



THE JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY
RICE UNIVERSITY

**PERTAMINA
INDONESIA'S STATE-OWNED OIL COMPANY**

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PREPARED IN CONJUNCTION WITH AN ENERGY STUDY SPONSORED BY
THE JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY
AND
JAPAN PETROLEUM ENERGY CENTER

RICE UNIVERSITY – MARCH 2007

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ABOUT THE POLICY REPORT

THE CHANGING ROLE OF NATIONAL OIL COMPANIES IN INTERNATIONAL ENERGY MARKETS

Of world proven oil reserves of 1,148 billion barrels, approximately 77% of these resources are under the control of national oil companies (NOCs) with no equity participation by foreign, international oil companies. The Western international oil companies now control less than 10% of the world's oil and gas resource base. In terms of current world oil production, NOCs also dominate. Of the top 20 oil producing companies in the world, 14 are NOCs or newly privatized NOCs. However, many of the Western major oil companies continue to achieve a dramatically higher return on capital than NOCs of similar size and operations.

Many NOCs are in the process of reevaluating and adjusting business strategies, with substantial consequences for international oil and gas markets. Several NOCs have increasingly been jockeying for strategic resources in the Middle East, Eurasia, and Africa, in some cases knocking the Western majors out of important resource development plays. Often these emerging NOCs have close and interlocking relationships with their national governments, with geopolitical and strategic aims factored into foreign investments rather than purely commercial considerations. At home, these emerging NOCs fulfill important social and economic functions that compete for capital budgets that might otherwise be spent on more commercial reserve replacement and production activities.

The Baker Institute Policy Report on NOCs focuses on the changing strategies and behavior of NOCs and the impact NOC activities will have on the future supply, security, and pricing of oil. The goals, strategies, and behaviors of NOCs have changed over time. Understanding this transformation is important to understanding the future organization and operation of the international energy industry.

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ACKNOWLEDGEMENTS

The James A. Baker III Institute for Public Policy would like to thank Japan Petroleum Energy Center and the sponsors of the Baker Institute Energy Forum for their generous support in making this project possible.

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PERTAMINA,

INDONESIA'S STATE-OWNED OIL COMPANY

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INTRODUCTION

Pertamina once had a status similar to such leading NOCs as Petronas, ADNOC and Petrobras – a producer and a regulator. Indeed, Pertamina's objectives until just recently included international investment and expansion into foreign upstream activities. Unlike the other NOCs of comparable stature in the 1970s, the history of Pertamina, especially over the past five years, reflects a departure from the upward trajectory of revenue and influence that typifies most national oil companies. Ironically, its regional competitor, Petronas, which has now vastly eclipsed Pertamina as a successful Asian NOC, originally based its structures and plans on Pertamina's example. Changes in the political and institutional climate in Indonesia have rendered Pertamina unique among the companies studied here, as one of the few major NOCs to have lost most of its market and political capital over the past five years. Understanding how Pertamina arrived at this low point in its status and image in Indonesian politics, as well as its declining profile as a producer and exporter of oil and gas, serves an important lesson for other NOCs as they move forward against many of the same demands that had been placed on Pertamina in its role in Indonesian society and politics.

A major thesis of this case study is that Pertamina was both an important representative and a major casualty of the Suharto “New Order” régime. Part of the company’s demise came from its onerous responsibility to assist with both national unity and national development efforts through a requirement that it distribute refined oil products throughout the country at a uniform subsidized price regardless of the costs entailed. But the company also suffered from interference by the regime, which used Pertamina as a cash cow for pet projects, and lost sight of its objective to become a world class operator and developer of petroleum projects. This loss of focus was to become especially damaging to the LNG segment, as well as to the company’s ability to expand overseas as its domestic opportunities dwindled. A 1999 PriceWaterhouseCoopers audit revealed that Pertamina had lost billions of dollars between 1996 to 1998 through corruption and inefficiency. To date, Pertamina has cancelled or retendered over 152 contracts with former President Suharto’s family members and associates and ordered such parties to sell their stakes in oil and gas projects.

Oil production in Indonesia has decreased steadily over the last decade, due to naturally declining production at the country’s large, mature oil fields and to sector mismanagement. Indonesian oil production has dropped by 32% since 1996 and averaged 1.1 million b/d in 2006. At the same time, government subsidies on refined oil products encouraged rising oil consumption in Indonesia, while technical and management problems simultaneously plagued the country’s downstream sector. As a result, Indonesia became a net oil importer in 2004 –an outcome that stands as a warning to other national oil companies that currently have similar structural problems and practices. Indonesian oil demand averaged 1.2 million b/d in 2006. It is against this background of setbacks in

its core operations and mission that Indonesia's state oil concern Pertamina found its mandate greatly curtailed.

In the wake of declining oil production and rapidly rising consumption, a new oil and gas law was passed by Indonesia's nascent democratic Parliament in 2001. The law forced state Pertamina to give up its prerogative in granting new oil field development licenses and greatly clawed back the company's monopoly in upstream oil field development. Pertamina's regulatory and administrative functions were transferred to a new regulatory body, BP Migas. The state oil firm was changed into a limited liability company PT Pertamina (Persero) by presidential decree in 2003 but remained a national oil company. Pertamina held onto more of its downstream refining and marketing responsibilities in the sector restructuring but its monopoly on retail and products distribution was ended in July 2004, when BP and Petronas of Malaysia received licenses for retail sales of petroleum products. Shell and Total joined the retail market in 2005 and 2007, respectively. Pertamina remains the operator of Indonesia's eight refineries though it only owns two of them. The state monopoly is no longer a significant exporter of refined products to Asia but rather is charged with ensuring delivering needed products to the domestic market.

Indonesia has 4.3 billion barrels of proven oil reserves and was for many years a significant oil and gas exporter to Asia and a member of the Organization of Petroleum Exporting Countries (OPEC). Currently, Pertamina's oil production is relatively insignificant averaging less than 133,000 b/d, including JVs. The majority of Indonesia's oil production is produced by a handful of international oil companies who have been operating in the country for many years under production sharing agreements.

Up until recently, Indonesia was the largest exporter of LNG in the world. In 2006, Indonesia exported 24 million tons of LNG or about 18% of the world total. Indonesia produces LNG from two terminals: the Bontang facility in East Kalimantan and the Arun plant in North Sumatra. However, mirroring problems in the oil sector, Indonesia's two major LNG production operations have experienced declining natural gas production in recent years, and state-owned Pertamina has had to purchase LNG on the spot markets to meet its long-term LNG contract obligations to foreign buyers. In 2005, Bontang LNG supply contracts were renegotiated to allow more of the project's output to meet local demand. Indonesia approved a new LNG export project at Papua in 2005 to be led by BP, and is expected to commence operations later this year. Indonesia's gas potential remains promising but problems in the sector may thwart its ability to sustain its leading market presence in the face of rising competition from new supplies from Qatar and Australia.

While Pertamina's oil production and products sales are not a major factor in the global energy market and its share of the LNG market could wane in coming years, its history and situation hold important lessons on the problems and challenges that can come to face national oil companies that lack good governance and management practices and are subject to too high a level of government interference and social responsibilities.

HISTORY

Indonesia is one of the oldest oil producers in the world (see Figure 1 for map). Seepages of Sumatra's waxy crude had been used to fuel torches and seal boats for hundreds of years prior to the first oil produced from a well drilled in 1884. The company Royal Dutch was formed in 1890, based on production from Sumatra. The company grew rapidly as Sumatran output rose throughout the 1890s. British Shell Transport and Trading initiated its own oil production in Borneo shortly thereafter. By 1907, the two companies had joined to form Royal Dutch Shell, with almost all of the oil production coming out of the East Indies. That same year a Mining Law (Indische Mijnwet) was promulgated to regulate the archipelago's petroleum industry, which lasted until 1960. Production continued to ramp up, achieving more than 4% of worldwide production in 1911 and rising throughout the 1920s and 1930s.¹ Perhaps the most dramatic episode in the country's petroleum history came in 1941, when the Balikpapan refinery was deliberately torched by its engineers during World War II. The Japanese renewed production, but over-exploitation and Allied bombing left oil development severely weakened by the end of the war. Just before the war, the newly formed Caltex Petroleum Corporation (a joint venture of Standard Oil of California and Texaco) had discovered the Duri and Minas fields near Riau in Sumatra. These fields, which still provide the backbone of the country's oil output, would not go into production until the 1950s. However, the Dutch were able to begin limited production in Kalimantan and Tarakan in 1945-1946.

¹ For a history of this period, see J. Poley, *Eroica: The Quest for Oil in Indonesia (1850-1898)*, Dordrecht, 2000, Philip Barnes, *Indonesia: The Political Economy of Energy*, Oxford, 1995, Sevine Carlson *Indonesia's Oil*, Boulder, 1977 and *The Prize*, New York, 1991, 114-127.

FIGURE 1: MAP OF INDONESIA WITH KEY OIL AND GAS



The first two decades after World War II were ones of political and economic turmoil in Indonesia. The 1945-1949 period saw conflict between Indonesian nationalists and Dutch colonial forces, culminating with the capture of most of the new Republic's leadership. Following the acceptance of Indonesian independence by the Dutch in December 1949, the Republic was faced with a decade of often violent conflict with opposition forces on Java and the outer islands. Further deterring foreign investors was an unstable government which was strongly nationalist in tone and antagonistic to Western capitalism. Under President Sukarno, who came to power in 1945 following the Japanese occupation of Indonesia, the country suffered severe economic difficulties and displayed considerable sympathy for radical solutions to domestic and international issues.

During these years after the war, the Indonesian petroleum industry developed with participation from both foreign and domestic oil companies. Western companies

attempted to re-establish pre-war production, but this did not take place until 1953. Progress was obstructed by Indonesian politics and policies. From 1951 to 1960, no new concessions were allowed. In 1957 the Republic's army took over Royal Dutch fields in northern Sumatra and Dutch interests were nationalized a year later. The period of 1964-1965 saw nationalism reach its height in Indonesia as President Sukarno' administration placed all foreign companies under supervision of the government and threatened massive nationalization. Although there was some improvement in production in these years, it was considerably less than could have been accomplished in a different economic and political environment.

These years also saw the development of a series of small indigenous petroleum firms. During the conflict with the Dutch, workers formed their own organizations to produce oil for the military. In the 1950s, three government-owned upstream firms were established; the National Oil Mining Company (PT Permina) formed two entities to handle the confiscated Dutch north Borneo fields: the Indonesian Oil Mining company (Pertamin) and the State Oil Company (PN Permigan). In 1960, the Oil and Mining Law was formulated and was ratified by parliament in 1961. The 1945 Indonesian Constitution had stated that "Land and water and the natural riches therein shall be controlled by the State and shall be exploited for the greatest welfare of the people." Under the new mining law, "oil and natural gas mining is only conducted by the State and the State company is authorized to engage in oil mining on behalf of the State."

An aborted coup in 1965 led to the slow ousting of Sukarno and the establishment of a new economic and political environment in Indonesia. The military dominated so-called New Order government was established in the late 1960s and lasted until 1998. It

has been described as a “façade democracy” with regular elections, a parliament and formal legal structure. But, in reality, the political parties were tightly-controlled; the parliament was a rubber stamp and the judiciary extremely weak. While economic policy was formulated by the Western trained “Berkeley mafia”, the government was dominated by the military headed by President and former general Suharto. Rule was sustained through coercion, financial awards for the elite, and economic and social programs for the general population. The Suharto regime stressed stability and development and indeed, there was significant economic growth during this period as the regime rejected the inefficient Sukarno socialist policies and sought international investment. While “all boats rose” and the overall economy improved, corruption and favoritism led to a wealthy elite and visible societal inequality.

The beginning of the New Order brought significant changes in the strengthening of government control over the petroleum industry. In 1968, Pertamin and Permina were combined into a single operation, the National Oil and Natural Gas Mining Company (Pertamina)². The third indigenous company, Permigan had been dissolved in 1965. The formal law establishing Pertamina was promulgated in 1971. That law set out the duties and responsibilities of Pertamina, which included significant governmental responsibilities. In particular, Pertamina was responsible for licensing and contracting with foreign operators, marketing the crude oil and gas produced, and supplying the domestic market with refined products.³

2 See Pertamina Company Website (www.pertamina.com/englishversion/companyprofile/history/html); U.S. Library of Congress, Indonesia Country Study (countrystudies.us.indonesia/73.htm), 1990.

