the collapse of the clear chain of command. In Soviet times power and influence were played out by rank, but now the lines are not so clear. For example, Yeltsin originally planned to abolish export quotas, but the Ministry of Foreign Economic Relations decided it might want to recentralize oil so that companies must first sell to the government, which then sells the oil on the world market. Chernomyrdin also pushed for this idea because he was the former head of Gazprom, the state natural-gas company which still operates in such a manner.⁸² When the loose power structure combines with xenophobia the result is even worse. Local officials who are no longer under the tight rein of the central government now feel free to interpret loosely-worded laws, especially the export tax, according to their mood, xenophobic feelings, or bribery interests. Thus decrees are not necessarily made law and implemented. Yeltsin is far from being a Stalin or even a Gorbachev. His word is not law, even after October 1993.

A final political issue is more simple and consequential: political instability. The result of the fall of communism was that 15 new states were created, most with economies and ethnic groups scattered in various areas, not corresponding to borders. Azerbaijan best demonstrates how the instability of a regime affects the oil sector. Since the late 1980s Azerbaijan, which is Muslim, has been at war with Christian Armenia over territories in Western Azerbaijan. The two ethnic groups had been mixed there because of Soviet border manipulation policies, but now thousands are dying in the civil war. The Soviets have

also left a weak economy with not much infrastructure, technology, or skilled workers. These factors have combined in Azerbaijan to hinder oil development as the direct result of a coup d'etat. In 1992, under President Elchibey, it was decided that all three major fields would be developed together by a consortium, and negotiations were conducted to that effect.⁸³ But in June 1993 all contracts were cancelled by President Aliyev, who had taken power in a coup d'etat. The companies had already paid out \$70 million.⁸⁴ Aliyev had different views, favoring relations with Iran and Russia over Turkey, and complaining that Azerbaijan was not getting fair profits from the oil deals. These complaints became his reason for suspending negotiations with the consortium.⁸⁵ He called in Azeri oil specialists, allowing them to have a voice in the new negotiations that resumed that fall.⁸⁶ Meanwhile, the firms were afraid of political violence and many pulled out all workers and equipment aside from skeleton crews.⁸⁷ Aliyev is still in power, but this is little comfort considering he is less amenable towards the West, and himself could be subject to a coup at any time given his weak relationship with his prime minister and the great losses occurring to Armenia in the civil war.⁸⁸

Even Russia is not immune to internal instability. It is warring with Chechnya, a Moslem sub-region, which lies in a prime oil transportation route. Also other regions could get similar ideas of secession, especially those that contain enough resources such as oil that would give them a chance at self-sufficiency. Jeffrey Sachs explained,

We already see tremendous pressures in the oil and mining regions. They ask, 'Why should we be a part of Russia? We want an independent state. We want freedom from the tax system. We want to set up our own free trade area, have our own taxes and not pay taxes to the center.' The territorial integrity of Russia is at stake. It is likely to collapse if the government can't supply the minimal public goods that any state is supposed to provide.⁸⁹

The situation he described would likely fit Sakhalin Island and other Far East regions that have an ocean border, are oil-rich, and cannot get needed goods from Russia. Ultimately, political instability is taking its toll in the form of internal violence in Azerbaijan and Russia and possible separation or coups in other areas. As a result, oil firms, out of fear or broken contracts, are being forced to scale back projects or

pull out all together, thus hindering the oil development.

Geographical Barriers

Geography, the third barrier in the oil sector, has been a roadblock that must be removed in order to facilitate rapid oil development. During the Soviet period, the aim of the planners was to plant various parts of production in different republics and coordinate it all through the center. This practice meant that goods produced in an outlying republic must be shipped across other republics into Russia. Transportation routes were linked across all republics to ship resources and goods in and out, all coordinated by Moscow. In the case of oil, pipelines were used for transport, bringing oil from the oil-rich republics to the industrial hubs. The Soviet legacy now leaves 15 separate republics, most landlocked, that must rely on each other to transport their goods to market. Oil is no exception. Some states were not designed to be sole oil producers and have no ports, links to world markets, or infrastructure of their own. Unfortunately for the smaller states, Russia controls the main pipelines to world markets, and it uses this instrument to impose its will on these states, its primary aim. Even if Russia were to allow unlimited access to the pipelines, it would not be able to accommodate all the oil coming on line from the new joint ventures. Ultimately the necessity is that new pipelines must be built, which proves a problem as well.

