CHAPTER FOUR

Who's Afraid of China's Oil Companies?

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Who's afraid of China's national oil companies? Quite a few people, if the reaction to the unsolicited offer made by China National Offshore Oil Corporation Ltd. (CNOOC Ltd.) for Unocal is any guide. The furor that erupted inside the Beltway in response to CNOOC Ltd.'s bid to break up the merger between Unocal and Chevron highlighted the anxiety that many U.S. policymakers, pundits, and oil companies harbor about the growing global footprint of China's national oil companies (NOCs). The objections raised by opponents of CNOOC Ltd.'s attempted acquisition are rooted in popular perceptions of the Chinese NOCs' international expansion. The conventional wisdom views the NOCs as arms of the Chinese government that are aggressively snapping up exploration and production assets around the world to enhance China's energy security at the expense of that of other consumers. Moreover, it contends that the state financial support that Beijing provides to China's NOCs to achieve this noncommercial objective violates the rules of the game for international mergers and acquisitions because it is not available to Western, publicly traded firms. Consequently, the Chinese government and oil companies are turning the global competition for oil into a game that major international oil companies (IOC) like Chevron cannot even compete in, let alone win.

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This chapter examines several popular perceptions about the foreign investments of China's NOCs. Contrary to conventional wisdom, China's NOCs are not merely puppets of the Chinese party-state that are expanding internationally for the sole purpose of assuaging Beijing's concerns about energy security. In addition, the NOCs are not dominating the global exploration and production market or "locking up" oil through their overseas deals and thus denying it to other consumers. State financial support, however, probably does provide China's NOCs with a competitive advantage over other oil companies and may play a larger role in the wake of the financial crisis. Separating myth from reality in the discourse on the foreign investments of China's NOCs is important in order understand whether and to what extent their international mergers and acquisitions impact U.S. interests.

"China's NOCs Are Arms of State Policy."

Not exactly. Conventional wisdom holds that China's NOCs are merely puppets of the Chinese party-state, executing the directives of their political masters in Beijing. As with most conventional wisdom, there is an element of truth in this view. To be sure, the Chinese party-state has several levers of control over the NOCs. However, China's oil majors—with their subsidiaries listed on foreign stock exchanges, global business portfolios, and vast profits earned from the high oil prices of recent years—are powerful and relatively autonomous actors with their own domestic and international interests that do not always coincide with those of the party-state.[1]

China's three major NOCs, China National Petroleum Corporation (CNPC), China Petroleum and Chemical Corporation (Sinopec), and China National Offshore Oil Corporation (CNOOC), grew out of government ministries. CNPC, formed in 1988 from the upstream (exploration and production) assets of the Ministry of Petroleum Industry (MPI), is the biggest oil producer in China and the fifth largest in the world.[2] Sinopec, established in 1983 from the downstream (refining and marketing) assets of MPI and the Ministry of Chemical Industry, has the largest refining capacity in China and the third largest in the world.[3] CNOOC, formed in 1982 as a corporation under the MPI and modeled after Western oil companies, was established to form joint ventures with foreign firms to operate in China's territorial waters and is primarily an upstream company that dominates China's offshore. CNPC and Sinopec are both ministry-level companies, a bureaucratic rank that they fought hard to

TABLE 4-1. Internationally Listed Subsidiaries of China's National Oil Companies

Listed company	*Parent company*	*Percent owned by parent*
PetroChina	CNPC	86.29
Sinopec Corp.	Sinopec	75.84
CNOOC Ltd.	CNOOC	66.41

Sources: PetroChina, Form 20-F for the fiscal year ended December 31, 2007, filed with the U.S. Securities and Exchange Commission, p. 80 (www.petrochina.com.cn/resource/EngPdf/annual/20-f_2007.pdf); Sinopec Corp., Form 20-F for the fiscal year ended December 31, 2007, filed with the U.S. Securities and Exchange Commission, p. 59 (http://english.sinopec.com/download_center/reports/2007/20080606/download/Form20F2007.pdf); and CNOOC Ltd., Form 20-F for the fiscal year ended December 31, 2007, filed with the U.S. Securities and Exchange Commission, p. 91 (www.cnoocltd.com/encnoocltd/tzzgx/dqbd/f20f/images/200941157.pdf).

retain during their creation to maintain a privileged position when dealing with the state.[4] CNOOC has the lower status of a general bureau. The current general managers of all three companies—Fu Chengyu (CNOOC), Jiang Jiemin (CNPC) and Su Shulin (Sinopec)—all hold the rank of vice minister. Jiang and Su are also alternate members of the Seventeenth Chinese Communist Party Central Committee, which consists of the 371 most politically powerful individuals in China.

Each of the three companies has a subsidiary listed on the Hong Kong and New York stock exchanges. The parent companies are the majority shareholders of the listed companies (See table 4-1). Other shareholders include individual and institutional investors.

Ownership does not always equal control, and that is true for the party-state. The State Asset Supervision and Administration Commission (SASAC) is the government body with formal authority over China's largest state-owned enterprises (SOEs), including the NOCs. Although SASAC has been relatively passive—it did not collect dividends from its firms until late 2007 and it does not appoint their top leaders (although it does choose high-level managers)—SASAC has begun to exert greater influence over SOEs in recent years by linking managers' salaries to their companies' financial performance.[5] Nonetheless, the party-state primarily controls the NOCs through other sources of influence in the party and the government.

The primary instrument of power that the party-state exercises over China's NOCs is the power to appoint, dismiss, and promote the companies' general managers. The ultimate authority over the top positions in the NOCs rests with the Chinese Communist Party's Organization Department, whose decisions are ratified by the Politburo Standing Committee. This authority extends, indirectly, to the NOCs' internationally listed subsidiaries because an individual appointed general manager of a parent company usually concurrently serves as the chairperson of the board of its listed subsidiary. Consequently, NOC managers must balance corporate and party-state interests, especially if they want to advance their political careers. Executives who demonstrate managerial prowess while not running afoul of the Chinese Communist Party can often use their tenure in the oil patch as a springboard to national leadership.[6]

The party-state also controls the NOCs through its investment approval system. Domestic investments in oil and natural gas fields, pipelines, refineries, oil storage facilities, and liquefied natural gas terminals require government approval. Foreign energy investments in excess of $30 million need to be signed off on by the National Development and Reform Commission (NDRC), and those in excess of $200 million have to be reviewed by the NDRC and then submitted to the State Council for approval.[7]

An additional source of leverage is the provision of cheap credit. In recent years, China's NOCs generally did not require government funds because of their strong cash flows. Nonetheless, low-cost loans from state-owned banks, such as the China Export Import Bank (China Eximbank) and the China Development Bank, can function as carrots and sticks that the party-state can wield over the NOCs.

Influence, however, is a two-way street between the party-state and the NOCs. Indeed, Chinese officials, academics, and journalists have come to view the oil majors as a "monopolistic interest group" that prioritizes profits over social welfare.[8] The Chinese media have criticized China's NOCs for creating artificial oil shortages to pressure the government to increase prices at the pump (discussed below), with one report noting that many people feel that the NOCs are robbing Chinese citizens and the country to bolster their bottom lines.[9] The power and autonomy of China's NOCs is due to a number of factors, including their relative strength vis-à-vis the central government's energy bureaucracy, large profits earned during the recent oil boom, and internationally listed subsidiaries.

The liberalization and decentralization of China's energy sector since the early 1980s, which are part of the broader transition from a centrally planned to a market economy, have shifted power and resources away from the central government toward the state-owned energy companies, notably the NOCs.[10] Multiple bureaucratic restructurings have fragmented

Beijing's authority over the energy sector among many government agencies, some of which are understaffed, underfunded, and politically weaker than the state-owned energy companies. China does not have a single government agency, such as a ministry of energy, with the clout to coordinate the often conflicting interests of the multiple stakeholders.[11] In addition, the transformation of China's energy ministries into corporations resulted in a large transfer of personnel and industry expertise from the government to the companies. Some Chinese analysts describe China's energy sector as one of "strong firms and weak government," with "strong" and "weak" referring to capacity, not authority.[12]

The enormous profits earned by China's NOCs in recent years due to higher oil prices are also a source of clout with the party-state. In 2007, CNPC and Sinopec were the two largest state-owned enterprises by revenue, and the earnings of CNPC alone offset the losses of all loss-making state-owned enterprises.[13] Moreover, among SOEs under the central government in 2007, CNPC, Sinopec, and CNOOC accounted for 24.1 percent of total sales revenue, 23.5 percent of profits, and 40 percent of taxes collected.[14] Although it is difficult to determine how and to what extent profits translate into government influence, some Chinese commentators contend that the companies' contributions to government coffers have bolstered their ability to shape government decisions.[15]

In addition, when CNPC, Sinopec, and CNOOC listed subsidiaries on the New York and Hong Kong stock exchanges in 2000–01, the companies exposed themselves to the influence of actors other than the party-state. These actors include not only the stock exchanges themselves, but also entities such as the U.S. Securities and Exchange Commission, international auditing and engineering firms, independent shareholders, and members of the companies' boards of directors. The independent shareholders of CNOOC Ltd., for example, have compelled the company to take actions counter to its interests and those of its parent company.[16]

China's NOCs sometimes advance corporate interests at the expense of national ones. For example, CNPC and Sinopec have periodically reduced crude runs at their refineries to pressure the government to raise the state-set prices for refined products, which lagged behind the higher crude oil prices of recent years. Their cutbacks created diesel and gasoline shortages in China and prompted the government to raise refined product prices.[17] Similarly, the opposition of China's NOCs is widely cited by Chinese energy experts as one of the main reasons that the Chinese government has not created a ministry of energy, a hot topic of debate in recent years.