3 Under this régime, Pertamina retained legal ownership of crude oil until it was delivered FOB to a foreign buyer. In addition to the crude available to Pertamina at market rates, the company was also entitled to “pro-rate” crude and Domestic Marketing Obligation crude, both at rates well

At this time, Pertamina introduced a new form of contract--the production-sharing contract (PSC). Along with Algeria, the other pioneer of PSCs, Indonesia believed that it had found a way to gain control of the activities of the foreign operators, with special attention to training, technology transfer and domestic supply for the industry. The Pertamina production-sharing contract formula split “profit” oil production between the contractor and the government, represented by Pertamina, and allowed the government to assume ownership of structures and equipment used for exploration and production within Indonesia. Pertamina’s control over allowable costs, and its insistence on “ring fencing” of production areas, were industry firsts.⁴ Indonesia’s contract terms were considered among the toughest in the world, with the government in most cases receiving 85 percent of oil produced once the foreign company recovered costs. The government’s profit share for “old” production areas has increased to 90% in many cases while lower profit oil shares are now common in areas with speculative or higher cost reserves.⁵

For many years, Pertamina used the variation in profit oil shares as its main method of attracting the desired mix of new contractors. However, the PSC split proved to be too blunt and slow an instrument to fine-tune exploration and production activities. In the 1980s and 1990s, prior to the current slowdown in upstream activity, government demands for large production shares were out of line with then-low oil prices and the

below prevailing market prices for oil. Pro-rata and DMO crudes were deducted off the top line of production, and were thus not included directly in the production share of the government.

⁴ Ring Fencing of a contract area means that each upstream contract must be undertaken by a special purpose company. All of the costs of finding and producing oil are then attributed to the company, inside the ring fencing. Services purchased from an affiliated company are subject to specific limitations. Revenues for the special purpose company are limited to the oil or gas produced within that area.

⁵ Lower profit oil shares were not introduced until there was nearly a cessation of new contractor activity in the late 1990s. Until then, the production shares from smaller and more remote fields was identical to that from larger and more prolific structures.

smaller kinds of fields left to discover in Indonesia. This contributed to diminished exploration activity, leading to declining production and falling reserves.⁶ The PSC structure also did not give Pertamina operational experience since it acted more as a supervisor of contracts than as an explorer.

The PSC contract format, as implemented in Indonesia, also potentially retarded domestic oil and gas development by penalizing production from smaller fields, treating them much the same way that more prolific field are handled.⁷ This impact of the PSC structure tended to create a large domestic oil regulation sector without the concomitant development of domestic-based investment. Pertamina was hardly a role model for how best to parcel out the domestic benefits arising from the huge oil cash flow of the 1970s.⁸

Within the New Order, Pertamina initially had a degree of independence, but eventually came under the control of Suharto and his chosen bureaucrats. The legislature and judiciary played no significant role in determining Pertamina policies. Contracts were let out to Suharto family members and associates and Pertamina became a supervisor of contracts. This led to corruption and a weak energy bureaucracy without the administrative and professional experience exhibited by neighboring Petronas. It should be emphasized that corruption and low bureaucratic efficacy were endemic in post-

⁶ In 2000 the World Bank published an assessment of Indonesia's PSC régime (the World Bank, *Indonesia Hydrocarbons Sector Study*, 2000). The study's authors found that the prevailing structure of contracts, cost recovery formulae, ring-fencing of small fields, and high cost of doing business had made a significant and adverse impact on the country's upstream sector. The contract structure was more appropriate for larger and more prolific production structures and was inhibiting output from the country's declining reserve base.

⁷ Studies of upstream contracts have shown that almost any financial and production result can be obtained from any of the available contract régimes. However, it is difficult to back down from a very high profit share in the PSC format without encountering political difficulties. As a result, the urge to apply roughly similar terms to most of the country's oil fields has resulted in disincentives for smaller, less prolific fields. (see Bearing Point, Iraq Oil Options, Vol I, 2004).

⁸ The World Bank's Indonesia Hydrocarbons Sector Study concluded in 2000 that smaller fields were significantly disadvantaged by the ruling PSC formulae.

independence Indonesia and that the case of Pertamina was not unusual. During the colonial era, relatively few Indonesians reached significant posts in the bureaucracy and many of them were Christians who were not welcome in independent Indonesia. Although there was a coterie of trained bureaucrats in independent Indonesia, the standards of the bureaucracy as a whole remained low and all too frequently based upon personal loyalty rather than merit. The recent re-emergence of democracy has meant that loyalty to Suharto and his cronies changed to loyalty to politicians and parties.

After the establishment of the “New Order” government in 1966, a rivalry between the so-called technocrats and nationalists commenced, and has waxed and waned to this day. In the Suharto era, the main fight was for the ear of Suharto.⁹ To get the nation back on its feet after the disasters of the Sukarno régime, the technocrats were given the upper hand through the mid-1970s. However, the sudden influx of cash following the 1973-74 oil embargo created embarrassing levels of corruption and became a political problem for the government. Consequently, the “nationalists,” who planned to reduce the role of private companies and foreign investors were given the go-ahead to invest large sums in projects aimed at a higher degree of self sufficiency in basic industries: steel, fertilizer, machine tools, cement, and chemicals.

The beneficiaries of these policies, including the Krakatau steel works, the Dumai oil refinery and Asahan aluminium smelter, consumed significant amounts of investment capital, at the same time that less foreign investment was arriving. As long as the price of oil remained high, the country could afford the ensuing errors and corruption in these

⁹ Adam Schwartz. *A Nation in Waiting*, Westview Press, 2000, 54-58.

industries. Import-substitution and *pribumi*¹⁰ investment policies dominated the nationalists' ten year reign.

During the oil price shock of 1973-1974, Pertamina and Indonesia experienced a boom in cash flow. This boom did not prevent, and even possibly exacerbated a massive increase in official corruption linked to the oil industry. The oil funds were also used to bankroll the nationalist investments noted just above. In early 1975, Pertamina began defaulting on bank loans from Western Banks. By mid-year, the Bank of Indonesia had declared a cap of \$560 million on its ability to make good the Pertamina debts. Most of these loans had little or nothing to do with the oil business, and left Pertamina with a legacy of hotels, golf courses, automobile assembly plants, foreign real estate, aircraft and airlines, ships and shipping companies and other "non-core" assets.¹¹ The total amount of the Pertamina debt has been estimated at \$10 billion, and it is believed that the country was bailed out by fellow OPEC members.¹² What is known for sure is that the country's official foreign debt doubled between the beginning of 1975 and the middle of 1976, reflecting the assumption of Pertamina's indebtedness by the Indonesian Government.

Indonesia's oil production peaked in 1977 at over 1.64 million barrels per day, roughly 60% higher than current oil and condensate output. By 1982, production had made a pronounced decline, reaching 1.26 million barrels per day. With the falling price

10 Pribumi policies favored those "from the soil" or the non-Chinese populace of the country. In practice, pribumi policies favored the Javanese and meant that Chinese businesses had to front a pribumi partner.

11 According to the Pertamina web site, the real estate subsidiary, Patra Jasa, still holds hotels, office blocks, resorts and other real estate properties, and is more than 98% held by the parent company as of this writing (Late January 2007).

12 This assertion is made by many sources. See *New Internationalist*, #116, October 1982.

of crude, the country needed to diversify its economy out of oil. Through the 1980s a group of US-trained economists, the so-called “Berkeley Mafia,” guided government policies toward substantial liberalization in many sectors of the economy. The liberalization was extremely successful, and the country’s economy grew rapidly throughout the 1980s and early 1990s¹³. By 1990, the oil and gas industry comprised less than 10% of the country’s economy.

Indonesia began diversifying to natural gas businesses in the early 1970s, with the discovery of the Arun gas field by Mobil in Aceh province at the northern tip of Sumatra. With a large resource far from any feasible market, and with little in the way of local infrastructure or skills, the company and Pertamina decided that export were the only feasible method of monetizing the gas. The LNG facility was completed in 1977 and shipments of LNG to Japan commenced at that time. Two years later production started at the Bontang plant in Kalimantan (Borneo), also headed to Japan. Expansion at both LNG plants continued throughout the 1980s and Indonesia became the largest LNG exporter in the world by 1988.¹⁴ LNG earnings helped Pertamina rebuild its financial strength as a pillar of the Suharto government during the 1990s. Between the Arun and Bontang facilities, LNG exports have achieved revenues that almost rival oil and condensate exports since 1990, more than making up for the decline in crude output.

13 The World Bank’s Economic Indicators (*World Development Report, 2004*) show that manufacturing grew at an average annual rate of 12.8% in the 1980s, about twice the rate of the economy as a whole in that period.

14 Indonesia remains the leading LNG exporter, at 29.4 million tones/yr. (31.5 bn M³), closely followed closely by Qatar, Algeria, Malaysia and Nigeria. Due to gas production cutbacks in Indonesia and surging production in Qatar and Nigeria, the country is expected to fall to third position sometime in late 2007 or early 2008. See *Petroleum Economist*, November 2006, pages 14-15.

Since LNG prices are indexed to crude and refined product prices, the value of LNG exports has averaged about 85-90% of crude, condensate and refined product exports.

Strong economic growth, combined with under priced domestic fuels caused Indonesian demand for refined oil products to rise rapidly throughout the 1980s and 1990s, and Pertamina was charged with the task of organizing new refinery capacity. Construction in the early 1990s added more than 400,000 daily barrels of capacity at Cilacap and Balongan, both on Java. Balongan was seen as the harbinger of a new downstream industry structure for the country. The plant used project financing (paid from exports by the MoF's Balikpapan unit) instead of Ministry of Finance resources.¹⁵ Unlike the country's other large refineries, Balongan was actually an asset of Pertamina rather than the Ministry of Finance.

As early as 1989, when domestic demand was still less than exports, the clashing trend lines of falling production and rising consumption generated an expectation that the country would cease to be a net oil exporter some time in the late 1990s. The late-1990s financial crisis held off this historic reckoning, but only for a few years. The country became a net oil importer during 2005, and total consumption of refined products is now some 200,000 b/d greater than domestic crude production.

Since the country already relied heavily on imported crude for its domestic refined product supply (indeed, the Cilacap refinery was built to use Saudi Light, rather than Indonesian crudes), the government thought that the country's future as a major factor in the regional oil markets could be extended by encouraging Middle East

¹⁵ The financing of Balongan from exports of naphtha by the Balikpapan unit continued a conflation of ownership and management authority with regard to the downstream operations and assets that continues to this day.

investors to construct new refineries along the sea lanes to Northeast Asia. To supply the domestic Indonesian market, the government of Indonesia had agreed to purchase output on a take or pay basis, much like the independent power producer (IPP) plan that was conceived at the same time.

This contracting procedure for IPPs resulted in excessive costs, arbitration and a dearth of generation-side investment that continues much to this day; the refinery program never came to fruition. In all likelihood, the refinery program would have proven even more financially damaging to the country than did its power sector counterpart. The offtake terms could have saddled Pertamina with a significant financial liability and would have compounded the effects of the 1997-98 financial crises.

The refined product market situation and the subsidies to consumers became the catalyst that ended Suharto's New Order régime, one of the longest reigns in the region.

Like many oil exporters, Indonesia tried to use a portion of its oil revenues as a method of spreading development throughout the country. There were three major avenues of wealth sharing: (i) "profit" oil and gas – the government's revenues from the sale of crude oil or LNG; (ii) "cost" oil and gas – revenues of Indonesian production sharing contractors and oil service companies in the oil and gas industry; and (iii) subsidies – direct benefits to oil and gas consumers in the country through low prices for products.