Kazakhstan is the biggest victim of geography. Located in Central Asia, it borders on the Caspian Sea but has no through water route to bring oil from its huge land and offshore oil fields to port. Chevron's giant TengizChevroil (TCO) venture has suffered heavy losses from decreased output. In 1993 the main reason for the fall in Kazakh output was the "refusal by Russian refineries to take the contracted volumes of Kazakh crude" because of the poor, unstable financial state of the refineries.⁹⁰ But there was nowhere else for the oil to flow since most pipelines run into Russia. Production had to be decreased. In early 1994 TCO claimed it could be pumping 60,000 barrels per day (b/d), but it was only pumping

30,000 b/d because of the lack of transport.⁹¹ Until TCO can build its own pipeline it must have Russian cooperation to export— an undesirable situation to say the least. The Russians continue to claim that they restrict flows because of high readings of mercaptans in Kazakh oil, which emits a foul odor and partially corrodes pipelines. However, Chevron insists that this claim is just an excuse and that mercaptan readings are often higher in Russia.⁹² The result of the complications is that Chevron had to scale back its Tengiz plans because of a lack of pipeline.⁹³ British Gas and Agip, an Italian corporation, are having similar problems developing Kazakh gas fields at Karachagansk. The gas must travel through Russia to be exported, and Russia is therefore demanding a stake in the project.⁹⁴

Turkmenistan, although containing less oil and gas resources, is faced with the worst situation, perhaps because it is such a weak country. It has been faced with excessive gas transit fees, non-existent in Soviet times. Its gas route to export crosses neighboring states, which have taken advantage of the situation. Uzbekistan and Kazakhstan have demanded \$3 / 1000 m², and even cut flow by 40 percent when the Turkmens refused to pay the fees. Russia also increased fees but did not demand payment.⁹⁵

If new pipelines must be built, what are the possibilities that this will occur? For TCO it would take two years to get financing, and then a few more years for them to be producing.⁹⁶ The main difficulty, however, is planning a route. "The list of territories the Tengiz export line may cross certainly reads like a litany of political hot spots: Chechnya, Azerbaijan, Armenia, Iran, Iraq."⁹⁷ One solution being acted on is the Caspian Pipeline Consortium (CPC). It presently consists of Russia, Kazakhstan, Oman Oil Company, and Chevron, pooling resources in partnership to build a pipeline to a port. The original route went through to the Black Sea at Novorossiysk and then on to Grozny, Chechnya. The Grozny plans, of course, had to be scrapped.⁹⁸ Oil will probably now flow through pipelines to the Black Sea and then sail on tankers to the Mediterranean. The CPC negotiations, however, are mired in controversy, as the terms are supposed to give a 25-percent stake to each of the four partners, but Chevron is being asked to provide \$300 million plus a \$900-million debt guarantee, whereas Russia and Kazakhstan are only

giving \$525 million together, and Oman Oil just \$25-50 million.⁹⁹ The negotiations are still stalled and Chevron is insisting that Oman either back down or pay their fair share.

Other states have plans of their own. Pipeline problems abound in Azerbaijan, especially after Aliyev took power. He scrapped plans to cooperate with Iran and Turkey, wanting to get closer to Russia. The Azeris have basically three options. They can join the CPC, build a pipeline through Georgia to the Black Sea, or cross Iran and Turkey to the Mediterranean. The Georgian route, though, is undesirable because of the ongoing civil war there and because of Turkish restrictions at the Bosphorus Straits.¹⁰⁰ The existing route already crosses Georgia and cannot be used. The third option, involving Iran and Turkey, will also not likely be considered because President Aliyev favors Russia, which wants the pipeline to go through its territory.¹⁰¹ Turkmenistan must also build new gas pipelines because its pipelines already cross Uzbekistan, Kazakhstan and Russia, who all control the flow and have been exercising that power. Possibilities of new routes include travel through Iran to the Persian Gulf, through Iran and Turkey to the Mediterranean, or through Azerbaijan and Georgia to the Black Sea, although the latter route is obviously extremely unstable.¹⁰²