The NOCs are reluctant to have another political manager and fear that it would limit their access to China's top leadership.[18] Moreover, the NOCs' acquisition of upstream assets abroad creates diplomatic challenges for Beijing. For example, the pursuit of investment opportunities in Iran by China's oil majors runs counter to the Ministry of Foreign Affairs's objective of curbing Iran's nuclear ambitions. Although the ministry has no direct authority over the NOCs, it has nonetheless pressured them to retreat from Iran, where Sinopec has signed a buyback agreement for the development of the Yadavaran oil field and China's NOCs are negotiating investments in liquefied natural gas (LNG) projects.[19]

"The Energy Security Concerns of the Chinese Government Are Driving the Foreign Investments of China's NOCs."

Yes, but there are also compelling commercial factors fueling the companies' global search for oil. The international expansion of China's NOCs is often portrayed as a misguided attempt by the Chinese government to enhance China's energy security through the acquisition of exploration and production assets abroad. In that view, Chinese leaders are acutely aware that a stable supply of oil is critical to the continued expansion of China's economy, which in turn is necessary for them to remain in power. China's leaders, who believe that oil is "too important to be left to the market" and prefer to "own oil at the wellhead," have dispatched China's NOCs on a global hydrocarbon shopping spree to help satisfy the country's burgeoning demand for oil. To be sure, China's NOCs have a government mandate to supply Chinese consumers with oil and natural gas. However, the tendency of some international observers to portray the foreign investments of China's NOCs as a political project conceived within the walls of Zhongnanhai, the Chinese leadership's compound in Beijing, obscures the market incentives driving the global expansion of China's NOCs.

Reserve Replacement and Diversification

China's NOCs appear to be purchasing exploration and production assets abroad first and foremost to grow and diversify their reserves of oil and natural gas. Like all other oil companies, China's NOCs need to continuously acquire new reserves to replace what they deplete. The opportunities are limited for China's oil companies to substantially grow their reserves, which account for only 1.3 percent of the world's proved oil reserves and 1.1 percent of the world's proved natural gas reserves. Although China's proved reserves of natural gas more than doubled, from 0.89 to 1.88 trillion cubic meters, between 1987 and 2007, China's proved oil reserves declined from 17.4 billion to 15.5 billion barrels over the same period.[20] As a result, overseas assets are important sources of growth in reserves and production for China's NOCs. Indeed, PetroChina's chief financial officer, when discussing his company's first overseas acquisition, noted that "we can hardly expect big production increases at home. Overseas production will become the new driving force in the future."[21]

China's NOCs are also expanding internationally to diversify their reserve portfolios. Like the major IOCs, China's NOCs recognize that it is not smart to put all of their eggs in one single basket. Unlike those of the major IOCs, however, the reserves of China's NOCs are highly concentrated in one country, China. Consequently, China's oil companies are seeking to disperse operational risks by expanding the number of countries in which they have production assets.[22]

Profits

The upstream sector is historically the most profitable part of the oil business. Like the IOCs, China's oil companies seek income from exploration and production assets. Unlike the IOCs, China's NOCs have also sought to raise profits through the expansion of their overseas upstream portfolios to offset losses suffered in their domestic upstream and downstream operations as a result of price controls for crude oil, which were abolished in 1993, and for refined products, which are still in place.

A key driver of CNPC's initial forays abroad in the early 1990s was to recoup some of the money that it was losing through its domestic upstream operations.[23] CNPC had been incurring large losses since its creation in 1988 because the cost of producing a barrel of oil in China was higher than the state-set price for crude oil, at which the company was required to sell the majority of its production. The company hoped to bolster its bottom line by producing oil abroad and selling it on the international market.[24]

In recent years, CNPC and Sinopec have sought to grow their international exploration and production portfolios to help mitigate the heavy losses incurred in their refining operations because state-controlled prices for refined products have prevented the companies from passing on rising crude oil costs to their customers. Between 2001 and 2007, the average annual price of crude oil increased from $26 to $72 per barrel, and China's oil imports grew from 1.6 million to 4.2 million barrels per day.[25] Forced to sell diesel and gasoline below cost, CNPC and Sinopec began to hemorrhage money. Sinopec, which is China's largest refiner and depends on imports for about three-quarters of its crude, suffered the most. The company's billions of dollars in refining losses since 2005—including $8.8 billion in the first half of 2008 alone—have not been completely offset by government subsidies and value-added tax rebates on crude oil imports.[26] Sinopec has sought to partly counter its poor downstream margins through expanded exploration and production at home and abroad.[27]

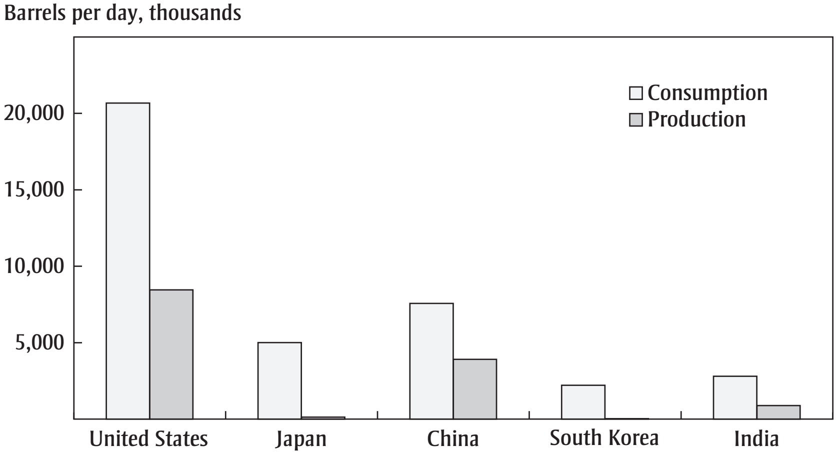
International Competitiveness

China's NOCs are searching for exploration and development opportunities abroad to transform themselves into world-class energy companies. Their executives recognize that if they want to be internationally competitive, then they must compete internationally. Former CNOOC general manager Wei Liucheng employed a soccer analogy to make that point, arguing that China's oil companies "can't just play in the domestic league. We should also compete in the World Cup."[28]

Some of the overseas assets in which China's NOCs are invested were purchased to gain technical expertise. One objective of CNOOC Ltd.'s bid for Unocal was to gain deepwater exploration and production capacity, while its acquisition of a stake in Canada's MEG Energy was aimed at securing advanced oil sands extraction technology.[29] Similarly, Sinopec, which has the least upstream experience of China's three major NOCs, has sought to enhance its exploration and production expertise through international acquisitions.

China's NOCs are also making international investments to develop the large project management skills possessed by the major IOCs.[30] Companies like ExxonMobil have distinguished themselves by their ability to execute complex projects that involve employing cutting-edge technology, arranging huge financing packages, handling intraconsortium politics and host government relations, managing environmental impacts, and finishing on time and on budget. In contrast, China's NOCs, which are relative latecomers to the international oil business, have less experience in simultaneously managing and coordinating all the components that must come together to execute very large projects overseas. That said, CNPC has gotten its feet wet with the big integrated projects that it operates in Kazakhstan and Sudan. Similarly, Sinopec and CNOOC Ltd. have partnered with IOCs with large project management experience to develop deepwater blocks in Angola (BP-operated Block 18) and Nigeria (Total-operated Oil Mining Lease 130).

FIGURE 4-1. Oil Consumption and Production of Selected Countries, 2007



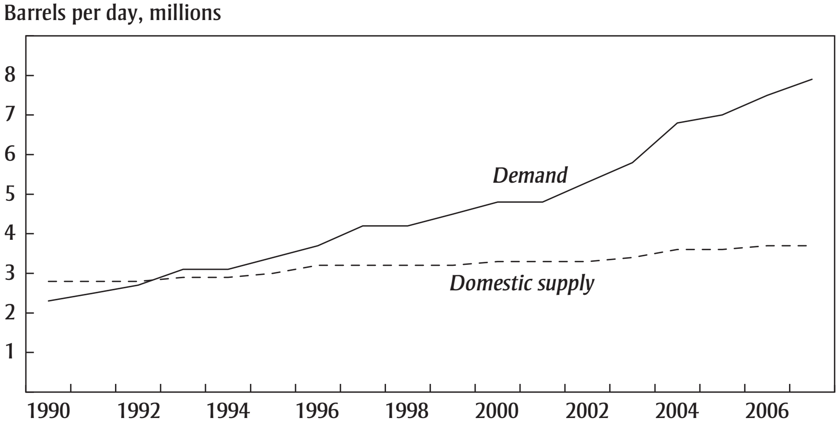
Source: U.S. Energy Information Administration, International Energy Statistics, Petroleum Production (http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=53&aid=1 [July 17, 2009]); and U.S. Energy Information Administration, International Energy Statistics, Petroleum Consumption (http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=54&aid=2 [July 17, 2009]).