All three were overseen with varying degrees of corruption, misallocation and cross purposes, ultimately to the detriment of Pertamina. The revenues from sales of profit oil passed through Pertamina before they reached the Indonesian Central Bank. This vast flow of money created an illusion of wealth that Pertamina used to build a

powerful head office staff. As in other oil exporters, some cash was usually available for special purposes of the government.¹⁶

The approval process for the costs associated with producing oil buttressed the power of the Pertamina bureaucracy, giving them life or death power over the profitability of the PSCs. This power of approval, combined with local content rules, created another avenue for rewarding friends and relatives of the Suharto régime. The potential for corruption and favoritism inherent in this approval process was buttressed by a cumbersome and highly centralized procurement process that, according to the World Bank's *Indonesia Hydrocarbons Sector Study*, resulted in excess costs throughout the sector on the order of \$2 billion annually by 2000.¹⁷

A third leakage from Pertamina's revenues, not listed above, derived from the company's own upstream activities. Never a major factor on the upstream side, the exploration and production directorate of Pertamina nevertheless managed to operate with very high finding, development and production costs. Comparisons with other PSCs operating in Indonesia found that Pertamina's costs upstream were at least 100-200% higher for oil and as much as four times as costly per unit for natural gas.¹⁸ With such exorbitant costs Pertamina was never able to establish much of a position upstream, much less in overseas diversification. The company had simply never learned to operate in a competitive environment, which requires controlling costs and providing essential skills to its upstream operations outside the country. In fact, most of Pertamina's overseas

¹⁶ The World Bank's *Indonesia Hydrocarbons Sector Study* found Indonesia to be worse than most NOCs in this regard. In particular, benchmarking versus YPF and Petronas found misallocation of government oil revenues to be far greater than at those two companies.

¹⁷ See World Bank, *op cit*, page 10 of the Executive Summary.

¹⁸ See World Bank, *op cit*, page 4 of Section III. The Bank estimated the present value of such inefficiencies in the range of \$1.3-2.0 billion (USD 2000, \$1.6-2.5 in USD 2006).

activities were sales and procurement operations in major countries, including Japan, the United States, and Australia.

On the political front, the technocrats and nationalists continued their sparring for influence at the top table. Through the late 1980s and early 1990s, nationalists continued their control of many of the secondary Ministries – Technology, Telecommunications, and Transport – while the technocrats held sway at the vital Ministry of Finance, the Bank of Indonesia and powerful Coordinating Ministry for Economics. By the late 1980s, official corruption had reached extraordinary levels, whereby the idea of a “competitive bid” meant that each team needed one of the régime cronies just to qualify. This cronyism meant that virtually all new businesses – toll roads, mobile phones, videos, eco-tourism – had to come within the ambit of one or more of the family members or key cronies.

One thing that changed by the late 1980s was that those in the inner economic circle no longer felt the need to hide their wealth behind a façade of moderation and humility.¹⁹ At the same time, the technocrats were successfully opening the country’s economy to an unprecedented wave of new investment opportunities. So in spite of the ever-greater levels of official corruption, new wealth was indeed making a better life available for millions of ordinary citizens. This duality continued throughout the 1990s. Still there was a growing unease in the country and a belief that the “old man” (Suharto) was falling ever more under the sway of his children and close advisors.

A creeping political crisis continued to be masked by waves of new investment, including significant output boosts at the Bontang LNG plant. By the time the Asian

¹⁹ Schwartz.

financial Crisis hit in 1997, Suharto no longer had the experienced and internationally respected technocrats to steer the country out of its troubles.

The fall of Suharto can be attributed to a number of interlocking factors, although he probably would have maintained power much longer if it were not for the Asian economic crisis. During the 1990s, there was increasing dissatisfaction with the apparent high levels of corruption in the regime and this got better organized in 1996 when the opposition became more coordinated and vocal. Then the Asian financial crisis hit. The crisis had a devastating effect on the Indonesian economy. The precipitous drop in the Thai baht was followed by a serious weakening of the Indonesian rupiah and the Indonesian economy sharply slowed. The crisis also highlighted other weaknesses in the economy including a weak banking system and an overextended pattern of international lending. This led the Suharto government to seek IMF help. The IMF, in turn, demanded reforms which included facing the problem of government commodity subsidies.

The spectacle of the IMF Managing Director standing over the shoulder of Suharto while he agreed to the Fund's conditions for emergency loans undermined the Suharto regime's grip on Indonesia. The most controversial of his agreements with the IMF was the one that immediately took domestic fuel prices toward international levels. Efforts to implement IMF demands led to further opposition to the regime and student riots. Unable to stem the tide of opposition and with signs of dissatisfaction within elements of the military, Suharto stepped down and his Vice President, B.J. Habibie, took power.

By the next fiscal year, 1998-99, the value of the fuel subsides reached almost one quarter of the government's budget, a level that would be revisited a number of times

until the current president, Susilo Bambang Yudhono, committed to finally terminate the subsidy program in 2005-06.

In the aftermath of the financial crisis, the fall of the Suharto régime and the IMF Special Audit, a consensus emerged in the country concerning the future of Pertamina. It was generally agreed that the corruption of Pertamina, its role as a cash resource for the régime, and the change in the country's role vis-à-vis oil markets had made a significant change in the oil sector imperative. The nation's first democratic government, elected after the caretaker presidency of economic nationalist and Suharto crony Habibie, was animated by the belief that the constellation of forces that supported Suharto, including Pertamina, must be brought to heel. With the ending of official censorship and the emergence of a vigorous press, coinciding with the growth of the internet, containing information had become simply impossible.²⁰ The findings of the Special Audit and commentaries thereon became staples of political discussion. If Pertamina was not a net national asset, then its special prerogatives and roles needed to be curbed. Although there were many disagreements about specific aspects of oil sector reform, there was widespread agreement on the following points:

1. Remove the special legal status from Pertamina – make it an ordinary state enterprise;
2. Remove the governmental and regulatory functions from Pertamina and turn these over to specialized independent bodies;
3. Redirect the government's share of oil revenues away from Pertamina and directly to the Central Bank;

²⁰ Official censorship was ended by an act of omission rather than one of commission. President Wahid simply failed to appoint a Minister of Information, leaving that entity without cabinet representation, guidance or a mission.

4. Make both contracting and revenue accounting transparent and make data available to the public;
5. Introduce legal and financial unbundling of Pertamina's upstream and downstream operations; and
6. Permit new entry into downstream operations.

A new oil and gas law was passed in October 2001. Though there was great contention about various specific clauses and although the Bill took at least one year longer than was necessary, throughout 2001 there was little doubt in the country that such legislation would ultimately pass the legislature. This law reflected the goals and provisions enumerated above and with the passage of the implementing upstream regulations one year later; Pertamina was officially relieved of its role as the government's representative in the upstream oil business. A new entity, BP Migas, took over the contracting and licensing functions formerly handled by Pertamina. More significantly, the relationship between the government's representative and the PSCs was changed. Where in the past Pertamina had taken physical possession of PSC crude and then sold, swapped or refined the oil as it saw fit, now the crude was priced at the boundary of the production sharing contract area and BP Migas would contract out sales of the crude as appropriate. The government's share of the profit oil went directly to the Central Bank without a detour through Pertamina. A major source of corruption and inefficiency identified in the special audit had been eliminated with a few hard fought strokes of the pen.

BP Migas is not without problems, nor is it entirely free from corruption. However, it is widely believed in the oil industry in Jakarta that the level of corruption

and waste is at least an order of magnitude lower than was the case when Pertamina ran the upstream operations.

The intent of the oil and gas law of 2001, reflected in the six principles listed above, has not been fully implemented. There are three key factors that have retarded full implementation of the oil and gas sector restructuring. First, BP Migas, the upstream implementation agency, has proved to be slow in recognizing the changing realities of both the world oil markets and the country's hydrocarbon resources. This slow speed of operation has resulted in falling levels of investment in new production, even as the country's demand for oil products soars. Second, domestic pricing of refined oil products and natural gas has been slow to achieve international market levels. Third, the legal status of the country's non-Pertamina-owned refineries, accounting for more than 85% of capacity, remains uncertain five years after the passage of the restructuring legislation.

The impacts of this incomplete unbundling are discussed further below. However, the most important impacts of the slow pace of full implementation of the oil sector reforms include the following ones:

1. Investment in the country's downstream segments, gas transmission, gasoline retailing, and refining, have been retarded by the poor pricing prospects for new market entrants;
2. Pertamina has proved unable to organize the financing and expertise necessary to make needed additions to the country's refining segment; and
3. Subsidies have resulted in net costs to the country, since low prices have dampened conservation efforts and resulted in higher refined product acquisition costs than if the country had adequate refining capacity.

COMPANY PROFILE

The following table identifies and contrasts Pertamina's assets and activities with those of the country's oil and gas sector more generally. Until the 2001 Oil and Gas law came into effect, all of the reserves and production of both oil and gas took place under the Pertamina banner.

| Key Indonesia and Pertamina Asset and Operational Statistics | | |
|--|---|---|
| Item | Indonesia | Pertamina |
| Proven oil reserves (bn. Bbl.) | 5.1 | 0.98 |
| Oil & Condensate Production (kbd) | 1025, of which Chevron 507 Total 82 CNOOC 81 Others 355 | 48 (Pertamina alone) 133 (including JVs) |
| Proven gas reserves (tcf) | 94 | 8.8 |
| Gas Production (tcf) | 3.0 | 0.32 (Pertamina alone) 0.40 (including JVs) |
| LNG Sales (m tonnes) | 24 - 5.6 million from Arun, 18.4 million from Bontang | |
| Refining capacity (kbd) | 1055 <i>State-Owned (non-Pertamina) refineries:</i> Pangkalan Brandan 5.0 Dumai 120.0 Sungai Pakning 50.0 Musi 133.7 Cilacap 348.0 Balikpapan 260.0 Kasim 10.0 Subtotal 926.7 | 128.8 (12.2%) <i>Pertamina-owned refineries:</i> Balongan 125 Cepu 3.8 |
| Refinery Throughput (kbd) | 999.8 | 114.1 (11.4%) |

Source: MIGAS

Energy Resources

Indonesia is generously endowed with a variety of energy resource in addition to oil and gas. The country is a leading developer of geothermal power and has become regionally significant as a coal exporter.

Oil and Gas

The country has approximately 60 basins that have been explored for oil and gas. Today the bulk of the country's output, well over 80% comes from just three areas – Riau province in Sumatra, South Sumatra and East Kalimantan. The Duri and Minas fields in Sumatra continue to account for more than half the country's production. Recent exploration efforts have proved up about 110 million barrels in Papua province, and the Cepu field in Java is estimated to hold almost one billion barrels.

Indonesia is better endowed with natural gas, with a reserve-to-production ratio of more than 30 years. In spite of that, production near the country's two LNG plants has been declining throughout this decade, indicating the need to develop additional reserves. Most of the country's gas reserves (>70%) are located offshore, with Natuna Island (29%), offshore Kalimantan (25%), South Sumatra (13%) and Papua (13%), accounting for most of the country's gas reserves. Current production comes almost exclusively from South Sumatra, Kalimantan, North Sumatra (Arun) and Java.

Rapidly falling gas output in North Sumatra and offshore Kalimantan has spurred interest in new gas resources, but Papua is the only tangible result thus far. The country has announced its intention to raise oil output to 1.3 million b/d by 2010 (down from an earlier stated goal of 1.6 million b/d). However, interest in new upstream contracts has been less than the government had hoped, mostly due to continuing difficulties in

implementing the Oil and Gas Law of 2001. The government continues to maintain that new production from some existing PSCs will reverse the decline in output. In particular, BPMIGAS cites additional short term production from Pertamina (Salawati), Petrochina Jabung and Sukowati), and Total Indonesia (Peciko). In the medium term, the country expects production from ExxonMobil (Cepu) and Santos (Jeruk).

The government's hopes for raising production run counter to declining output from existing fields, with enhanced recovery methods accounting for a bigger share of total output. One factor militating against a quick turnaround is the changing character of the companies winning upstream contracts. In 2005 all but one of the successful bidders was a local Indonesian company, implying a relatively low level of technological sophistication.²¹

Geothermal

As a defining feature of intersecting tectonic plates, geothermal energy has always been a reality for the country, whether intentionally produced or not. The country now makes use of geothermal energy to supply 800 MW of generation capacity, making Indonesia the fourth largest geothermal electricity generator in the world (after the US, Philippines and Mexico). The government estimates that as much as 21 GW of generation capacity (more than the entire Java-Bali grid) can be tapped from the country's geothermal resources.