Although Russia dominates, it is not immune to transport problems, as it is left with a lack of infrastructure from the Soviet times as well. Its pipelines cannot accommodate even Russian oil, much less other countries' flows. In June 1993 the Russians attempted to suspend foreign ventures' exports to make room for their own state companies' products, but after aggravated protest, acquiesced to the foreigners.¹⁰³ Siberia contains very little infrastructure, leaving the new ventures there forced to build roads, a pipeline, and a port to put the oil on tankers.¹⁰⁴ Even existing ports are inadequate. Russia desperately needs a new oil port, especially to northern Europe, because the main pipeline, Druzhba, ends in Central Europe and the Black Sea port often poses trouble in winter.¹⁰⁵ The Far East also has vast potential for exports to the emerging markets of Asia, but it lacks infrastructure for transport to the Pacific.¹⁰⁶

Geographical conflict has also included boundary disputes since the fall of communism. As previously mentioned, the Soviets manipulated borders to create the 15 republics, with the present result for the oil market that Russia, Kazakhstan, Azerbaijan, Turkmenistan and Iran all border on the Caspian Sea, one of the most oil-rich areas of the region. Projects are going forward, even though sea boundaries have not yet been negotiated, a contentious point among the major players. Russia, which will not cease trying to continue to be the hegemonic power, has asserted its domination over boundaries and in the pipeline battle. "To any historian it was naive in the extreme to think that Russia would concede sovereignty over oil and gas resources just because it ran out of money in the early 1990s."¹⁰⁷ One way Moscow has pursued this is through the pipeline battle, such as trying to force Azerbaijan and others to route pipelines only through Russia. "Russian companies possess a technical stranglehold over new projects in all of these countries, because of their historical control of the pipeline system. . ."¹⁰⁸ Another tactic is to acquire a direct share of other states' resources. The Russians' tool of choice is often Lukoil, the most successful oil company in Russia since the USSR's demise. Although Lukoil is supposed to be privatized, the Russian government has a controlling share of Lukoil and other new companies, and government members even vote as a bloc.¹⁰⁹ In this manner they get a stake in projects in neighboring states. For example, through Russian pressure on Azerbaijan, Lukoil was offered a stake in the Guneshli project, thus giving Russia partial, indirect control in Azerbaijani oil development.¹¹⁰ A third vehicle for domination is using their pipeline control, while setting up barriers regarding the boundaries of the Caspian Sea. The Russians are angry that offshore projects are beginning in the Caspian before borders are determined, without any Russian consultation. In April 1993 they claimed veto power over all Caspian development,¹¹¹ and then in September 1994, after the Azeri government had finally signed a deal for their three huge fields, the Moscow government refused to recognize the deal because of the unsettled borders.¹¹² One might think it would be easy to ignore Russian complaints, until it is remembered that Russia has pipeline control over the countries, especially Kazakhstan, and similar influence regarding

other sectors. Robin Matthews, an oil consultant, explained, "Russia won't be left out of the big oil and gas developments. . . It feels it has an historical claim to the big Kazakh fields discovered during the Soviet era."¹¹³

Oil development in the FSU is therefore also delayed by the barrier of geography, which is not easily surmountable by the weaker states. Russia, with its power, influence, and most importantly, control of the major pipelines to Europe and large ports, is in a position to take advantage of or control its more unfortunate neighbors. This is exactly the position it wants to be in. Unless Russia suddenly becomes more cooperative, the new states and foreign joint ventures will be forced to build their own pipelines, while avoiding routes through such political hotspots as Georgia, Azerbaijan and Chechnya. It will be a lengthy and expensive, but not impossible, process.

Conclusion to and Analysis of the Soviet Legacy

The above section presents a dismal picture indeed, showing how the Soviets have left a legacy of chaos. The technological record leads to a conclusion that foreign investment is necessary to the success of rapid development of the oil sector. However, overlying problems of xenophobia, distrust, and a reliance on the old ways of governance, have combined with political and geographical barriers to create a difficult investment scenario for foreign firms. The process in Russia is riddled with excessive regulations and taxes, old communist bureaucrats, and an ambiguous governmental structure. Kazakhstan has a more clear and stable government, but has no way to get oil to market without Russian cooperation or a few years spent building a pipeline. Azerbaijan is in the midst of a civil war, and Turkmenistan is being dictated to by neighboring countries.

What will be the short-term and long-term impact of these obstacles? This question appears to be a difference of opinion among analysts. The factual consequence has been the drop in oil production in the Former Soviet Union. Analysts who concentrate on that fact insist that the oil market in the FSU will

take years to develop. Others point to the fact that, despite falling production, exports are actually rising. Given that, it would seem that the barriers are suppressing the oil sector into slow growth instead of letting it take off.