Energy Security

China's NOCs are also acquiring assets abroad to help ease the Chinese leadership's concerns about oil supply security. A net oil exporter until 1993, China is now the world's third-largest oil importer, behind the United States and Japan, and the world's second-largest oil consumer, after the United States (figure 4-1). Between 1997 and 2007, China's oil demand almost doubled, from 4.2 million to 7.9 million barrels per day, and the country's oil imports more than quadrupled, from 1 million to 4.2 million barrels per day (figure 4-2).[31] The International Energy Agency projects that by 2030 China's oil demand will rise to 16.6 million barrels per day and its imports will reach 12.5 million barrels per day, making the country dependent on imports for 75 percent of total oil consumption.[32]

Chinese oil executives and senior officials have publicly stated that China's NOCs have a political mandate to enhance China's energy security through investment in foreign oil fields.[33] There is a fairly widespread perception within Beijing that oil pumped by China's NOCs abroad provides a more secure supply of oil than purchases made on the international market. This idea is rooted in skepticism of the view of Western

FIGURE 4-2. China's Oil Demand and Domestic Supply, 1990–2007



Source: *BP Statistical Review of World Energy* (London: BP, June 2008), pp. 8 and 11 (www.bp.com).

oil industry analysts, who maintain that the world market will always make oil available to the highest bidder. In the late 1990s, some Chinese energy officials (and at least one Chinese oil company executive trying to gain high-level political support for the international expansion of China's NOCs) argued that China might one day find itself in a situation in which China has money to buy oil but none is available on the international market because of war or other political turmoil.[34] In such a situation, they continued, the Chinese government could order the NOCs to send their foreign oil production back to China. Despite these concerns, it is difficult to imagine a scenario in which China has money but no oil to purchase, because the world is filled with buyers and sellers. Moreover, the NOCs are unlikely ever to pump enough oil abroad to cover China's oil import requirements because more than three-quarters of the world's oil reserves are in countries that do not permit foreign equity participation. Indeed, ExxonMobil, the world's largest "resource-seeking" oil company, pumped only 2.2 million barrels per day overseas in 2007.[35]

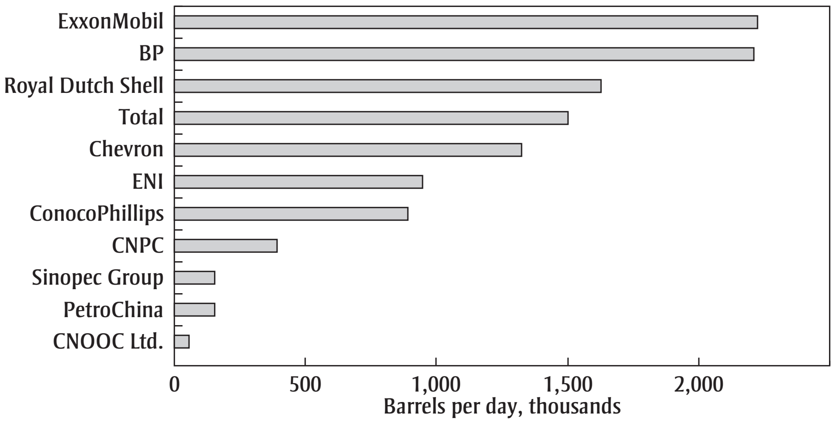
"China's NOCs Are Taking Over the World."

No. China's national oil companies are not dominating the international upstream sector. The rapid global expansion of China's NOCs has generated concerns that the Chinese firms are winning the worldwide race for exploration and production assets. Many stories in the mainstream media about the NOCs' expanding global footprint merely list the wide swath of countries in which the companies are invested, giving no information about the size and quality of their assets. Nevertheless, some readers have concluded that China's NOCs have left the IOCs in the dust. The reality, however, is quite different. To be sure, the overseas expansion of the NOCs is certainly changing the competitive landscape of the global oil industry, and some analysts expect the NOCs, especially CNPC, to become international players on a scale to rival that of the major IOCs.[36] However, reports that China's NOCs have already vanquished the competition are exaggerated.

First, China's NOCs have not been as active in global mergers and acquisitions as their international peers, according to a report by UK-based consultancy Wood Mackenzie on the emergence of Asian NOCs in the international upstream sector.[37] To be sure, the value of the acquisitions made by Asia's most expansive NOCs—CNPC, Sinopec, CNOOC Ltd., ONGC of India, and Petronas of Malaysia—grew dramatically, from less than $500 million in 2001 to more than $6 billion in 2005. However, the Asian NOCs' level of participation in international mergers and acquisitions (M&A) during that period still lagged behind that of international companies of comparable scale. The total value of the acquisitions made by the five companies studied over the five years from 2001 to 2005 was $13 billion, compared with $33 billion for BP, ConocoPhillips, ENI, Devon Energy, and Occidental. In the view of Wood Mackenzie, many of the Asian NOCs "have yet to complete deals that reflect the scale of their ambitions in the international upstream sector. This is particularly the case for CNPC, the largest of the Asian NOCs." Wood Mackenzie maintains that CNPC, whose largest foreign purchase was PetroKazakhstan, for which it paid $4.2 billion in 2005, is capable of making acquisitions in the range of $20 to $40 billion.

Moreover, the international M&A activity of China's NOCs slowed considerably in 2007 and 2008.[38] Not only was there stiff competition for assets, but China's oil majors also shied away from major acquisitions to avoid buying at the top of the oil price cycle.[39] They also had some bad luck. CNOOC Ltd., for example, made offers for Shell's assets in Nigeria and Australia but lost out to a local buyer in Nigeria (chosen by Shell to help improve its relations with the country) and to Woodside in Australia (because Woodside had preemption rights).[40]

FIGURE 4-3. International Liquids Production of Selected Oil Companies, 2007

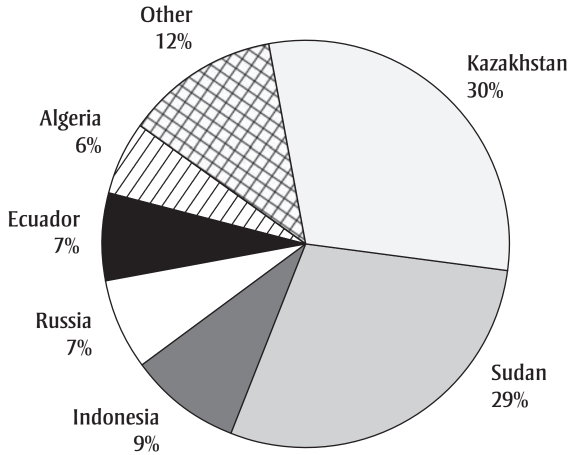


Source: ExxonMobil, *2007 Financial and Operating Review,* p. 60 (www.exxonmobil.com/corporate/files/news_pub_fo_2007.pdf); BP, *Financial and Operational Information 2003–2007,* p. 57 (www.bp.com/liveassets/bp_internet/globalbp/ STAGING/global_assets/downloads/F/FOI_2003_2007_full_book.pdf); Royal Dutch Shell, *Financial and Operational Information 2003–2007,* p. 57 (www.faoi.shell.com/2007/ explorationproduction/oilandgasproduction.php); Total, *Factbook 2000–2007,* p. 38 (www.total.com/static/en/medias/topic2346/2007_factbook_global.pdf); Chevron, *2007 Supplement to the Annual Report,* p. 42 (www.chevron.com/documents/pdf/Chevron2007Annual ReportSupplement.pdf); ENI, *Fact Book 2007,* p. 42 (www.eni.it/attachments/publications/reports/reports-2007/Fact-Book-2007-eng.pdf); ConocoPhillips, *Fact Book 2007,* p. 3 (www.conocophillips.com/NR/rdonlyres/DC7C811C-4528-4B6F-A6E8-A3D7A172F39B/0/07_Fact_Book.pdf); data provided by Wood Mackenzie to author by e-mail, December 14, 2008.

Second, China's NOCs do not produce as much oil overseas as the major IOCs. In 2007, CNPC and its domestic peers pumped a combined total of 780,000 barrels per day of liquids abroad, less than the overseas production of any of the major IOCs (figure 4-3). Although the NOCs are invested in upstream projects in more than two dozen countries, most of those assets have done little to substantially bolster their overseas output. The foreign production of China's NOCs is concentrated in just two countries, Kazakhstan and Sudan (figure 4-4).