²¹ Ironically, the disincentive effect of the older PSC terms with regard to smaller companies and smaller fields, a longtime complaint of the international investors, now seems have been remedied at their expense, empowering a new cadre of indigenous upstream companies.

Coal

Indonesia, with 5.5 billion tons (short) of coal reserves, is the second largest exporter in the world, after Australia. While the country's reserves are modest relative to the largest producers, China, US, Russia, Australia and South Africa, its current production rate of 142 million tons/year gives Indonesia a comfortable reserve life of 80 years.

Domestic coal consumption of 24 million tonnes has remained relatively flat since 2000, so most of the country's output goes to the export market. Some increase in coal demand is expected from the power sector, but domestic consumption is not expected to pass 50 million tons per year in the foreseeable future.

Oil Sector and Pertamina Assets

Pertamina has recently been subject to a thoroughgoing restructuring, which aimed at stripping out some of the company's non-core assets, including real estate, hotels, and other activities. Core assets include the following:

Oil in place: ~ \$18 billion

Gas in place: ~ \$ 19 billion

Refineries: ~ \$ 10 billion (legal status uncertain).

As of this writing the real estate subsidiary, Patra Jasa, 98% owned by Pertamina, still holds hotels, office buildings and other non-industry property.

Refineries

The distinction that has been made above with regard to refineries is an important one for the country and potentially vital for Pertamina. The company owns two refineries,

the Balongan unit near Jakarta (125 kbd), and a small refinery in Cepu (3.8 kbd). The Balongan unit was project financed using exports from the Balikpapan refinery, even though the latter refinery is not owned by Pertamina, but rather is operated by them and owned by the Ministry of Finance. Similarly, the rest of the country's refineries are owned by the government rather than by Pertamina. The pledging of export streams from the MoF refineries, common in the past, cannot be legally undertaken at present without specific MoF authorization, effectively freezing the current downstream structure and refinery configurations.

What this means is that most of the refineries in the country do not represent assets of Pertamina. Therefore, the incentives for Pertamina are weak regarding efficient operation of the refineries. Such a split of ownership and operation also holds up movement toward clean fuels, now the norm for gasoline and diesel elsewhere in the region.

There are a number of proposed refinery expansions or even new grassroots refinery construction. A number of deals have been announced, but no financial closure has yet taken place. Tentative refinery locations include Tuban in Java (to process the Cepu crude), Lombok, east of Bali, another refinery in the Makassar Strait, and mooted expansions of Dumai, Cilacap and Balikpapan. With the exception of Tuban, the refinery expansions or new construction would rely on imported crudes.

PRESENT DAY ORGANIZATION AND LEADERSHIP

Any understanding of Pertamina's present role must be viewed against the fact the contemporary changes are based in large part on a new oil and gas law which was poorly written and has yet to be fully implemented. The following table shows the key divisions of responsibilities formulated between Pertamina and the various Ministries and regulatory agencies. In the past decisions about which blocks were to be bid, the terms for the contracts, oversight, approvals of expenditures, were all in the hands of Pertamina. After the passage of the Oil and Gas Law of 2001 Pertamina was left with secondary roles in those areas that remained in their remit – monitoring of upstream activities and reservoirs, data maintenance about reservoirs and cost accounting for refined product price setting.

Whereas once the President (Suharto) signed all of the PSCs, now this job went to the new BP Migas upstream supervision agency. BP Migas also had the ultimate authority for establishing the crude transfer prices and upstream activity monitoring, two key areas of Pertamina's power before 2001.

Downstream, Pertamina was acknowledged to contribute to the formulation of, but not to control refined product pricing. The company, which had formerly controlled or regulated the use of much of the country's downstream infrastructure of terminals, storage tanks and pipelines, was now reduced itself to a regulated state-owned company.

In this process, the Ministry of Mines and Energy, which previously had played a secondary role to the one played by Pertamina, was now put back in control of oil sector policy and contract terms. The Ministry, rather than the NOC, will be responsible for determining whether and to what extent PSC terms need to be changed to attract new

investment, whether addition blocks should be put on offer, and to approve the specific terms of the PSCs. The organization chart for the old system shows that the Ministry previously interacted with the oil sector *through* Pertamina. Now the Ministry would have a direct role in policies and in terms for the PSCs.

| Allocation of Oil Sector Policy and Regulatory Duties: Indonesia | | | | | |
|--|--------------------|-----------|----------------------------------|----------------------------------|-------------------------------------|
| Item | NOC (Pertamina) | President | Ministry of Mines & Energy | Upstream Agency – BP Migas | Downstream Agency – BPH Migas |
| Policy Direction | | λ | σ | | |
| Policy Formulation | | σ | λ | | |
| Set Blocks for bidding | | | λ | σ | |
| Set Terms for Cooperation Contracts | | σ | λ | σ | |
| Negotiate Upstream Contracts & Approve Development Plans | σ | | σ | λ | |
| Monitor E&P Activities | σ | | σ | λ | |
| Set Transfer Price for Crude | | | λ | σ | |
| Maintain Reserves Database | σ | | λ | σ | |
| Manage Reservoirs | σ | | σ | λ | |
| Regulate Refined Product Prices | σ | σ | σ | | λ |
| Regulate Access to Pipelines & Other Facilities | | | σ | | λ |
| Regulate Pipeline Tariffs | | | σ | | λ |

Key: λ primary role, σ - secondary role

In the new Indonesian system, the national oil company, Pertamina, is a relatively small player, responsible for just under 10% of total crude production. The company has recently been restructured and its legal status changed so that it is now a limited liability state-owned company (Law 22, 2001).

As a state-owned enterprise (SOE), Pertamina is audited by the Government of Indonesia's Financial and Development Supervisory Board (BPKP), the government auditors. While the Government of Indonesia is making strides toward greater

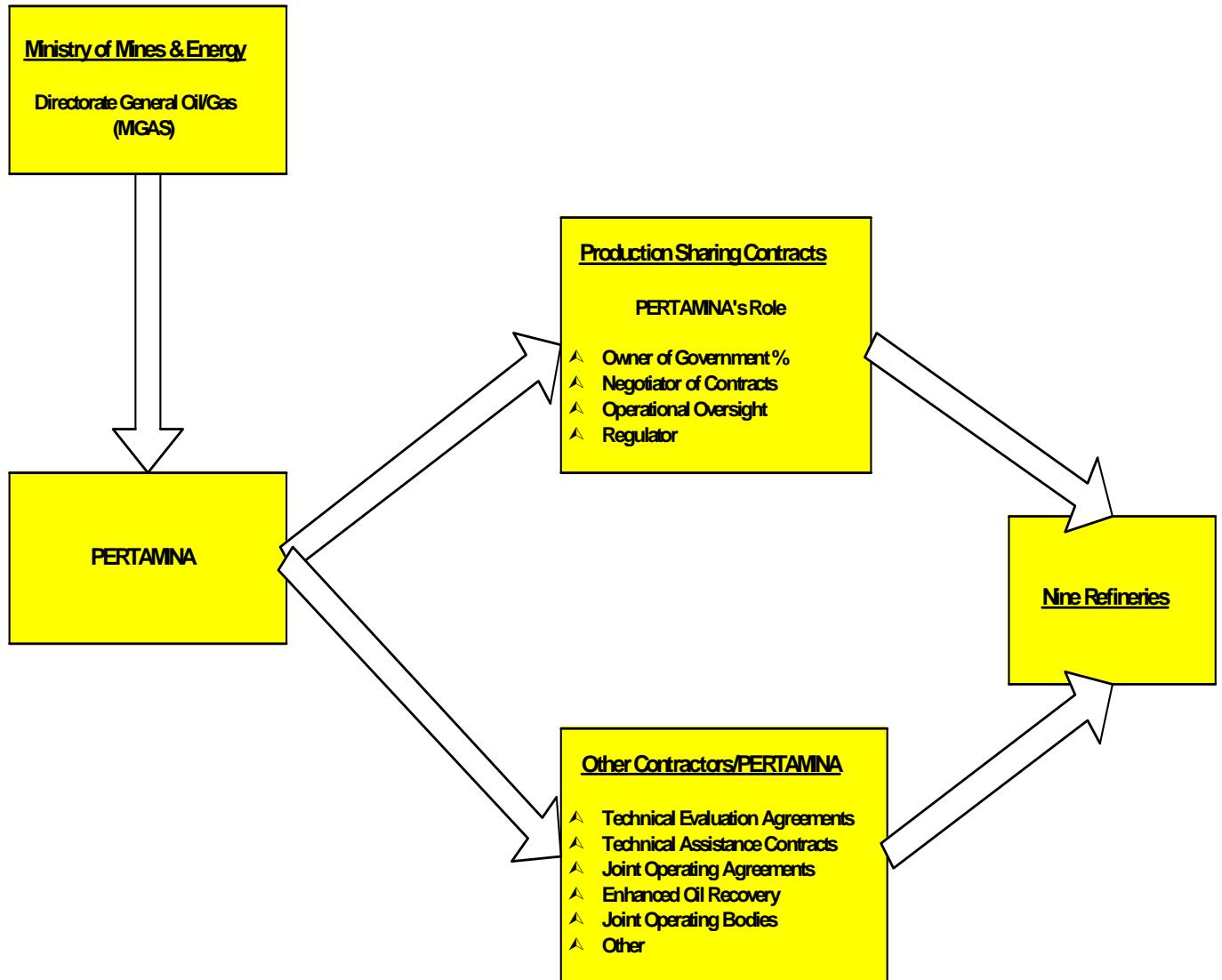
transparency in the accounts of SOEs, the country still experiences considerable difficulties in establishing a firm basis for financial reporting. Making Pertamina's upstream accounts subject to the same accounting standards as those of the PSCs will improve the accuracy and transparency of such accounts in subsequent years. In particular, the booking of reserves, now a somewhat unclear entry in Pertamina's accounts, will be entirely comparable to that of the PSCs starting in 2008.

Now that it is clear that the company's future lies in its upstream operations, Pertamina must make energetic efforts to increase its output. Its current production as operator of 49,000 b/d is hardly sufficient to make the company a force in the upstream market. This does not even qualify Pertamina as the largest Indonesian producer (rather Exspan is larger at 54,000 b/d). As a cash-poor company, Pertamina cannot allocate significant sums to upstream operations on its own.²²

The key upstream strategy for Pertamina is to try to leverage its legacy acreage in joint ventures. Such activities are now bearing fruit with the newly-announced Sulawesi LNG project, based on a JV with domestic and international investors. Such transactions permit Pertamina to access the cash of its JV partners, in effect monetizing its resource position, without having to provide either technology or cash to the venture. The company's strategy for the exploitation of the Cepu oil field in Java has been similar, with P.T. Pertamina obtaining a 50% share in the field's output.

²² Preliminary reports for 2006 indicate that Pertamina made upstream profits of more than \$110 million, though this result has not yet been publicly released in an audited financial report.

FIGURE 2: PERTAMINA: PRE-2001 DECISION STRUCTURE



Pertamina's upstream organization is functional and currently consists of an Exploration and Production Directorate with regional branches. The current structure is shown below.²³

FIGURE 3: PERTAMINA: CURRENT CORPORATE STRUCTURE



²³ http://www.pertamina.com/index.php?option=com_content&task=view&id=4&Itemid=55

Under the terms of the Oil and Gas Law of 2001 and the Pertamina Law of 2002, both the contractor management and the “other business” directorates have been removed from the corporate structure.

The functional divisions in the Upstream Directorate include the following:

- Exploration for oil and gas
- Exploration for geothermal energy
- Development Activities
 - Oil
 - Gas
 - Geothermal
- Oil production
- Gas production
- Geothermal production

In this new status, Pertamina has surrendered its quasi-governmental role as the implementing entity for production sharing contracts (PSCs) to a new upstream agency, BP Migas. As the table above shows, Pertamina no longer has lead responsibility in any area of sector governance. BP Migas is responsible for monitoring implementation and compliance with existing PSCs and advises the government (Ministry of Mines & Energy) on future terms and exploration blocks.