SOLUTIONS

Although the Soviet legacy has proven to be a formidable barrier, the next section will show that governments and firms are finding ways of working around it or even destroying it. The most promising fact is that oil firms have not lost interest. In a period of rising demand and dwindling reserves, the prospect of proven reserves in the FSU is too exciting to ignore. Western support has also been strong, providing technical support and giant loans. On the supply side, world demand has been rapidly rising, partially due to expansion in Asia. Corresponding to that is rising exports from the FSU. Rising natural gas exports coming out of Russia and Turkmenistan will also affect prices as natural gas replaces oil, especially in Europe. All of these factors combine to overcome the Soviet legacy and initiate a downward trend in oil prices due to oversupply.

It may seem baffling, given the bleak record of FSU oil development, why the foreign oil firms have not given up. However, despite failure after failure, oil executives are still quoted in major journals and newspapers exhibiting their support for continued investment. They have positive responses for almost every barrier to expansion presented in the last section. The simple reason is that international oil firms need reserves. Oil firms for years have been drilling around the world looking for a "mega-field", but now many firms are changing strategies to explore in places containing proven reserves.¹¹⁴ "In the 1980's they spent a hell of a lot of money and a hell of a lot of time looking in funny places," said Bill Cline, an oil economist for Gaffney, Cline & Associates in London. "It didn't work out. Now we are seeing a refocusing to areas where we know there is oil."¹¹⁵ What makes the FSU so attractive is that it already has huge fields like Tengiz, the Azeri fields, and Siberia that are largely untapped because the USSR produced mainly for communist consumption. These prospects are worth the high risk. Mobil was very cautious in signing a preliminary agreement with Kazakhstan for Caspian development, but the prospect of large reserves was too much to ignore. John Hilton, an oil analyst for Argus Research said, "It's absolutely a good move, but it has some very high risks. What companies not seeking opportunities in

the Russian republics risk is that competitors could come up with large reserve additions."¹¹⁶

The tortuously slow negotiations prove a bane to many, but although a few firms have walked out, most choose to continue. A Western oil executive in Azerbaijan, perhaps the worst place to negotiate given the recent coup, was still positive:

I would like to conclude these agreements this century. Sometimes I wonder why we are here. Then I remember the Caspian, it is more than a gold mine. So we will wait as long as we have to. Believe me, it will be worth the wait.¹¹⁷

In Russia where the chaotic power structure frustrates many firms trying to conduct negotiations, they are still interested. Even after an Arctic gas project was taken away from foreigners who had been working on it and awarded to Russians, a Conoco spokesperson said, "[it] certainly won't mean we'll stop being interested in Russian oil development."¹¹⁸ "Thus despite the political uncertainty of drilling in Russia, the pressure to replace dwindling reserves has pushed many to take the plunge."¹¹⁹ This statement is true even in the face of the menacing export tax. Although White Nights struggled with a \$5 per barrel export tax, "this and other surprise decrees from Moscow haven't jaded [the director's] enthusiasm for doing business there."¹²⁰ But what of the complicated pipeline battles in the region which were previously stated to be the main barrier to the oil sector expansion? Even if solutions such as the CPC do not prove to be helpful, oil companies agree that the oil they could get from the Caspian and other regions would be well worth the cost of a new pipeline.¹²¹

It is obvious therefore that firms need new reserves enough to brave the risk involved in FSU oil investment. However, some firms are more cautious and choose to alter their plans. In response to 'failures' like White Nights, some companies are beginning with smaller-scale projects, with the idea of making large-scale investments in the future.¹²² Such continued optimism, even if on a smaller scale, means that as more projects come on line FSU exports will increase.

Western support has also been positive and steady, primarily in the form of loans, some general and some conditional. The biggest lender, the World Bank, approved its "largest project loan ever— a 610-

million credit to help Russia rebuild its oil industry."¹²³ Europe has been strong in its assistance. Up to June 1994 the European Bank of Reconstruction and Development (EBRD) had approved six large loans worth \$300 million.¹²⁴ Also in 1991, several European countries met to create the European Energy Charter as a response to the FSU's need for markets and West Europe's need for energy. Several provisions included technology transfer. Conspicuously, the agreement did not involve OPEC.¹²⁵ The European Union (EU) has set up several programs of support. One, called Thermie, is an energy technology transfer program to non-EU states that includes the creation of energy centers in the EU and Russia. Another project, named Tacis, also encourages technical cooperation between the EU and the FSU / Eastern Europe. The Corfu Agreement of June 1994 between Russia and the EU improves cooperation between the two regions by liberalizing trade.¹²⁶