Third, China's NOCs rarely compete head-to-head with the major IOCs. High-profile takeover battles, such as those that pitted CNPC against Texaco and Amoco for Kazakhstan's Aktyubinsk Oil Company; CNOOC Ltd. and Sinopec against the members of the consortium developing Kazakhstan's Kashagan field (ENI, ExxonMobil, Royal Dutch Shell, Total, ConocoPhillips, and Inpex) for British Gas's stake in the project;

FIGURE 4-4. Overseas Liquids Production of China's NOCs, 2007
Percent



Source: Data provided by Wood Mackenzie to author by e-mail, December 14, 2008.

and CNOOC Ltd. against Chevron for the U.S. firm Unocal have been the exception rather than the rule. Many of the assets purchased by China's NOCs are not especially attractive to the IOCs. During their early forays overseas, the NOCs had little choice but to take what they could get. New to international mergers and acquisitions and eager to secure reserves abroad, the companies largely confined themselves to small projects passed over by the IOCs, whose enormous balance sheets and high cost structures require large projects.[41] The Chinese firms, especially CNPC, accumulated an unwieldy collection of small assets that spanned the globe. While some casual observers in the international media seized on the breadth of the NOCs' portfolios as evidence that Chinese firms were winning the global competition for oil, Chinese industry analysts tended to focus on the lack of depth, bemoaning that the late arrival of China's NOCs to international exploration and production appeared to have doomed them to settling for the "leftovers" of the IOCs. An interlocutor from CNPC lamented that even acquiring the "little bones and little scraps of meat" left behind by the IOCs was difficult.[42]

Although the initial overseas ventures of China's NOCs helped them develop a taste for the substantially bigger assets on which the IOCs feast, the upstream capabilities of the Chinese firms have prevented them from

TABLE 4-2. Selected Large Merger and Acquisition Deals by China's NOCs

Company	*Date*	*Country*	*Assets*	*Price (US$ millions)*
Sinopec	Dec 08	Syria	Tanganyika Oil	2,000
CNPC	Nov 08	Iraq	al-Ahdab field[a]	2,900
Sinopec	Jun 08	Australia	AED Oil	561
Sinopec	Dec 07	Iran	Yadavaran field[b]	2,000
Sinopec	Nov 06	Russia	Udmurtneft	3,500
Sinopec	May 06	Angola	Blocks 17 and 18	2,400
CNOOC Ltd.	Jan 06	Nigeria	OML 130	2,300
CNPC	Oct 05	Kazakhstan	PetroKazakhstan	4,000
CNPC/Sinopec	Sep 05	Ecuador	Encana Ecuador	1,400
Sinopec	Mar 05	Angola	Block 18	725
CNOOC Ltd.	Jan 02	Indonesia	Repsol-YPF	585
CNPC	Mar 97	Sudan	Blocks 1, 2, and 4	750

a. Technical service agreement.
b. Buyback agreement, pending final approval from Iran.
Source: Author's database.

directly competing against the IOCs for certain projects.[43] For example, the Chinese oil companies' lack of deepwater exploration and production capacity has limited their ability to bid for some of the most attractive blocks open to foreign investment, which are in deepwater and ultra-deepwater locations in Angola, Brazil, Nigeria, and the United States. Technological constraints have also largely kept China's NOCs on the sidelines of the development of unconventional hydrocarbons and liquefied natural gas.

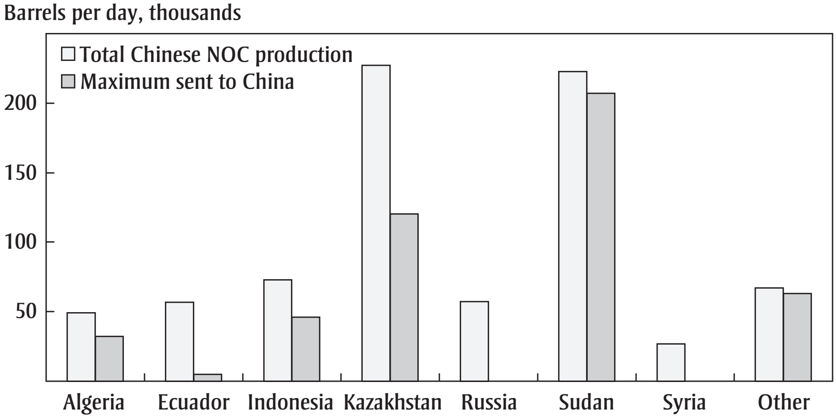
Faced with those disadvantages, the NOCs have sought to satisfy their appetite for larger assets by investing in countries and projects with elevated levels of political risk, where they face less competition from the IOCs. Many of the largest acquisitions made by China's NOCs are in places where IOCs have been unable or unwilling to tread (table 4-2). Indeed, CNPC has amassed assets worth about $7 billion in Sudan, where the north-south civil war and the violence in Darfur have kept the IOCs away.[44] CNPC and Sinopec, through their joint venture Andes Petroleum, also spent $1.4 billion to purchase EnCana's assets in Ecuador, which the Canadian firm had been trying to divest for more than a year, partly because of the increasingly difficult operating environment for foreign oil companies.[45] CNOOC Ltd.'s tolerance for risk also helped the company gain entry into the Nigerian deepwater—and the opportunity to work with Total and Petrobras—with its purchase for $2.3 billion of a 45 percent working interest in an offshore block (Oil Mining Lease 130) with a controversial and opaque ownership history.[46]

There are two reasons why China's NOCs accept higher levels of political risk than the IOCs. First, China's NOCs have less experience that the IOCs in evaluating political risk because of their substantially shorter involvement in international mergers and acquisitions. Unlike many of the IOCs, China's oil companies have yet to suffer substantial political disruption or expropriation of their overseas operations and therefore attach lower risk premiums to investments in unstable areas.[47] Second, there appears to been a perception within the Chinese oil industry and government, at least during the companies' earlier forays abroad, that Beijing would be able to protect their investments in countries with elevated levels of political risk through its relationships with host governments.[48]

However, China's NOCs are learning that they are not immune to the misfortunes that their IOC peers have suffered in unstable areas. In Ecuador, for example, CNPC and Sinopec have experienced for themselves the difficult operating environment that spurred the exodus of IOCs such as Occidental Petroleum and EnCana. In 2007, the government successfully pressured the Chinese firms to accept less favorable contract terms under the threat of a 99 percent windfall profits tax, resulting in huge losses.[49] In Sudan, where CNPC is operating in fields discovered by Chevron in the 1970s, Chinese oil workers have been kidnapped and killed like their American predecessors. The most recent murders, in October 2008, elicited a public commitment from CNPC to "fully understand the risks of overseas projects."[50]

Moreover, the difficulties that China's NOCs have encountered in Ecuador and Sudan indicate that the Chinese government may do more harm than good when it comes to mitigating political risk. As one Chinese media commentator noted, the fact that Ecuador was on the list of countries in which Beijing encouraged the NOCs to invest in 2007 indicates that the government lacks the ability to assess political risk, let alone the official diplomatic means to protect assets overseas.[51] That point is underscored by CNPC's experience in Sudan, where Beijing's friendly relations with Khartoum have put the company's employees in the crosshairs of various Darfur rebel groups.[52]

FIGURE 4-5. China's Foreign Oil Production in and Imports from Selected Countries, 2007



Sources: "Table: China Dec. Crude Oil Imports and Exports," *Reuters*, January 21, 2008; data provided by Wood Mackenzie to author by e-mail, December 14, 2008.

"China's NOCs Are Removing Oil from the World Market."

No. The argument that China's oil companies are taking oil off the world market and reducing the amount available to other consumers by selling their overseas oil production exclusively to consumers in China is wrong. Any foreign oil production that China's NOCs send to China merely replaces oil that China would have to buy from other countries. If the NOCs shipped home every one of the 779,000 barrels per day of oil that they produced abroad in 2007 (instead of the maximum of 474,000 barrels per day that they may have sent to China), then China would not have needed to purchase at least 300,000 barrels per day more from other exporters, such as Saudi Arabia and Angola, which are China's top two providers of crude oil and also large suppliers to the United Sates (figure 4-5). Moreover, the NOCs are actually expanding rather than contracting the amount of oil available to other consumers by pumping oil abroad, especially at oil fields in which other companies are unable or unwilling to invest.

In 2007 China's NOCs sold at least 40 percent of their foreign oil production, about 300,000 barrels per day, on the international market. The NOCs did not send home any of the oil that they pumped in Azerbaijan, Russia, Syria, or Tunisia.[53] Most of the oil produced by China's NOCs in Ecuador was shipped to the United States.[54] At least half of the output of the NOCs in Kazakhstan and one-third of their production in Indonesia was sold locally (figure 4-5).

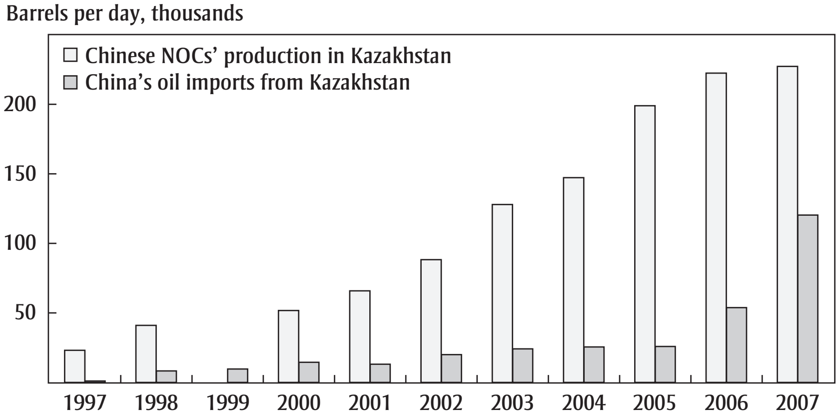
The export to China of any oil pumped by China's NOCs in Indonesia, Kazakhstan, and Sudan, which accounted for two-thirds of the foreign oil production of the NOCs in 2007, appears to be largely determined by economic factors. China is a natural market for oil from Indonesia and Sudan because of their geographical proximity. Moreover, Indonesia's Minas crude and Sudan's Nile Blend crude, which accounts for the bulk of CNPC's output in Sudan, are very similar to the light and sweet crudes produced in northeastern China and easy for China's refineries to process. Indeed, Indonesia was a large crude oil supplier to China in the 1990s, and China has been the top buyer of Sudanese crude since the country began exporting oil in 1999. (However, the sharp decline in China's oil imports from Sudan in 2006 indicates that the company is happy to sell the oil to consumers in other countries that are willing to pay a higher price than buyers in China.[55]) In addition to sending the bulk of its Nile Blend production to China, CNPC is also importing the Dar Blend crude that it began to pump in Sudan in 2006—and building a refinery to process it—because of the lack of international buyers for this high-acid, heavy-paraffin crude.[56]

In Kazakhstan, CNPC has sold most of its oil production—which is concentrated in the northwestern part of the country—on the international market because it is more profitable to export it to the West through the Caspian Pipeline Consortium or the Aytrau-Samara pipeline than to deliver it to China. Indeed, China's crude imports from Kazakhstan hovered around a mere 25,000 barrels per day until the completion of the easternmost leg of the Kazakhstan-China oil pipeline in 2006. CNPC's production in the Kumkol region, which is located near the mouth of the pipeline, may account for some of the growth in Kazakhstan's oil exports to China, which reached 121,000 barrels per day in 2007 (figure 4-6).