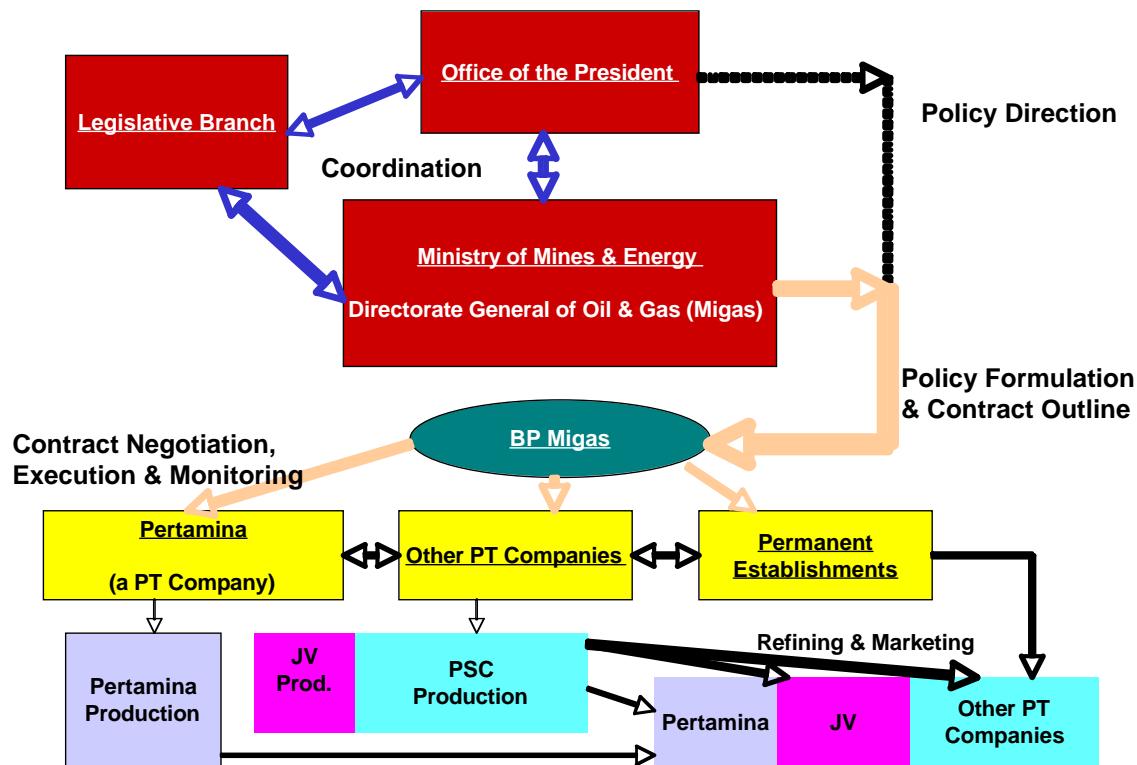
Pertamina was previously governed by a Board of Commissioners, all government ministers, plus a Board of Directors, all officers of the company. Since the legal and structural changes, Pertamina will be governed by a government Board of Commissioners, like any other state-owned enterprise. There are no outsiders or

foreigners on either Board at this time, nor can there be as long as Pertamina is a state-owned limited liability company.

Political changes in the country make a reprise of Pertamina's previous role and mode of operation almost impossible to contemplate. Unlike a number of countries with strong leaders in which the economy seemed to implode once the leader left, even though the strongman might have been largely responsible, Indonesia experienced its financial crisis on Suharto's watch. The ending of official censorship makes the return to a secret governance mode difficult to imagine. And finally, many of Pertamina's former political allies have now established their own upstream companies. Therefore, Pertamina is no longer the only potential Indonesian partner for upstream investments. The Golkar Party, which once supported Suharto, his family and Pertamina wholeheartedly, now is not the dominant player in parliament. More importantly, the Indonesian legislature now has real power and it is a fragmented body based upon coalition politics. Parties and politicians seek to tap into the largesse of the oil and gas industry and access to power is more dispersed than it was under the New Order.

The Indonesian system was devised post-1998 as an approach that would introduce formal separation of powers between policy, implementation and cash flows. Under this new system, Pertamina is just one of many producers, and the state's ownership interest in underground oil and gas is expressed through the upstream agency, rather than the NOC. Under the new law, the listing of upstream roles and responsibilities for any other production sharing contractor is exactly the same as those for Pertamina.

FIGURE 4: UPSTREAM INSTITUTE STRUCTURE, POST-2001



Pricing of crude oil is done using a reference price (Indonesia Crude Price or ICP) that is calculated as a market basket of various crudes available in the region. This calculation is now in the hands of the upstream implementation body.²⁴ Pricing of domestic refined products has moved toward market levels in recent years, largely due to the country's financial crisis in 1997-98, and the subsequent intervention of the IMF and World Bank.

Downstream structure has not yet been definitively established, though Pertamina has lobbied the government for legal title to the refineries that it does not now own. At present, Pertamina owns about 135,000 b/d of capacity, 125,000 of which is operable.

²⁴ The ICP is based on periodic auctions of Indonesian crudes, carried out by contractors for BPMigas, in a transparent bidding arrangement, a far different arrangement than the “negotiated” ICP prior to the new Oil and Gas Law of 2001.

The remaining 875,000 b/d of the country's refining capacity is owned by the Ministry of Finance and operated by Pertamina.

With a new organization of supervision and collection of the government's share of oil and gas revenues, the role of Pertamina shrinks significantly. Where previously Pertamina executives would speak of "Pertamina's 1.5 million barrels per day of oil and 9 billion ft³ per day of gas output, with our production sharing contractors," after the reforms Pertamina could only claim credit for the 50,000 b/d of its own licensed oil production (133,000 b/d including JVs) and roughly 1 billion ft³/day of gas (including JVs). Shorn of its regulatory and governmental roles, Pertamina simply matters less in the upstream arrangements.

Lacking the cash, expertise and experience in a more market-oriented environment, Pertamina suffered a significant loss of status and the desire on the part of other operators to venture with the company was tempered by its past associations and its lack of capital. For Pertamina, virtually the only way to regain some of its previous status was to form joint ventures on its legacy properties, in effect adopting the approach of the Nigerian National Petroleum Corporation. Rather than emulate Petronas which was investing profitably abroad under an internationalization program, Pertamina is moving in the opposite direction – less access to capital, less output, less expertise and less international exposure.

Downstream activities are still managed by Pertamina. Although Pertamina owns just one refinery of consequence, Balongan in West Java, it runs the other refineries²⁵ as

²⁵ The country's other significant refineries, Cilacap, Balikpapan, and Dumai are owned by the Ministry of Finance. Pertamina owns a training refinery at Cepu and a small refinery, now closed in Papua. Finances are significantly intermingled, however. For example, the project finance note

well as the logistics chain in a semi-integrated manner.²⁶ As long as prices were controlled and heavily subsidized few independent firms have been willing to take a chance on a government-reimbursement scheme to make market entry profitable. Until November, 2005, all of the retail filling stations in the country²⁷ still purchased their products from Pertamina. Figure 5 shows the pre-liberalization structure of downstream activities.

In an effort to preempt competition in the refining segment, Pertamina has announced numerous JV oil refining projects during the past 2-3 years. Partners have included Sinopec, Iran's NIOC and private Saudi interests. Not one of these projects has reached financial closure yet, and the downstream implementation failures are implicated in each of the stillborn refinery ventures.

The latest refining investment announcement, a new 300,000 b/d refinery in Sulawesi with NIOC of Iran, will rely almost entirely on imported crude oils, 200,000 b/d of which will be sourced in Iran. Where P.T. Pertamina would find its share of the \$5-6 billion investment cost for this venture is unclear. Nor is it clear why the rapidly growing private presence in the retail segment would want to source its products from the Pertamina-NIOC JV refinery. However, the constant stream of refining JV announcements does have one significant impact; it deters other investors in the country's refining segment. Significant foreign interest in making upgrading/expansion investments

for Pertamina's Balongan refinery is paid through the proceeds to gasoline sales by the MoF-owned Balikpapan refinery.

26 The new downstream regulations make it possible for outside firms to participate in storage, transportation and import of refined products. Pertamina is prohibited from using its control of infrastructure in an anti-competitive manner.

27 Many of the country's retail outlets, especially in West Java, are owned by private firms that purchase all of their product from Pertamina. They sell at regulated prices with a fixed retail markup.

at the Cilacap, Dumai and Balikpapan refineries continues to be deferred as a result of the overall uncertainty regarding new refining investments by Pertamina and its putative JV partners.

FIGURE 5:

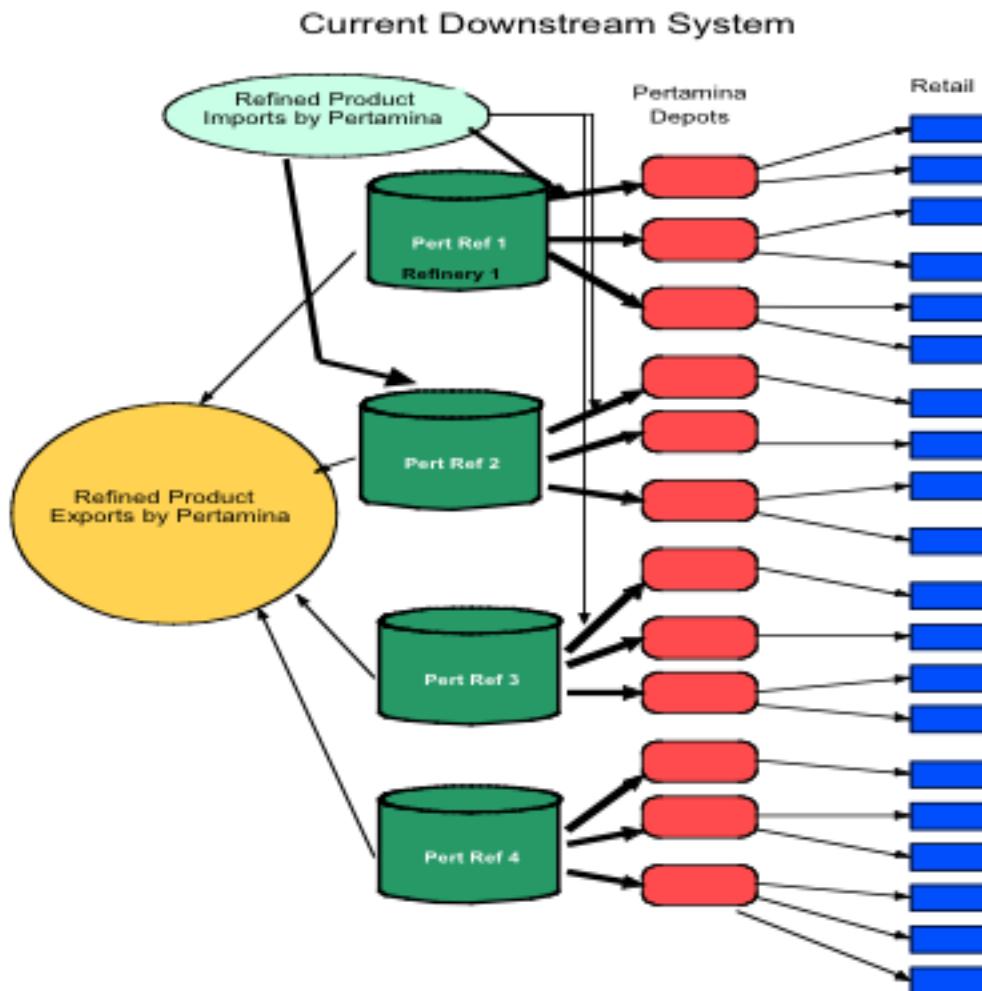
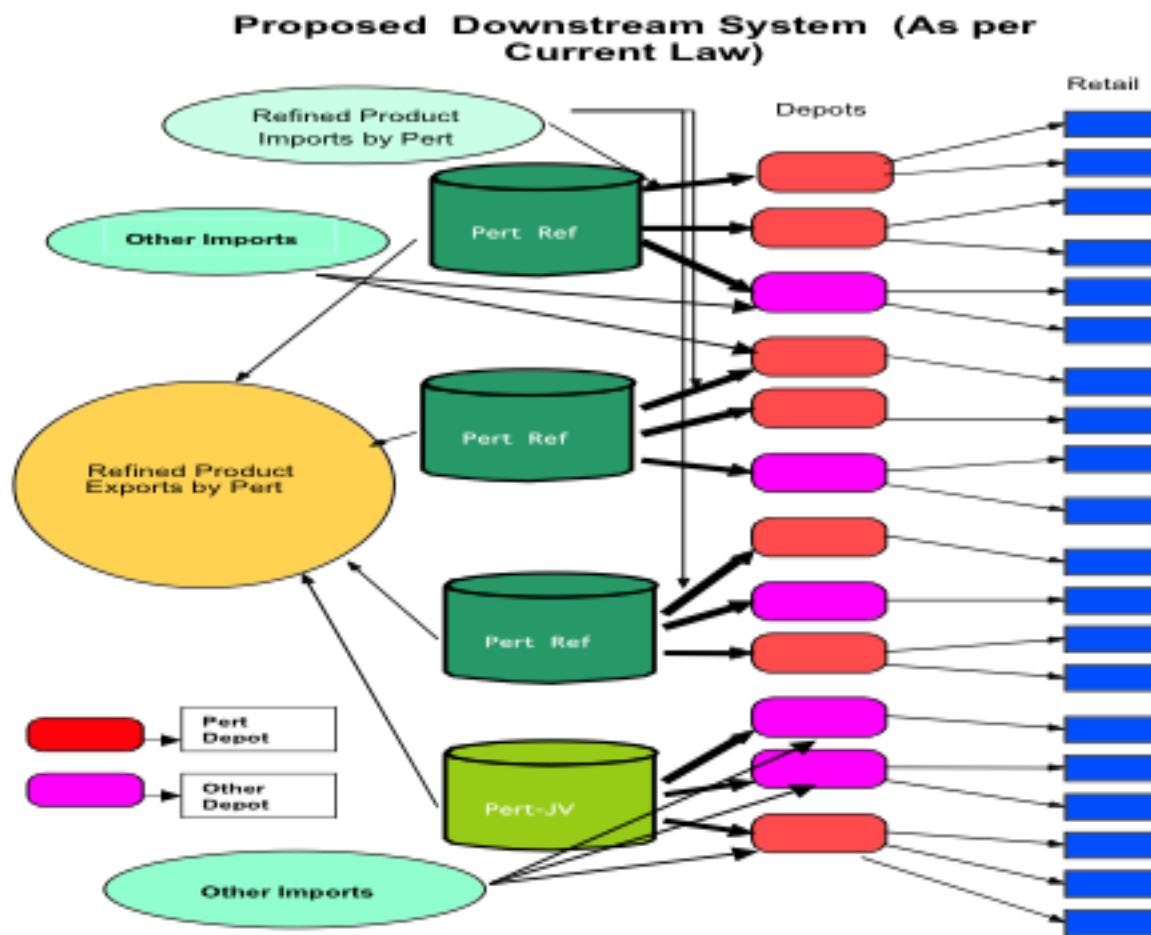


FIGURE 6:



STRATEGIES AND BEHAVIORS

The most important factor determining Indonesia's behavior as regards upstream investment is the steadily worsening terms of exchange in the oil sector. Although the country only became a *physical* net importer of oil sometime in 2005 or 2006, it was a financial net importer as early as late 2003, when the value of crude oil exports plus refined product exports failed to match the cost of crude and product imports.²⁸

²⁸ U.S. Embassy Jakarta Petroleum Report, op cit, page 52.

Upstream Oil

Pertamina's upstream oil fortunes now rest to a great degree on the fate of the Cepu field in Central Java. This field, believed to contain at least 1 billion barrels of oil, is the largest single oil discovery in the country in at least 25 years. Pertamina relinquished its exploration rights to the field in the late 1990s. ExxonMobil then took over the exploration contract and discovered the new deposits. Pertamina now insists that they should have senior rights to ExxonMobil regarding operation of the field. This was widely seen in the PSC community as a naked asset grab by Pertamina. The President had tasked the Finance Minister, Boediono, as the lead arbitrator, to arrange an equitable settlement. A settlement was finally reached in third quarter 2006 whereby both Pertamina and ExxonMobil get 45% shares in the field and ExxonMobil gets to operate the field. The other 10% is to be distributed to provincial government entities. Since the output from Cepu has already been factored into estimates of future output, and since that level of output will continue to decline until Cepu comes on stream sometime in 2010, it is likely that the output from Cepu, estimated to be some 170,000 b/d at peak, will only slow, but not reverse the country's declining output from existing fields.

LNG: Pertamina Loses the Plot

For many years Pertamina, the operator of the country's gas liquefaction plants, would proudly point to its flawless record in delivering LNG to its customers in Japan, South Korea and Taiwan. The country's two liquefaction facilities, at Arun, North Sumatra, and Bontang, Kalimantan, were operating at full tilt, monetizing gas that would otherwise have not found domestic markets.

The first indication of trouble was the failure of Mobil to replace its gas reserves at Arun, setting the stage for a gradual closure of the liquefaction trains at Lhok Semaue, Sumatra. As long as production increases from Bontang could match the declines at Arun, Pertamina could continue to field its claims of supplier reliability.

Under new ownership, and far less important to the parent company, the Arun plant became a pawn in a multi-player political game, which all of the parties lost. ExxonMobil, facing difficult negotiations with regard to Cepu and Natuna Island, a giant gas field in the South China Sea, was hardly in the mood to allocate its capital investments in order to extend production in the restive province of Aceh, with Pertamina the primary beneficiary.

Acehnese separatists, believing that the Arun plant represented a cash cow that was rightfully theirs, did little to cooperate on matters of plant and local security. Neither ExxonMobil nor Pertamina was anxious to turn over revenues to this movement, now the core of the provincial government. However, the most important issue involving Arun today is that it has depleted some 90% of its recoverable reserves.

Pertamina, the owner of all of the country's the LNG plants and the seller of record for the put or pay gas supply agreements, apparently did not plan forward sufficiently to see the implications of its liabilities for purchasing LNG cargoes spot to meet their contractual obligations. The company has insisted on receiving preference for its upstream position, even though it doesn't have the funds to make the development and production investments. A better policy for both Pertamina and Indonesia would have emphasized a speed up of new production contracts with established producers.

To compound matters, new production at Bontang failed to live up to expected output levels, idling some of the liquefaction trains at times. Again, there was no specific action aimed at increasing gas output, despite the understanding of the financial implications for Pertamina of delivery shortfalls.

The net result of all of this was falling output at Arun, falling output at Bontang and rising purchases of spot LNG by Pertamina to meet its obligations. In spite of purchasing literally hundreds of spot cargoes, Pertamina was unable to meet all of its supply obligations and had to instruct its customers to go elsewhere for supplies.

In the midst of a worldwide boom in LNG, generally believed to be a classic sellers' market, Pertamina was forced into the position of a buyer.²⁹ Moreover, the inability of the company to make good on its contracts has harmed its reputation for reliability, further impairing the company's credibility on new projects.

The company's newest LNG projects, Tangguh and Donngi, have both taken more time to reach fruition than was expected, in part due to buyers' preferences for more diverse sources of supply. Meanwhile, Natuna Island continues to retreat toward the horizon, still mired in acrimonious negotiations in contrast to Trinidad and Tobago, where swift decision-making and responsiveness to changes in LNG market conditions have allowed a decidedly modest gas resource to power the nation to prosperity.

The two new projects should be sufficient to boost the country's LNG output back to its late-1990s peak levels of about 27-28 million tonnes per year, at least in the short run. However, the closure of Arun in 2014 and continuing gas production declines at

²⁹ Due to the absence of segment-specific financial reporting, it is impossible to determine if and to what extent the purchase of spot LNG cargoes has harmed either Pertamina or the government of Indonesia.

Bontang augur poorly for the long term strength of LNG exports. The country will need significant new output at Tangguh or at some new prospect by the middle of next decade to maintain its current role in world markets.³⁰

Working against higher LNG exports are two other factors: (i) growing domestic demand; and (ii) growing demand among Indonesia's neighbors, thereby facilitating pipeline exports rather than liquefaction. As the country's demand for natural gas grows, especially for power generation on Java, pipelines from Sumatra and Kalimantan have become more attractive than LNG for the country. Certainly, wellhead netbacks are greater for domestic gas use as long as gas is priced based on markets.

In addition to rising domestic use, increased gas demand in Singapore and peninsular Malaysia have led to exports to the city-state via a pipeline from Sumatra. Once again, wellhead netbacks for such exports exceed those of LNG. If Natuna Island is to be developed, it is likely that the "Trans ASEAN Pipeline" network, a collection of undersea gas transmission lines under the South China Sea now linking Sumatra and Singapore, Malaysia and Thailand, will be able to use the output from Natuna. LNG may also figure into the development of Natuna Island, but probably not as the primary offtake for the gas.

Downstream Strategies

Throughout the 1980s Indonesia, then still a major oil exporter provided heavily subsidized middle distillates (kerosene and diesel fuel, called ADO locally) to households, farmers and the transportation industry. It was well understood during that period that

³⁰ New LNG developments may not necessarily help Pertamina regain its role in that space. Under the new rules for the sector, it is doubtful that Pertamina can be a conduit for the extremely attractive debt-financed liquefaction plant transactions that allowed the construction of Arun and Bontang, each of which has an implicit government of Indonesia guarantee.

such subsidies would misallocate fuel resources and that they were probably not well targeted. Nevertheless, the fuel pricing policy was seen as one of the only practicable methods of providing the benefits of the country's oil wealth to the masses.³¹

By the late-1980s the total value of the fuel subsidy was headed toward an annual cost of about \$500 million, about 0.5% of GDP.³² This cost, though burdensome, was certainly not dispositive as regards the fate of the country's economy. Other misallocations of resources were far more significant. In fact, some of the fuel subsidies probably helped to counteract inefficiencies and shortages elsewhere in the economy, especially with regard to electricity generation and public transport, where the subsidized diesel fuel was used to fuel self-generation for factories and businesses and small, privately-owned buses. In both cases, the subsidized fuel made economic an essential service that the state's monopoly suppliers could not provide in adequate volumes with reasonable prices. The kerosene subsidy had no direct economic role, but rather was seen as an in-kind income transfer, especially for the poor on Java. Gasoline was generally sold at or near its actual cost of supply throughout the 1980s and 1990s.

In 1988, the World Bank, as a part of support for an overall economic liberalization program, insisted that the government of Indonesia reduce its fuel subsidies and bring domestic energy prices to some type of rough parity with world levels. The

31 The program worked basically like this: Pertamina, the state oil monopoly, would total the costs of the crude and refined products (domestic and imported) that it needed to supply the domestic market. Against this it took the receipts from refined product sales plus the crude exports that offset crude imports. The differential was to be paid by the Ministry of Finance. Most of the domestic crude oil was priced at the heavily discounted DMO (Domestic Marketing Obligation) price or at the even lower "pro-rata" price. However, imported crudes used in the Cilacap refinery were included at their world prices of the day.

32 Domestic demand for refined oil products in 1989 was about 400,000 b/d. With relatively low oil prices, the sales-weighted value of a barrel of oil was about 60% of the market price of crude at the time.

Indonesian government was not generally inclined to implement such a pricing program, but went along with the World Bank at least for a while. With no high level political support, the initial effort to bring oil and gas prices to market levels was abandoned. However, the run-up in crude oil prices in 1990-91 increased the cost of the program to the country to more than \$2 billion annually.