The United States has both unilaterally and multilaterally promoted transfer efforts, both financial and technological. The Clinton administration's Energy Department has made modernization of the Russian oil industry a top priority since its installment. This agenda is echoed in a speech by Energy Secretary Hazel O'Leary:

Russian economic performance is declining, which threatens its transition to democracy, and less oil on world markets increases the chances for a tightening in the market place once the pace of world economic growth increases . . . These developments would have adverse impacts on our national security and our economy.¹²⁷

It seems clear that Western officials realize the importance of FSU stability to the world order, and that oil sector development would help facilitate that stability. In this case the United States has backed up its words with actions. In February 1994 the U.S. tripled its foreign aid to Kazakhstan.¹²⁸ The Overseas Private Investment Corporation (OPIC), a federal agency, has provided loan guarantees and insurance against political risk for FSU ventures.¹²⁹ Their protection has been against expropriation (unlawful government action), political violence (physical destruction), and inconvertibility (inability to convert currency).¹³⁰ Occasionally OPIC and other banks will give a loan package together. The Polar Lights venture (Conoco) received such a package in 1993 from the EBRD, OPIC, the International Finance

Corporation, and the World Bank.¹³¹

Technology transfer is common as well. Shell Oil Corporation is working to transfer technology with the Commonwealth consultative group, consisting of 150 Western and CIS managers, scientists, economists, and other experts.¹³² Other foreign companies are helping Russia repair broken oil wells. As early as 1992, 22 contracts were signed to repair 3,053 wells.¹³³ The Japanese Export-Import Bank lent money to Lukoil to purchase new equipment to fix old wells and build new ones.¹³⁴

The impact on OPEC of heavy Western backing from both firms and governments is twofold. First, the increased support spurs the development of the FSU oil sector, raising export totals and lowering world prices. Second, the support for non-OPEC countries draws investment funds away from OPEC, which badly needs funds itself. Most OPEC countries are in debt from the long period of low oil prices.¹³⁵ The Western countries' support is likely self-motivated. They seek to avoid oil crises as in the 1970s, and are afraid that rising demand will lead to a similar tightening of the market, giving OPEC domination again. A flood of oil from the FSU would combat that effect. Also, more oil exports from the FSU would bring more stability to the region. But perhaps above all, cheap oil is always beneficial to the West.

Another positive aspect is that Kazakhstan has become a relatively safe place for foreign oil firms to do business, notably because of the absence of one of the main barriers, a chaotic power structure. First of all, it has huge fields with proven reserves. It will be relatively easy for Tengiz to come on line, and in late 1993 a seven-company consortium of major firms (Italy's Agip, Mobil, Shell, British Gas, France's Total, British Petroleum, and Norway's Statoil) won a contract for a seismic study of the Kazakh region of the Caspian that will take about three years to complete.¹³⁶ Second, Kazakhstan's power structure is much more organized, thus allowing firms to bypass tortuous negotiations and broken agreements in Russia. James McTiernan of Chase Manhattan commented, "Kazakhstan has a much clearer command structure than Russia."¹³⁷ There is more of a sense of rank, and a clear flow of power.

A JP Morgan delegation to the state found: "The power structure in Kazakhstan is far more centralized and streamlined than in Russia. It is clear whom people should negotiate with— you don't have the regional / federal power conflict which is so disruptive in Russia. Corruption is a problem, but it is not all-pervasive, as it seems to be in Russia."¹³⁸ Kazakhs are also more receptive to foreign investment, one possible reason being that while Russians are extremely suspicious of Westerners entering and "taking over", Kazakhs are used to having foreigners (Russians) in their country exploiting their land and resources. President Nazarbaev especially has great international respect and is receptive to foreign investment.¹³⁹ An Agip executive commented: "doing business in Kazakhstan is much easier than in Russia because it's so much clearer what the president wants."¹⁴⁰

However, recent negotiations have become a little more unstable as Kazakhstan has become more assertive. But despite the Kazakhs' attempts for increased control, most oil companies believe that, despite changing legislation and threats of contract renegotiation, the Kazakh government will abide by its original contracts, unlike in Russia. Elf Aquitaine (France) was positive, saying the Kazakhs had always done so in the past.¹⁴¹ Ibrahim Cahir, a Turkish economist who serves as advisor to President Nazarbayev, displayed honesty in his statements to the press:

I do not think contracts will be renegotiated. I'm pretty sure about that. But it may well be that future deals with foreign companies will not be quite so attractive, because they will have to fit in with the new laws as they are passed. But I can assure you that the president and the government do understand the concept of profit and they accept that foreign companies are not going to invest in Kazakhstan unless the incentives are there.¹⁴²

Such frank statements are what makes Kazakhstan so attractive. The Kazakh factor will make short-term development much more feasible than in Russia. If exports do increase rapidly, prices will decrease.