"State Financial Support for China's NOCs Gives Them a Competitive Advantage over the IOCs."

Probably, but it's hard to determine how much of an advantage China's NOCs gain from Beijing's largesse. The Chinese government's willingness to draw on government coffers to help China's NOCs expand internationally has

FIGURE 4-6. China's NOCs' Oil Production in and Imports from Kazakhstan, 1997–2007



Sources: Data provided by Wood Mackenzie to author by e-mail, December 14, 2008, and October 6, 2006, and in person in Beijing, September 2006. Tian Chunrong, "2001 nian Zhongguo shiyou jinchukou zhuangkaung fenxi" [An Analysis of China's Oil Imports and Exports in 2001], *Guoji shiyou jingi* [*International Petroleum Economics*] 3 (2002), p. 12; Tian Chunrong, "2007 nian Zhongguo shiyou jinchukou zhuangkaung fenxi" [An Analysis of China's Oil Imports and Exports in 2007], *Guoji shiyou jingi* [*International Petroleum Economics*] 3 (2008), p. 40.

sounded alarm bells in capital cities and oil companies around the globe. Policymakers and oil executives have raised concerns that Beijing's provision of low-cost capital to the NOCs and development assistance to host countries gives China's oil firms a leg up on the competition for exploration and production assets. To be sure, the Chinese government has given China's NOCs some financial support that is unavailable to the IOCs. However, it is difficult to assess the extent to which Beijing's deep pockets have tilted the playing field in favor of the NOCs because the Chinese firms rarely engage in direct competition with the IOCs. In addition to the dearth of case studies, the waters are further muddied by the ability of China's NOCs to self-finance most of their foreign acquisitions and the fact that the attempts of the Chinese government to use development assistance as a tool to help the NOCs build their international upstream portfolios has yielded mixed results.

The contention that state financial support gives China's oil majors the upper hand in the race for exploration and production assets is difficult to assess because for the most part, China's NOCs and the IOCs compete on different playing fields. There are few examples of acquisitions for which a Chinese NOC and a major IOC engaged in direct competition, and there are even fewer examples for which complete information about the offers made by all bidders is easily accessible. As a result, there is not enough information to make a definitive declaration about how much of an advantage the NOCs derive from state financial support in international mergers and acquisitions.

The financing package that CNOOC Ltd. assembled for its bid for Unocal—one of the rare examples of direct competition between a Chinese oil firm and an IOC for which the information needed to assess the capital costs of both firms was publicly available—lies at the heart of the contention that Chinese government subsidies give China's NOCs a competitive advantage over the IOCs. To finance its $18.4 billion bid for Unocal, CNOOC Ltd. arranged to borrow $7 billion from its parent company, CNOOC, including a $2.5 billion bridge loan with no interest and a $4.5 billion thirty-year loan with a 3.5 percent interest rate. The company also lined up a $6 billion loan from the Industrial and Commercial Bank of China. The fact that the terms of at least some of the loans were not available to any Western publicly traded company prompted Peter Robertson, then the vice chairman of Chevron, whose offer of $16.4 billion had already been accepted by Unocal at the time of CNOOC Ltd.'s bid, to cry foul: "We're not competing with this company; we're competing with the Chinese government—I think it's wrong."[57]

The Unocal case, however, is probably the exception rather than the rule when it comes to Chinese government institutions providing huge sums of cheap capital to bankroll the overseas acquisitions of China's NOCs. As Trevor Houser has noted, Unocal is far and away the largest acquisition ever attempted by a Chinese firm, and it was undertaken by the smallest of China's three major NOCs. Given that the $18.5 billion deal was half of CNOOC Ltd.'s market capitalization and more than double its annual revenue, it is hardly surprising that CNOOC Ltd. had to seek external sources of funding for its offer.[58]

CNOOC Ltd.'s offer notwithstanding, China's NOCs have not bid for assets that are large enough to require huge amounts of external capital. The largest foreign investment made by a Chinese firm, CNPC's purchase of Petrokazakhstan for $4.2 billion, is less than one-quarter of CNOOC Ltd.'s offer for Unocal. Moreover, a number of the international upstream assets recently bought by the NOCs cost $500 million to $2 billion. China's NOCs, which raked in billions of dollars in profits in recent years, were able to self-finance acquisitions in this range easily. Sinopec, for example, stated that it would use internal resources to finance its $2 billion acquisition of Tanganyika Oil in 2008, while CNOOC Ltd. self-financed its $2.3 billion purchase of a stake in Nigeria's offshore Oil Mining Lease 130 in 2006.[59]

While China's NOCs may enjoy a lower cost of capital than the IOCs, the ability of the Chinese firms to accept lower rates of return than the IOCs likely has more to do with lack of shareholder discipline. As Houser observes, firms such as ExxonMobil and Shell undertake projects that they expect will earn returns on reinvested earnings in the mid-to-high teens because they realize that if they deliver anything less, then their shareholders might take their profit as dividend payments to invest in companies that can deliver higher returns. In contrast, the wholly state-owned CNPC, Sinopec, and CNOOC Group are not subject to the same level of shareholder discipline.[60] To be sure, the companies are under increasing pressure from their sole shareholder, the Chinese government, to generate profits. Beijing reinstated the collection of dividend payments from state-owned enterprises in 2007, with the NOCs required to hand over 10 percent of their profits. In addition, the salaries for CEOs of China's "Big Three" oil companies, like those of all other state-owned enterprises under the control of the central government, are now more dependent on their firms' performance than ever before.[61] That said, the Chinese government probably is willing to settle for rates of return that are unacceptable to the shareholders of IOCs because, unlike those shareholders, the Chinese government has objectives other than profit maximization, such as securing access to energy resources abroad.

However, just because China's NOCs are able to live with lower rates of return than the IOCs, they do not necessarily do so across the board. In fact, some recent industry analyses have indicated that the reputation that China's NOCs have earned for paying top dollar for assets is not entirely deserved. A report by Wood Mackenzie concluded that the majority of the deals completed by five Asian NOCs, including the three Chinese majors, over the 2001–04 period would yield rates of return in the range of 15 to 20 percent.[62] Other industry analysts have also noted that the gap between rates of return for Asian NOCs and the IOCs narrowed in recent years as the IOCs increased their oil price assumptions.[63]

The Chinese government's developmental assistance to host countries, like the cheap capital that it offers to China's NOCs, probably provides China's oil majors with a competitive advantage in certain situations over other companies that do not receive similar support from their governments. Anecdotal information indicates that Beijing's attempts to use aid to help China's NOCs acquire upstream assets abroad has yielded mixed results. To be sure, Beijing's financial largesse helped Sinopec move into Angola and probably helped persuade Turkmenistan to award CNPC the first-ever onshore production-sharing agreement (PSA) to a foreign company. In Nigeria, however, arrangements for China's NOCs to obtain upstream assets in exchange for development assistance have failed to win China's NOCs any attractive assets.