As long as significant oil and rising gas exports continued throughout the early and mid-1990s, and as long as crude oil prices were stable or rising, revenues more than offset the increased costs of oil subsidies. In 1992 alone, the *additional* government takes from oil and gas amounted to more than \$3 billion, more than offsetting the additional \$1 billion in subsidy costs.³³ Ironically, in the late 1980s and early 1990s the government would have been ideally positioned to extinguish the subsidy program. The economy was growing rapidly, a testimony to the beneficial effects of economic liberalization in the 1980s; many commodities such as rice and cooking oil, formerly non-market goods, were now bought and sold freely at largely uncontrolled prices³⁴; and most importantly, the government had putative legitimacy in the area of economic and social policy owing to the evident success of the liberalization program; and Islamic radicalism, now a major national element of oppositional strength, was limited to a few regions of the country.³⁵

33 It is important to note that the cost of the subsidy consists of two elements, the cash cost as described in footnote 15, and the opportunity cost. This latter amount represents the actual market value of crude oil sold at reduced prices to the government's refineries, the costs of owning and operating those refineries while earning negative returns, and the costs of acquiring excess imports of middle distillates to meet a subsidized demand while exporting lower value straight run refinery products.

34 The government maintained floor prices for farmers for important agricultural crops and would intervene if shortages resulted in local prices for commodities that were "too high."

35 In a move not limited to Indonesia, Suharto is credited with promoting an increased role for Islam throughout the society in the 1990s as means of quelling dissent in an increasingly fractious society. See *Inside Indonesia*, #52, October-December 1997.

For quite a while, at least until the mid-1990s, the program was not really big enough to affect the economy, the government was still quite popular in the early 1990s, though it was losing both focus and control over significant elements of the economy and society. Of particular importance in the 1990s were the following trends in the Indonesian polity: (i) increasing public perception, correct as it turned out, of widespread corruption at the top of the political system; (ii) increased financial exposure of the Indonesian economy to external financial events; and (iii) an increasing role of Islamic opposition to the government.

When the regional financial crisis hit Indonesia in 1997-98 the Ministry of Finance and the Central Bank were no longer run by experienced technocrats, but rather by friends of the president. A large-scale program to promote independent power projects (IPPs) to meet most future generation needs was generally perceived as overpriced and rife with insider transactions. Low world oil prices had made the oil product subsidies *relatively* insignificant until the financial crisis hit in 1997-98. At roughly 26% of oil sector revenues and 0.75% of GDP in 1996-97, the subsidy program was “affordable” until the steep devaluation of the Rupiah pushed up the domestic cost of subsidizing internationally priced commodities, including the increasing share of imported refined products and crude oil in the domestic consumption basket.³⁶ The oil subsidy program cash cost rose sharply after devaluation, to about \$3.6 billion in 1998-99 based on consumption of just less than 900,000 b/d, up from \$900 million the year before. Consumers and taxpayers had generally concluded that they would be stuck with the bill for oil product price increases and new power generation.

³⁶ *Petroleum Report*, op cit, Appendix 1, 5.

Against this background of perceived corruption and mismanagement, President Suharto signed an agreement with the IMF to immediately move domestic energy prices to world levels. In fact, the magnitude of the subsidy program was not yet a major economic impediment, given the low international oil prices in 1998.³⁷ However, the atmospherics for reform, so strong in the early 1990s, were all different by the time the financial crisis hit. The belief was widespread that Suharto and his cronies had simply looted Pertamina, the state oil company, and that the proceeds from this price increase would once again be stolen.

Suharto was forced to rescind the oil price increases and then to leave office. The subsidies would remain in place for the time-being. With his departure came three years of weak government as well as a freed-up press and a growing civil society. Vigorous debate about the role of Pertamina was fueled by reports in 2000 that a “special audit” of Pertamina, funded by the IMF, had turned up evidence of waste, fraud and theft aggregating to more than \$1.5 billion annually. This atmosphere provided support for those who sought substantial reform of that state enterprise and a new oil and gas bill that would remove from Pertamina its governmental roles and responsibilities in the oil sector.³⁸

Domestic oil prices stagnated in nominal terms while the rupiah declined in value and domestic demand surged. The rise in demand coupled with the fall in the country’s oil output raised the sensitivity of the economy to changes in world oil prices in two ways -- directly, through government profit share revenues, and indirectly, through subsidy

37 By 2000, a slight rise in oil prices took the total cost of the subsidy program to \$5 billion.

38 In that year the cash cost of the subsidy program was about \$7.6 billion, roughly 24% of total government expenditures and more than 75% of oil and gas receipts by the government. See U.S. Embassy, Jakarta, *Petroleum Report 2005*, Appendix 1, 5.

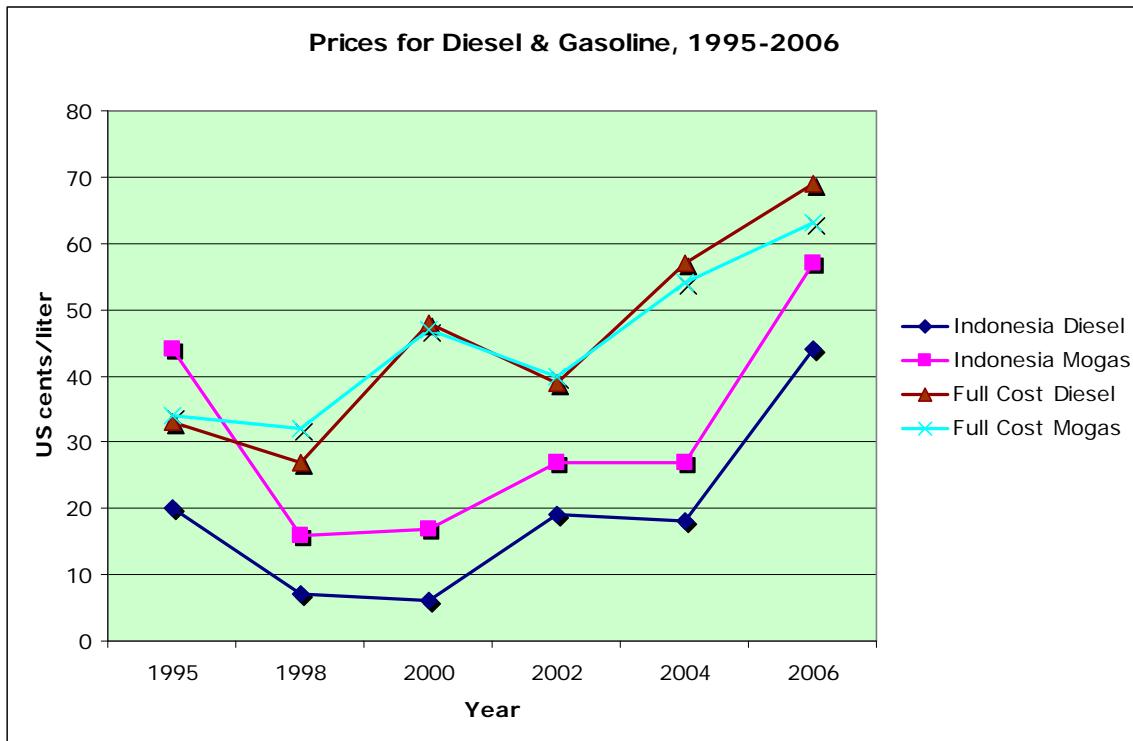
costs for imported refined products and crude. In 2001, the cash cost of the fuel subsidy was about \$7 billion, and consumed roughly 75% of the government's take from the oil and gas sectors. By 2002 domestic oil product demand had passed 1 million b/d and even with severe upward price adjustments for refined products, the cost of the subsidy program had fallen only by 50% to \$3 billion in cash costs. Without further radical steps, the cash costs of the program were projected to surpass \$5 billion in cash costs by 2004, a projection that was exceeded in reality by more than \$2 billion.

As a part of the government's economic program, and with the assistance of USAID, the Ministry of Mines and Energy and the Ministry of Finance in 2001 put together a program to phase out subsidies once and for all. The starting point for oil product prices was 15-50% of world market price levels for selected refined products. The program contained the following key elements:

1. Move gasoline and industrial fuel prices to or near market levels by the end of 2003, the IMF agreement date (see Figure 3 below);
2. Start an aggressive public relations campaign to explain the changes in the country's oil sector and fiscal realities.
3. Enlist respected public officials, journalists in the campaign
4. Clean up the oil sector – make revenue accounting more transparent and punish malefactors
5. Make use of religious parties to support the program – former president Wahid enlisted his large Islamic party to support the oil sector reforms as a part of good government. This ensured a continuous flow of good public relations for the program.

FIGURE 7: PRICES FOR DIESEL & GASOLINE

Relative to World Market Levels



Source: GTZ, International Fuel Prices, 2007, Eschborn, Germany.

As figure 3 shows, the 2001-03 price adjustment put gasoline and ADO almost to market levels. Indeed industrial customers using ADO, including distributed generators, had to pay market prices for fuel starting in 2003. However, in 2002 President Wahid was removed from office, replaced by Megawati Sukarnoputri, and during her subsequent campaign for election to the presidency in her own right, oil price reform was left to languish.

By 2005 the combination of higher world oil prices, rupiah devaluation and growing domestic demand had dug an even deeper hole for the oil subsidy program and for oil's contribution to the Indonesian economy. At the end of 2004, the total value of

oil and gas exports, about \$16 billion, was not much more than the value of crude and refined product imports, about \$11.7 billion, and with falling LNG output at Arun, the financial turnaround in oil's contribution to the country's economy was widely seen to be fast approaching.³⁹ With the country's economic recovery imperiled by oil subsidies, and with a new president, the architect of the 2001 oil sector reforms when he was Minister of Mines and Energy, the final four pieces of oil subsidy reform were put into place in October 2005.

With the end of the retail subsidy program for all industrial consumers and a reduced subsidy component for other consumers,⁴⁰ regional and international oil companies are taking another look at Indonesia's retail and refining segments. At the present time the country is short at least 50,000 b/d of refining capacity.⁴¹ More importantly, the country's upgrading capacity falls well shy of the demands for middle distillates, kerosene, and clean international spec fuels more generally. In fact, Indonesia is the only major country in the region that still retails leaded gasoline. To provide unleaded gasoline in the Jakarta area the country has relied on imports of high octane blending components.

However, the expiration of the South China Sea refining capacity surplus, combined with demand growth of more than 75,000 daily barrels each year, makes additional upgrading units and new refinery construction essential to the continued economic health of the country. Already, Pertamina has tried to get out in front of this

39 Petroleum Report, Op Cit, 6.

40 Still projected by Pertamina to total around US \$7.5 billion for 2007.

41 That assumes that all of the country's 1,024 million b/d of refining capacity is operable. The general consensus in the industry is that actual operability is about 0.975 million b/d, leaving net imports in excess of 100,000 b/d in 2004 and probably close to 175,000 b/d today.

trend by signing an agreement with Sinopec to build a new refinery at the site of the Tuban chemical works in East Java. However, rising construction costs and delays in the settlement of the Cepu Block disagreement (the likely source of the crude for Tuban) have caused Sinopec to reconsider its role.⁴² Other refining investments with foreign partners have also been announced. These include expansions of the Cilacap, Dumai and Balikpapan refineries, all MoF properties.

For the time being, imports of refined products are the likely sources of new supplies for both Pertamina and other likely retail suppliers, including Shell, Petronas and Caltex. The ultimate structure of the downstream segment is likely to resemble the relationships shown in Figure 6 more than those of figure 5. New market entrants will insist on some ownership and Pertamina will probably have to form a new downstream structure to remain competitive. Without ultimate title to refineries, Pertamina will find it difficult to obtain the capital necessary to meet its own goals.

FUTURE INVESTMENTS AND FINANCING POST-REFORMS

In the past, most of the funding for Pertamina was derived from its fees received for representing the government's interest in upstream production and gas liquefaction. The quite substantial losses in oil refining and marketing were made up directly by the Ministry of Finance on an *ex post* basis. Almost all large investments were financed by the government (refineries, pipelines, terminals) or by private investors (LNG liquefaction plants).