Natural gas is a factor often left out of discussions about the FSU's long-term affect on prices, but it is one of the greatest factors affecting oil prices and OPEC. The reason is indirect but clear. Natural gas is already fast becoming the fuel of choice in Europe. Greater investment in the Russian gas sector could provide more and cheaper gas and encourage the trend, thus reducing oil demand and prices.

Russia has been supplying Europe with gas for years. "Countries in central and eastern Europe have so far relied on only one external supplier, namely Russia."¹⁴³ Among potential exporters to Europe, Russia is first in reserves with 48,461 billion cm, with Algeria, Nigeria, and Norway following.¹⁴⁴ BP estimates that Russia's reserves comprise about 40 percent of the world's total reserves.¹⁴⁵ Russia "already produces more energy just in the form of natural gas than Saudi Arabia and the United Arab Emirates do together in the form of oil. . ."¹⁴⁶ Turkmenistan also has a huge gas sector, about one-fifth of Russia's with 10 trillion cm of reserves.¹⁴⁷

In Europe, natural gas is used more for power than is oil¹⁴⁸, and demand is rapidly rising. Gas already accounts for about 20 percent of European energy consumption.¹⁴⁹ However, European demand has risen three percent per year since the mid-70s, and it grew 6.2 percent in 1993.¹⁵⁰ The EBRD estimated that gas use could double in Western Europe in the next 20 years.¹⁵¹ Even OPEC Secretary-General Subroto admitted that "gas will [continue to] replace oil, especially in Europe."¹⁵²

Since the fall of the USSR, gas development has been proceeding at a rapid pace. In Russia the industry still is run by the state company, Gazprom, although it announced in January that nine percent of its shares would be sold to outside investors.¹⁵³ Gazprom has begun a rapid expansion and in March 1994 began a huge deal for a 1.615 billion loan for buying equipment, repairing pipelines, and new development.¹⁵⁴ One necessity still lacking is a new pipeline, since most pipelines currently end in eastern or central Europe. Gazprom has already begun the Yamal pipeline to flow directly to Western Europe. The route also has an added bonus of not crossing Ukraine, which has posed a problem of gas theft in the past.¹⁵⁵ Recent investment has been used for new pipelines, but the old ones also need about \$10 billion in maintenance funding. Tragaz, another Russian company, is part of a \$1.9 billion plan to refurbish pipelines.¹⁵⁶ Turkmenistan is also expanding export routes with an agreement last fall with Iran to build a pipeline from the Caspian through Turkey to the Black Sea. However, it will require eight years to complete.¹⁵⁷

The most important aspect of the gas market expansion perhaps is that it will be short-term. Gazprom wants to increase exports to Western Europe by 25 percent in just five years. Russian gas now comprises 25 percent of Western European consumption, and after Gazprom expansion, would comprise half.¹⁵⁸ This possibility would lead to an increase in gas production that would cause not only a decrease in gas prices from increased supply, but also a decrease in oil prices from decreased demand since oil is a substitute good. "The international energy industry could be weakened by the ripple effect of downward pressure on prices."¹⁵⁹

CONCLUSION

The Former Soviet Union contains largely untapped reserves that are proven, comparable to those in many Middle East countries. Unfortunately the Soviet legacy includes chaotic political and geographic barriers. However, for companies that have been drilling for years in other unstable areas and are seeking proven reserves, the prospect of such reserves in the FSU is too much to pass up. The impact of the many barriers is therefore short-term inconvenience and delay. Reserves will be more expensive to develop if pipelines and infrastructure must be built. They will also be more inconvenient to find as firms must negotiate with unstable or uncooperative governments.

Exports are still rising, however, despite the fact that production is falling. Companies and governments are finding ways to destroy or circumvent the barriers, thus in the next few years exports will probably rise even further, forcing prices down. These developments are important in bringing political and financial stability to the region, and they significantly affect world oil prices.

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