Beijing uses development assistance as a tool to further the international expansion of China's NOCs for at least two reasons. First, there is a widespread perception in the Chinese government and oil industry that the NOCs are handicapped in the global competition for oil reserves because they are latecomers to the international oil business. The NOCs have been active abroad only since the early 1990s, while some of the IOCs have been operating overseas for about a century. Their historical experience has given the IOCs a competitive edge that other companies have not been able to replicate.[64] For example, Shell, which entered Nigeria in 1938 and enjoyed a monopoly until the country's independence in 1960, is still the country's largest producer. In the words of CNOOC Ltd. chairman and CEO Fu Chengyu, "it is actually not easy for us to find projects. The oil market already has more than 100 years of history and all of the good projects are already taken. As a newcomer, it is obviously not easy to do well."[65]

Second, the sustained rise in world oil prices from 2002 until mid-2008, like other periods of high prices, shifted bargaining power away from foreign companies and toward resource-holding countries, encouraging them to tighten state ownership and to increase their take vis-à-vis that of foreign firms. Some oil producers in Africa, lacking critical infrastructure and eager to diversify their economies away from oil, sought to capitalize on their newfound positions of strength by linking investments in oil exploration and production to investments in other sectors of the host country's economy.[66] Nigeria, for example, offered preferential rights to oil exploration and production blocks to foreign companies that promise to invest in the country's energy and transportation sectors. Edmund Daukoru, Nigeria's minister of state for petroleum, characterized Nigeria's "oil-for-infrastructure deals" as a tool to spur companies that profit from Nigeria's oil wealth to help develop other sectors of the Nigerian economy. He has criticized the IOCs for failing to provide such assistance: "The best bidders have not helped with our national aspirations. No operator has talked railway to me, no operator has talked shipyard, no operator has talked about generating so much. Nobody has shared our aspirations with us. We are in a hurry to develop. The oil industry has been an enclave industry. We want to break out of the enclave and merge with the greater economy of the country, and we are not getting the response we expect and deserve."[67]

Beijing's deep pockets helped China's NOCs establish a footprint in Angola that they otherwise might not have. If China Eximbank had not extended a $2 billion low-interest loan to Angola in 2004 to finance projects built primarily by Chinese companies, such as the refurbishing of the Benguela Railway, it seems unlikely that Sonangol, the Angolan NOC, would have rejected the deal struck between Shell and India's Oil and Natural Gas Corporation Ltd. (ONGC) for the latter to purchase Shell's 50 percent stake in Block 18 (Greater Plutonio fields) and instead sell it to Sinopec.[68] China Eximbank's largesse may also have contributed to Sonangol's decision to award Block 3/80 to Sinopec after refusing to renew Total's license for it in the wake of the French judicial investigation into alleged arms sales—in breach of international sanctions—made to Angola by businessman Pierre Falcone in the early 1990s.[69]

In Nigeria, however, efforts by Abuja and Beijing to link oil and non-oil investments by Chinese firms have yet to yield any results for China's NOCs. An agreement reached in April 2006 between CNPC and the Nigerian government to allow the company to invest $2 billion in the decrepit Kaduna refinery in exchange for the right of first refusal on four oil blocks in the mini-licensing round in May 2006 fell apart.[70] The four blocks are not especially attractive, and CNPC, after doing some seismic work, decided to relinquish them. CNPC's plans to invest in the Kaduna refinery also were derailed when the Nigerian government sold a 51 percent stake in the refinery to Bluestar Oil, a company run by cronies of former Nigerian president Olusegun Obasanjo, just before he left office.[71] Similarly, an arrangement under which China Eximbank would provide Nigeria with a $2.5 billion loan for the construction of a railroad in western Nigeria and, in return, CNOOC Ltd. would receive the right of first refusal on several oil blocks failed to materialize because of disagreements between CNOOC Ltd. and Abuja over the amount of interest each would pay on the loan.[72]

Chinese aid may also have been a factor in Turkmenistan's decision to sign a production-sharing agreement with CNPC to develop the Bagtiyarlyk field on the right bank of the Amu Darya river, making the Chinese firm the first company to operate onshore in Turkmenistan. China Eximbank extended several hundred million dollars in low-interest loans to Turkmen institutions in 2006 and 2007.[73] That aid, combined with the drilling rigs and assistance provided by CNPC and the company's role in spearheading the development of a pipeline to deliver natural gas from Turkmenistan to China have made CNPC the only foreign oil company allowed onshore in Turkmenistan.[74] CNPC also is providing several billion dollars in funding for the pipeline and building the sections in Uzbekistan and Kazakhstan. The Turkmens have told the major IOCs, such as ExxonMobil, Royal Dutch Shell, and Chevron, which are eager to exploit the country's huge onshore gas reserves, that they will have access only to its riskier, less attractive offshore acreage.[75]

The case studies discussed above indicate that state financial support plays a role in helping China's NOCs acquire exploration and production assets abroad but is not necessarily a decisive factor. With respect to access to cheap capital, the low-cost loans that CNOOC Ltd. arranged to help finance its bid for Unocal certainly made the Chinese firm's offer highly competitive with Chevron's. However, CNOOC Ltd.'s final offer ultimately was not high enough to persuade Unocal's shareholders to terminate their agreement with Chevron. (Although Unocal's former chief executive did say that if CNOOC Ltd. had raised its bid rather than withdrawing it then Unocal would have ended up being acquired by the Chinese firm.[76]). With respect to tied aid, the billions of dollars in low-interest loans that China Eximbank extended to Luanda clearly helped Sinopec acquire some assets in Angola. Yet, as with any cheap capital that Chinese government institutions provide directly to the Chinese oil majors, it is hard to assess how much of an advantage Chinese tied aid gives China's NOCs vis-à-vis the IOCs because it is not clear that the IOCs would bid for some of the assets that the Chinese have pursued in "oil-for-infrastructure" deals if the IOCs had been given the opportunity to do so. While it seems likely that some of the IOCs would have jumped at the chance to compete for a production-sharing agreement for Turkmenistan's Bagtiyarlyk field, it seems unlikely that they would have found the onshore acreage that Nigeria offered CNPC and CNOOC Ltd. to be especially attractive.

Conclusion

The good news for U.S. policymakers and pundits who have been watching the global expansion of China's NOCs with varying levels of anxiety is that several of their concerns about the international mergers and acquisitions of these firms are misplaced. The NOCs are not supplicant arms of state policy, purchasing oil assets abroad for the sole purpose of assuaging the Chinese leadership's concerns about oil supply security. The Chinese oil firms, which must acquire oil and natural gas reserves abroad to help ensure their survival in the oil business, are in the diver's seat when it comes to deciding where to invest and gaining the necessary government approvals. China's NOCs are also not winning the global race for exploration and production assets. Although increasingly internationally competitive, China's oil firms do not dominate the international upstream sector. The lion's share of the world's oil reserves and production is in the hands of state-owned oil companies. Among resource-seeking oil companies, the overseas production of China's NOCs lags behind that of the major IOCs. Moreover, whether the NOCs sell the oil that they pump abroad on the international market or to consumers in China does not affect the amount of oil available to consumers in other countries. Each barrel of overseas production that a Chinese company supplies to China is one barrel less that it must buy on the international market—and vice versa.

Observers of the international activities of China's NOCs should nevertheless continue to pay attention to the provision of state financial support to China's oil majors. Beijing's financial largesse has probably given the NOCs a competitive advantage. However, the extent to which China's NOCs depend on state capital to conduct international mergers and acquisitions and the degree to which such financial support impacts the IOCs have been much less than suggested by CNOOC Ltd.'s offer for Unocal. Not only have China's oil majors been able to self-finance most of their deals, but they also rarely compete directly against the IOCs for assets. That may change, however, with the global financial crisis and lower oil prices. Chinese oil executives and officials view the global economic downturn and oil price drop as providing China's NOCs with a golden opportunity to continue their international expansion because assets are cheaper and there is less competition for them.[77] Although the NOCs, like all other oil companies, have less cash to spend on upstream investments, they can turn to state banks for support. Some banks are willing and able to support the acquisition of oil abroad, as indicated by the more than $44 billion in loans extended by the China Development Bank (CDB) and China Export Import Bank to major energy producers battered by the fall in the price of oil, including Russia, Brazil, Kazakhstan, and Turkmenistan, in the first half of 2009 alone. Although only the loan to Kazakhstan is explicitly linked to acquisition of an upstream asset by a Chinese NOC (CNPC is to acquire a 50 percent stake in Mangistaumunaigas), the Chinese government and China's NOCs undoubtedly hope that these "loans for oil" deals will facilitate upstream investment opportunities for Chinese firms. If Beijing's loans do help China's NOCs win plum assets abroad, such as stakes in Brazil's Santos Basin or Turkmenistan's South Yolotan gas field—both of which are very attractive to the major IOCs—it will be an indicator that Chinese state financial support is tilting the playing field in favor of China's NOCs.

Notes

1. This section draws heavily on Erica S. Downs, "Business Interest Groups in Chinese Politics: The Case of the Oil Companies," in *China's Changing Political Landscape: Prospects for Democracy,* edited by Cheng Li (Brookings, 2008), pp. 121–41.

2. "PIW's Top 50: How the Firms Stack Up," *Petroleum Intelligence Weekly,* December 1, 2008, special supplement, p. 2.

3. Ibid.

4. Susan Shirk, *The Political Logic of Economic Reform* (University of California Press, 1993), p. 94.

5. For more information on SASAC, see Barry Naughton, "Profiting the SASAC Way," *China Economic Quarterly,* June 2008, pp. 19–26; Barry Naughton, "SASAC and Rising Corporate Power in China," *China Leadership Monitor* 24 (Spring 2008); and Barry Naughton, "Claiming Profit for the State: SASAC and the Capital Management Budget," *China Leadership Monitor* 18 (Spring 2006).

6. For a discussion of how former NOC general managers Ma Fucai (CNPC), Li Yizhong (Sinopec), and Wei Liucheng (CNOOC) fared in balancing corporate and party-state objectives, see Downs, "Business Interest Groups in Chinese Politics."

7. National Development and Reform Commission, Order 21, "Jingwai touzi xiangmu hezhun zanxing guanli banfa" [Temporary Regulations for Overseas Investment Project Approval], October 9, 2004 (http://tzs.ndrc.gov.cn/tzfg/hjbaz/t20051010_44800.htm).