⁴² *Oil and Gas Journal Online*, February 15, 2006. For more on Cepu controversy, see previous section. It is not clear that Pertamina has the legal right to joint venture with Sinopec at the Tuban site, since that is also a Ministry of Finance asset. The legal status of the non-Pertamina refineries and their ultimate disposition remains a murky area.

In the company's new environment, it will need to finance its own undertakings, including exploration and production. For the next few years it is expected that Pertamina will make extensive use of joint ventures and partnerships to provide funding for new activities. The company is not yet in a position to go to financial markets to obtain financing for its new ventures and programs. Successful completion and release of audited financial figures later in 2007 or 2008 will enable Pertamina to obtain roughly \$500 million in new debt.

With the expiration of the IMF agreement as of the beginning of 2003, the Fund no longer has an active program involving the oil sector.⁴³ The IBRD has shifted its emphasis out of energy and into other types of lending; hence its direct influence on Pertamina is quite limited as well.

With the passage of the new legal arrangements in the oil and gas sector, Pertamina, formerly an opaque entity will be forced to issue the same financial statements as other SOEs in Indonesia. In particular, this means:

- Audit by the government auditors, the Financial and Development Supervisory Board (BPKP);
- Financial policies and practice, standards, reporting, audit and management control mechanisms (transparency).
- Issuance of an abbreviated annual report and financial statement (*without* a sources and uses of funds section);
- Audit and management control are now exercised through a board of directors, appointed by the government, through the Ministry of State Enterprises;

⁴³ The IMF might once again take an active interest in the country's oil sector if the government's oil refining assets were to be transferred to Pertamina without adequate compensation. However, such a move is speculative, though highly desired by Pertamina.

Essential facts about Pertamina, its operations and personnel, are now obtainable from the Government. In the past, much of such data were considered to be privileged information bearing on state security. Overall, transparency has improved a great deal over the past three years.

Pertamina has improved its financial performance in the past few years, and now expects to make a fiscal 2007-08 profit of about \$2.7 billion. However, unlike its private competitors, Pertamina will be required to (i) pay a dividend to the government; and (ii) obtain approval from the government prior to making major investments. As a result, the company, while far stronger financially than in the past, will still find it difficult to compete on an international scale with either the IOCs or with its regional NOC competitors.

FOREIGN AFFAIRS

Indonesia has maintained generally good relations with most of its Asian neighbors for several decades. While there was a lengthy period of broken diplomatic and economic ties with China, the two nations have reestablished a solid relationship over the past decade. The Timor independence movement led to strains with Australia, but that is no longer a contentious question. Today there are no significant issues that divide Jakarta from other Asian states. Indonesia has never used its oil and gas resources as a tool in furthering its foreign policy and its lack of an overseas investment presence leaves it free of international problems such as have been faced by Petronas of Malaysia.

Pertamina desires to develop an international profile similar to that held by Petronas. However, Pertamina, once stripped of its governmental and regulatory functions, has little cash to invest in upstream operations. As such the company hopes to

engage in joint venture activity and joint operational agreements, using its extensive block holdings as an enticement. The company has made two small overseas investments to try to establish some experience and expertise. One upstream operation in Iraq has been closed down for security reasons. The second investment, in Libya, is intended as Pertamina's proof of concept for its international strategy.

In addition to the company's efforts to gain traction upstream, Pertamina is attempting to wrest legal title to all of the country's refineries, totaling more than 1 million b/d of capacity. Pertamina hopes to upgrade the current refineries by entering into agreements with IOCs to pledge various output streams as collateral for loans, investments and assistance. It is the company's intention to maintain ownership of all of the refineries, limiting outsiders to specific technology, participation and offtake agreements.

The Trans-ASEAN Gas Pipeline (TAGP) noted in the gas section above, can tie Indonesia ever-more tightly with the fortunes of Malaysia and Singapore. Gas pipelines have the potential to link all but two of the ASEAN member states, Vietnam and Philippines, with significant volumes of trade. However, the TAGP has been difficult to launch. Initially proposed in 1997, a memorandum to study the idea was signed in 2002, but it remains to be implemented. The map that follows shows both existing and possible future gas links between and among ASEAN member states.



Solid lines represent existing pipelines; dashed lines represent pipelines under consideration.

For Indonesia a development plan that ties the Natuna Island gas to its fellow ASEAN members works against the nationalist trend in resource use. Between the remoteness of Natuna Island, the high CO₂ content of the gas and the country's ongoing squabble with ExxonMobil, the contractor for those blocks, development has been stalled for many years. Indonesia will have to weigh the satisfaction of driving a tough deal with ExxonMobil against the reality of the heavy technological and financial demands for developing Natuna Island, the ability to replace Sumatran gas now going to Singapore with Natuna gas so as to redirect some of that Sumatran gas to domestic markets, and the

potential for a significant LNG project using the Natuna gas. In addition, “facts on the water” in the form of tangible investments and links with two other ASEAN countries might temper some of the territorial claims that China has made on the South China Sea littoral; claims that include Natuna Island.

Japan has an abiding interest in peaceful and prosperous development in the ASEAN states. In particular, Japan wants Indonesia to remain “on track” as regards development and stability. Consequently, the country has been loath to press liquidating damages claims on Pertamina, and hence, the Indonesian government for failure to deliver LNG in the past few years. Indeed, Japan has been eager to participate in whatever LNG prospects Indonesia has developed recently, witness the role of Mitsubishi in the Donggi field gas and LNG development in Sulawesi.

The gas-short ASEAN members, peninsular Malaysia, Thailand and Singapore, would all benefit from a trans-ASEAN pipeline system, one that linked at least four of the countries. From the Indonesian point of view, this would cement their role as the major geopolitical player in the association, the one with the ability to more closely meld the economies of the ASEAN member states. Indeed, it is difficult to imagine Indonesia being able to justify the development of the Natuna Island resources without corresponding offset and swapping agreements with Singapore and Malaysia for gas that resemble a true regional market. However, Pertamina relations with Petronas have not always been positive in recent years as Pertamina has been overshadowed by what was once their inferior in the industry.

A regional gas grid is good for Indonesia, providing new upstream revenues for the government, new sources of gas for the region, possible new LNG exports, and

increased flexibility to use Sumatran gas for domestic purposes. But ironically, there is little evidence that such a development is good for Pertamina, *per se*. Indeed, the almost total absence of Pertamina from any consideration on the regional gas transmission system simply stands as one more manifestation of the company's ongoing weakness as a regional partner. Pertamina may benefit as owner of the LNG plant, if the government allows it to participate. However, as was discussed earlier, Pertamina's participation as the owner of the LNG plant and seller of the fuel is problematic, given the supply obligations and consequent financial liabilities that then inure to the Indonesian government as a result.

CONCLUSION

Pertamina has finally started a process of evolution that will move it from being the government's representative to the IOCs and its revenue collector, to the status of a limited liability company without sovereign backing. It starts this process without significant assets save its undeveloped exploration acreage plus the refineries (*if* the government grants title to Pertamina). Its other major source of business, LNG, represents as much a liability as an asset to the company until the company can restore its delivery reliability and resurrect its reputation among buyers.

Both of its major asset categories require significant financial injections to achieve anything close to international standards of operation. A recent study by outside consultants concluded that Pertamina's refining costs were well above levels at other regional oil refiners. Similar benchmarking results were found in upstream segments, as well as trading and marketing.

The company hopes to revive its fortunes through its upstream activities, though it will require partners for any significant venture, and its execution speed is still questionable, even when funds are available. Its downstream position is much stronger, since it currently operates all of the country's refineries without the *de facto*, as opposed to *de jure* rights of foreign operators to enter the market. This position is incompatible with the ASEAN Free Trade Agreement and will eventually bring the company into either direct home market competition with others in the region or some type of market allocation through joint ventures that satisfy the various parties that their interests are fairly represented.

The current status of Pertamina highlights one of the key risks of a PSA/PSC regime, namely the reliance on the PSCs for technology and funding. Unless the NOC makes a concerted effort to achieve world class standards on its own, it can remain in a weakened state both financially and technically. Indeed, such is the structure of Indonesia's oil market that Pertamina is no longer essential to the functioning of the sector, except in its role as operator of processing facilities. Nevertheless, Pertamina retains some power as the "state champion" and its continuing close relationships with both government officials and regulators has allowed it to retain considerable power as a spoiler, as was the case during the Cepu negotiations.

In light of these observations, it is instructive to review the six goals of the restructuring legislation and to assess their effectiveness:

| Objective | Degree Implemented | Outlook |
|---|--|---|
| 1. Remove the special legal status from Pertamina – make it an ordinary state enterprise; | Fully implemented in 2003 | |
| 2. Remove the governmental and regulatory functions from Pertamina and turn these over to specialized independent bodies; | Fully Implemented in 2003-2005 with formation of BP Migas and BPH Migas | Both agencies functioning, but at lower level than envisioned by Law 22/2001 |
| 3. Redirect the government's share of oil revenues away from Pertamina and directly to the Central Bank; | Fully Implemented | Pertamina can still call on government funds to back its LNG contracts, since Government of Indonesia was implicit guarantor of those contracts. |
| 4. Make both contracting and revenue accounting transparent and make data available to the public; | No yet implemented | Pertamina promises audited financial statements this year, but no indication of when or how complete these statements will be. |
| 5. Introduce legal and financial unbundling of Pertamina's upstream and downstream operations; and | Legal separation has taken place, financial unbundling is not clear without audited financial statements | Role and legal status of MoF refineries still unclear. Pertamina has encumbered Balikpapan with the Balongan note and promises to encumber other with additional upgrading investments. |
| 6. Permit new entry into downstream operations. | Effective in November 2005 | Will probably not mean much until almost all subsidies are gone. Pertamina still trying to retain full control of refining sector. |

As the table shows even a well-designed legal restructuring program is difficult to implement. The main problems for Pertamina now are the continuing financial and production problems in LNG, which have frittered away the country's leading role in that industry, its attempt to skirt the spirit of the restructuring law by tying up all of the MoF refineries in new JVs and debt-funded expansions, and the lack of transparency that still surrounds Pertamina's financial performance. If Pertamina is able to complete this round

of refinery upgrades without incident, then they will likely move more toward a downstream focus. However, if the *de facto* refinery monopoly continues, and new entrants to the segment cannot effectively operate and if Pertamina does not deliver on cost and product quality, then the future of the company is imperiled.

One of the interesting and unintended outcomes of the restructuring of the country's oil sector has been the loss (to Pertamina) of upstream talent, with its subsequent absorption by newly-formed Indonesian companies. More than ten *new* domestic companies have entered Indonesia's upstream since 2002, and had a combined production of more than 17,500/bd in 2004.⁴⁴ When combined with production from established domestic companies, Indonesia's private upstream sector now accounts for more than 80,000 b/d, more than Pertamina without its partners and JVs. It is not inconceivable that one or more of these firms will become more significant down the road than Pertamina in output and potentially in standing inside Indonesia.⁴⁵ This outcome stands as a lesson to other NOCs that their status as the main vehicle for oil and gas industry leadership and management is not guaranteed forever and that inefficiency, corruption and poor execution of core responsibilities can wind up with the rise of competing organizations and a diffusion of the NOC mission.

⁴⁴ *Petroleum Report*, op cit, page 11. In the context of the Gulf, 17,500 b/d may not be very meaningful; however, in an environment of declining reserves, these small local companies may be able to revive smaller production areas at a lower cost than might be the case for the IOC or Pertamina. And as a general matter, the IOCs are not interested in such small output levels.

⁴⁵ One of the domestic upstream companies, P.T. Medco, is partnering with Pertamina and Mitsubishi in the recently announced Sulawesi LNG project. Mitsubishi Corp. will own 60% of a 2.5 million tonnes/year gas liquefaction (LNG) plant to be built in Central Sulawesi, and will offtake much of the LNG production from the plant. Pertamina and PT Medco Energi Internasional will each have a 20% share in the \$1 billion LNG plant. Gas feedstock for the plant will come from two fields: Senoro gas field in the Senoro-Toili block jointly owned by Pertamina and Medco and from Pertamina's Donggi-Matindok block in Central Sulawesi. The two blocks have proven gas reserves of about 2.3 tcf. (OGJ Online, Dec. 13, 2006).

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