8. "Zhongshiyou wei shenme gan 'zuo gei lianghui kan?' " [Why Did CNPC Make a Gesture of Deference to the Two Sessions?], *Xinhua,* March 12, 2007 (news.xinhuanet.com/legal/2007-03/12/content_5833290.htm [May 15 2007]); and "Zhengxieweiyuan fansi qunian 'youhuang' " [A CPPC Member Reflects on Last Year's 'Oil Shortage'], *Jinghua shibao* [*Beijing Times*], March 13, 2007, p. A4.

9. Shu Xingxiang, "Youhuang 'bigang' zhangjia he bu hefa?" [Oil Shortage 'Forces' a Price Increase; Is It Legal?], *Zhongguo Qingnian bao* [*China Youth Daily*], May 22, 2009 (http://finance.people.com.cn/GB/9345250.html); and "Longduan qiye xianqi 'shehui zeren re' qiye jiaoqu baixing bumanyi" [Monopolized Enterprises Causing Calls for 'Social Responsibilities'; Enterprises Say Accusations Unfair, Citizens Are Not Satisfied], *Zhongguo Caijing Bao* [*China Financial and Economic News*], September 10, 2009 (http://finance.people.com.cn/GB/7882502.html).

10. J. Sinton and others, *Evaluation of China's Energy Strategy Options,* LBNL-56609, May 16, 2005, p. 4 (http://china.lbl.gov/publications/nesp.pdf).

11. For more information on China's fractured energy bureaucracy, see Edward A. Cunningham, "China's Energy Governance: Perception and Reality," Audit of Conventional Wisdom Series, MIT Center for International Studies, March 2007 (http://web.mit.edu/cis/pdf/Audit_03_07_Cunningham.pdf); Kong Bo, "Institutional Insecurity," *China Security* (Summer 2006), pp. 65–89; and R. Lester and E. Steinfeld, "China's Energy Policy: Is Anybody Really Calling the Shots?" Working Paper Series, Industrial Performance Center, MIT-IPC-06-002 (Massachusetts Institute of Technology, January 2006).

12. Huang Hui, "Guojia nengyuan lingdao xiaozu zhi shi di yi bu" [The National Energy Leading Group Is Only the First Step], *Liaowang xinwen zhoukan* [*Liaowang News Weekly*], no. 23 (June 6, 2005), pp. 40–42.

13. Naughton, "Profiting the SASAC Way," pp. 24–25.

14. Chen Geng, "Shiyou gongye gaige kaifang 30 nian huigu yu sikao" [A Review of and Reflections on the 30 Years of Reform and Opening Up of the Oil Industry], *Renmin Ribao* [*People's Daily*], November 18, 2008 (http://energy.people.com.cn/GB/8356135.html.)

15. Interview, Beijing, April 25, 2007.

16. Laura Santini, "Moving the Market: Shareholders Say 'No' in China—CNOOC Is Defeated on Cash Lending; Will Action Spread?" *Wall Street Journal,* April 3, 2007; and Wendy Lim and Tony Munroe, "Update 2–CNOOC Shareholders Reject Proposals on Acquisitions," *Reuters,* January 2, 2006.

17. Trevor Houser, "The Roots of Chinese Oil Investment Abroad," *Asia Policy 5* (January 2008), p. 152.

18. See the remarks of Zhou Dadi in "Liu Keyu: Zujian guojia nengyuanbu tiaojian yijing jiben chengshu" [Liu Keyu: The Conditions for Establishing a National Ministry of Energy Are Already Basically Mature], *Jingji cankao bao* [*Economic Reference News*], January 29, 2008 (http://news.xinhuanet.com/fortune/2008-01/29/content_7516573.htm).

19. Author's interview with Chinese foreign policy expert, Beijing, June 24, 2008.

20. *BP Statistical Review of World Energy* (London: BP, June 2008), pp. 6 and 22.

21. Xie Ye, "PetroChina Adopts Global Aim," *China Daily,* March 7, 2003.

22. For a Chinese oil executive's perspective on the importance of geographic diversification, see Qiu Zilei, "Zhonghaiyou weihe shougou haiwai zichan" [Why CNOOC Purchases Overseas Assets], in *Gei caijing jizhe jiangke* [*Talking to Financial Reporters*] (Beijing: CITIC Publishing House, 2004), pp. 129–44.

23. Interviews with current and former employees of China's NOCs in Beijing in May 2000, March 2003, and April 2006.

24. Neither Sinopec nor CNOOC suffered from the tightly controlled crude oil prices to the extent that CNPC did. Sinopec had no upstream operations at the time and benefited from a fixed spread for refining margins. CNOOC, which was never subject to price controls or production quotas, exported most of its output prior to the liberalization of crude oil prices in 1993.

25. The prices referenced are spot West Texas intermediate prices. *BP Statistical Review of World Energy,* June 2008, pp. 8, 11, and 16.

26. "Sinopec Gets $4.4B Handout," *International Oil Daily,* July 31, 2008.

27. "Profile: Sinopec Takes the Lead," *Energy Compass,* October 3, 2008; and Chen Wenxian, "Sinopec Aims to Achieve More," *Xinhua China Oil, Gas, and Petrochemicals,* May 14, 2007.

28. "2001 niandu jingji renwu—Wei Liucheng" [2001 Economic Person of the Year—Wei Liucheng], *Duihua* (Dialogue), January 7, 2002 (http://cctv.com/financial/dialogue/sanji/sanji_nr020107_01.html).

29. Nelson D. Schwartz and Doris Burke, "Why China Scares Big Oil," *Fortune,* July 25, 2005.

30. This paragraph is based on e-mail correspondence with Mikkal Herberg on December 12, 2008; a colleague at an international oil company on December 5, 2008; and a Beijing-based energy consultant on December 14, 2008.

31. *BP Statistical Review of World Energy,* pp. 11 and 20.

32. International Energy Agency, *World Energy Outlook 2008* (Paris: OECD/IEA, 2008), pp. 93, 102.

33. See, for example, the remarks of Sinopec Corporation president Wang Tianpu in Duan Xiaoyan, "Women de liyi zhuyao bushi laizi longduan" [Our Profits Mainly Are Not from Monopoly], *21 shiji jingji baodao* [*21st Century Business Herald*], January 8, 2007 [www.nanfangdaily.com.cn/jj/20070108/zh/200701080009.asp]; and the reported remarks of Zeng Peiyan in "Zhongshiyou: dang mengxiang zhaojin xianshi" [PetroChina: When Dreams Become Reality], *Jinrongjie wang* [*Financial World Online*], February 14, 2008 (http://stock1.jrj.com.cn/news/2008-02-14/000003285143.html).

34. See Zhang Yuqing, "Shishi shiyou gongye 'zou chu qu' de fazhan zhanlüe" [Implement the 'Go Abroad' Development Strategy of the Oil Industry), *Hongguan jingji guanli* [*Macroeconomic Management*] 10 (2000), pp. 5–6; and "Guojia jiwei jiaonengsi fusizhang Xu Dingming tan Woguo jingwai shiyou ziyuan de kantan kaifa" [Xu Dingming, Deputy head of the Transportation and Energy Department of the State Planning Commission, Discusses China's Overseas Oil Exploration and Development], *Zhongguo jingji daobao* [*China Economic Herald*], October 8, 1997; and Zhao Yining and Pu Shouru, "Zhongguo shiyou mianlin de tiaozhan" [The Challenges China's Oil Faces], *Liaowang xinwen zhoukan [Liaowang News Weekly]* 9 (1997), p. 13.

35. ExxonMobil Corporation, *2007 Financial and Operating Review,* p. 60.

36. Wood Mackenzie, "The Impact of Asian NOCs on the Upstream M&A Market," *Corporate Insights*, May 2006.

37. This paragraph is based on Mackenzie, "The Impact of Asian NOCs on the Upstream M&A Market."

38. Song Yen Ling, "China: Challenging Deals," *Energy Compass,* July 25, 2008; and "China Spending on Oil M&A Tumbles, but for How Long?" *Dow Jones Energy Service,* November 11, 2007.

39. E-mail from Beijing-based industry analyst, January 14, 2009. See also Kong Di, "Zhongshihua: 'san banfu' yingdui weiji" [Sinopec: 'Three Weapons' to Deal with the Crisis], *Zhongguo qiye bao* [*China Enterprise News*], January 16, 2009 (www.ceccen.com/index.php?page=news_view&id=262).

40. E-mail from Beijing-based journalist, December 14, 2008.

41. Mikkal E. Herberg, "Energy Security Survey 2007: The Rise of Asia's National Oil Companies," NBR Special Report 14 (December 2007), p. 23.

42. Huang Zhouhui, "Xuannian diechu: Zhongshiyou shougou PK you neiqing" [Twist after Twist: The Inside Story of CNPC's Acquisition of PetroKazakkhstan],

Minying jingji bao [*Private Economy News*], October 26, 2005 (http://biz.ixco.com/htmlnews/2005/11/01/703774.htm).

43. This discussion of the connection between the upstream capabilities of China's NOCs and their investments in countries with elevated levels of political risk is informed by Houser, "The Roots of Chinese Oil Investment Abroad," pp. 155–58.

44. Estimate based on data provided by Wood Mackenzie in April 2007.

45. Bill Graveland and James Stevenson, "EnCana Sells Ecuador Assets to Chinese Joint Venture for $1.4B US," *Ottawa Citizen,* September 14, 2005; and Claudia Cattaneo, "EnCana Exits Ecuador with US$1.4B Deal: 'Ecuador Is a Difficult Area Both Politically and Economically for the Oil Industry,' " *National Post's Financial Post & FP Investing,* September 14, 2005.

46. Iyobosa Uwugiaren, "Nigeria: Obasanjo's Messy Oil Deals—$20 Billion Investment at Risk," *All Africa,* December 31, 2008; and "CNOOC to Buy Nigeria Block for $2.27 Bil; Block Holding Akpo Field Drew Broad Interest," *Platts Oilgram News,* January 10, 2006.

47. Houser, "The Roots of Chinese Oil Investment Abroad," p. 157.

48. An interlocutor from Sinopec, for example, speaking in 2004 about the operations of China's NOCs in Sudan, stated that political risk was a problem to be solved through diplomacy. See "Ruzhu Sudan shinian Zhongguo shiyou haiwai zhanlue nanbu jiu lu" [After Ten Years in Sudan, It Is Hard for CNPC's Overseas Strategy to Follow the Same Old Road], *Zhongguo jingying bao* [*China Business News*], August 20, 2004 (http://auto.sohu.com/20040820/n221632951.shtml).

49. Wang Kangpeng, "Zhongguo Eguaduoer jiang qian 10 yi Mei yuan daikuan huan shiyou huiyi" [China and Ecuador Will Sign a US$1 billion Loans-for-Oil Agreement], *Renmin Wang* [*People's Daily Online*], April 8, 2009 (http://energy.people.com.cn/GB/9090632.html); "Ecuador Pres Shrugs Off China Arbitration Threat over Oil Tax," *Dow Jones International News,* November 22, 2007. See also "Andes Petroleum Signs Contract Amendments with Ecuador Govt," *Dow Jones International News,* August 26, 2008.

50. Li Xiangyang, Liu Hongbo and Li Bin, "Kuaguo yingjiu: weile jiu wei gurou tongbao" [An International Rescue Effort for Nine Compatriots], *Zhongguo Shiyou bao* [*China Petroleum News*], November 6, 2008 (http://news.cnpc.com.cn/system/2008/11/06/001207678.shtml).

51. Yu Liang, "Bei wusu yu bei sunhai de Zhongguo nengyuan zhanlue" [A Humiliated and Undermined Chinese Energy Strategy], *Zonghe zhoukan* [*Far and Wide Journal*], November 2007 (www.fawjournal.com/archives/399). See also He Huidong, "Haiwai xun you zaoyu dongdaoguo zhengce bianlian" [The Search for Oil Overseas Runs Up against a Host Country's Hostile Policy Change], *Xin Caijing* [*New Finance*] 1 (2008) (http://review.ec.com.cn/article/spfms/spwzjx/200801/542619_1.html).

52. Mohamed Osman, "Darfur Rebels Attack Chinese-Run Oil Field in Attempt to Broaden War against Sudan Government," *Associated Press Financial Wire,* October 25, 2007.

53. Data provided by Wood Mackenzie, December 15, 2008; and Nelli Sharushkina, "China Has Little to Show for Udmurtneft Purchase," *Nefte Compass,* December 13, 2007.

54. Lisa Viscidi, "China: The Ecuador Connection," *Energy Compass,* July 6, 2007.

55. For more on the sale of Sudanese crude to Japan, see Houser, "The Roots of Chinese Oil Investments Abroad," pp. 162–63; and Arthur Kroeber and G.A.

Donovan, "Sudan Oil: Where Does it Go?" *China Economic Quarterly,* Quarter 2 (2007), p. 18.

56. European Coalition on Oil in Sudan, "Sudan's Oil Industry: Facts and Analysis," April 16, 2008, p. 30 (www.ecosonline.org/back/pdf_reports/2008/dossier%20final%20groot%20web.pdf).

57. James Politi, "CNOOC Funding for Unocal Scrutinized," *Financial Times,* June 29, 2005.

58. Houser, "The Roots of Chinese Oil Investment Abroad," p. 159.

59. Song Yen Ling, "Profile: Sinopec Takes the Lead," *Energy Compass,* October 3, 2008; and CNOOC Ltd., "Discloseable Transaction Relations to Acquisition of Interests in Offshore Nigerian Mining License," February 20, 2006, p. 5 (www.cnoocltd.com/UploadFile/NewsFile/b00f5301-d23f-49fa-bcef-c4d8b290dc82.pdf).

60. Houser, "The Roots of Chinese Oil Investment Abroad," p. 159.

61. Naughton, "Profting the SASAC Way," pp. 19–26.

62. Wood Mackenzie, "The Impact of Asian NOCs on the Upstream M&A Market."

63. James Batty, "Corporate: NOC Deals: Fact and Fiction," *Energy Compass,* May 23, 2008.

64. I thank Edward Morse for this point.

65. "Fu Chengyu: 'shenxin zouchuqu' de zhengzhi jingjixue" [Fu Chengyu: The Political Economy of 'Cautiously Going Abroad'], *21 Shiji jingji daobao* [*21st Century Business Herald*], December 29, 2004 (www.nanfangdaily.com.cn/southnews/zt/2004nztk/21ren/200412290045.asp).

66. "Nigeria to Offer New Blocks in Late February; Indian Companies Expected to Bid and to Move Downstream," *Platts Oilgram News,* January 17, 2007; and "Angola, Nigeria Seek Development as India Eyes More Oil Blocks," *Indo-Asian News Service,* September 30, 2005.

67. Tom Ashby, "Nigeria Ties Korea, Taiwan Oil Deals on Bidding Eve," *Reuters News,* August 26, 2005.

68. For discussions of the link between Chinese aid to Angola and Sinopec's acquisition of Shell's 50 percent stake in Block 18, see Xu Fei, "Shiyou daqiao, Zhongguo qiye de Angela wubu" [Building a Bridge to Oil, the Angolan Dance of Chinese Companies], *Nanfengchuang,* November 20, 2006; Margaret McQuaile, "Africa is Staging Ground for Push by China, India to Control More Output," *Platts Oilgram News,* October 26, 2004. For more on China's financial relationship with Angola, see Indira Campos and Alex Vines, "Angola and China: A Pragmatic Partnership," Center for Strategic and International Studies, June 4, 2008, pp. 3–7.

69. "Angola Carries Out Earlier Threats to Total over French Arms Allegations," *World Markets Analysis,* November 8, 2004.

70. This deal was part of a broader memorandum of understanding signed by President Hu for China to provide billions of dollars for investment in Nigerian infrastructure. Information about the disintegration of the "package deal" involving CNPC is based on e-mail correspondence from a Beijing-based oil analyst, July 1, 2007.

71. CNPC made a low bid for the 51 percent stake in the Kaduna refinery in the May 2007 auction ($102 million versus the winning bid of $160 million offered by Bluestar Oil) because CNPC had been told in advance that it would not win. E-mail correspondence with Beijing-based oil industry analyst, July 1, 2007.

72. David Winning, "China CNOOC Deal for Four Nigeria Oil Blocks Hits Snags," *Dow Jones International News,* November 2, 2006.

73. The largest of these loans was a twenty-year loan for $300 million with a 3 percent interest rate extended to Turkmenistan's State Bank of Foreign Economic Activity for work on a fertilizer plant and construction of a glass factory. See "Zhongguo zhengfu jingmao biaotuan fangwen Tukumansitan qude youanman chenggong" [The Visit of the Chinese Government's Economic and Trade Delegation to Turkmenistan Achieves Complete Success], Economic and Commercial Counselor's Office of the Embassy of the People's Republic of China in Turkmenistan, August 29, 2006 (http://tm.mofcom.gov.cn/aarticle/jmxw/200608/20060803009073.html).

74. E-mail correspondence from oil industry analyst, January 15, 2009.

75. Paul Sampson, "Turkmenistan: Looking East," *Energy Compass,* December 5, 2008; and "Turkmenistan Reserves: Big, but Nasty," *World Gas Intelligence,* November 26, 2008.

76. Gary Gentile, "Former Unocal CEO Says Higher Bid Would Have Led to Acquisition by CNOOC," *Associated Press Worldstream,* October 13, 2005.

77. For the comments of Chinese oil executives and officials on the opportunities provided by the financial crisis and lower oil prices, see Kong Ji, "Zhongshihua: 'san banfu' yingdui weiji" [Sinopec: 'Three Weapons' to Deal with the Crisis], *Zhongguo qiye bao* [China *Enterprise News*], January 16, 2009 (www.ceccen.com/index.php?page=news_view&id=262); Zhang Guobao, "Dangqian de nengyuan xingshi: 'wei' zhongzhi 'ji' " ['Opportunities' amid 'Risks' in the Current Energy Situation], *Renmin ribao* [*People's Daily*], December 29, 2008 (http://scitech.people.com.cn/GB/8591346.html); and "Jinring wei ji he youjia baodie gei Woguo youqi haiwai binggou chuangzao liangji" [The Financial Crisis and the Slump in Oil Prices Creates a Good Opportunity for International Acquisitions by China's Oil Firms], *Xinhua,* November 5, 2008 (http://news.xinhuanet.com/energy/2008-11/05/content_110309781.htm).