Petroleum prospects and political power

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Oil is the lifeblood of the Angolan economy and will remain the country's primary, and most secure, source of income – no matter what the political complexion of government in Luanda in the early 21st century.

At the same time, the role of the international oil industry in Angola, as in other African countries, has come under the spotlight with powerful political lobbies (including non-governmental organisations) calling for the imposition of sanctions, and other conventional remedies to long term and complex matters.

The petroleum industry in Angola has a long history. It has been built through coordination with the Angolan state enabling the major oil companies, as well as the independent and national oil companies (NOCs) to inject foreign investment, technology infusion and skills inflows. Ironically, many of these companies originate in the West whose governments only recently recognised the Angolan state leading to often-paradoxical policies and positions taken in the world of real politik.

The petroleum industry in Angola boomed in the 1990s and shows no sign of slowing down, with rising crude oil production, sizeable and sustained discoveries and new potential for gas ventures. As Africa moves into the 21st century, the significance of this is immense, for the continent as a whole and within the global context. Yet the financial benefits that should be reaped for both the government and its people are only marginally being realised. Why?

There may be many reasons for this state of affairs.

Some lay the blame on the petroleum companies, saying that the funds from the oil have enabled the government to finance one of the longest conflicts of the 20th century. As a solution, these critics advocate sanctions, or similar measures, against Angola through the world oil industry. In some cases, sanctions have also been suggested against the foreign companies, who through their commercial ventures have brought Angola to the forefront of African petroleum. It is not clear how these strategies would improve the management of the Angolan oil industry or reduce poverty by uplifting the real incomes amongst the people.

Poverty in Angola is acute. Its roots lie in 25 years of grinding internal conflict between the government and the *União Nacional para a Independência Total de Angola* (UNITA), inter-state Southern African wars, and consequent regional and urban/rural differentiation resulting in massive social dislocation. Addressing both the roots and the outcomes must be a government priority. Through the development of its petroleum industry Angola stands a better chance of alleviating poverty than if it were emasculated by one or another short-term policy – however politically benign or morally persuasive.

The international petroleum industry's involvement in Angola has delivered significant economic benefits, primarily to the Angolan government as the official and contractual adjudicator. This is not an unusual practice in Africa or elsewhere in the developing world. If government has 'failed' to meet its own governance responsibilities and development obligations then it has to be held accountable for that. But, there is relatively little the industry can do, apart from deploying corporate social responsibility-styled policies and seeking to influence local counterparts.

The purpose of this chapter is not to focus on such strategies, but rather to look at the present status of the petroleum industry and explore its potential for development in the light of upstream opportunities, investment and competition. This overview is intended to help people make their own judgements about such issues as:

- whether the beneficiaries of petroleum development have been restricted;
- whether the industry is managed according to 'best practice';
- if the oil bonanza has 'fueled' local conflict;
- if foreign governments have ill-advisedly taken positions hostile to Angolan interests (in preference to supporting their own companies in Angolan ventures); and,
- if patronage and/or corruption are at the heart of the contemporary system.

Indeed, before coming to such judgements, it is necessary to examine the relative success of Angola in the petroleum world, the potential and opportunities that might lie ahead and Angola's long-term future. One also needs to be aware of Angola's strategic significance for corporate oil players and the critical issues that govern Angolan petroleum issues inside a global industry that faces competition and complexity on all continents.

The Angolan petroleum industry and its development

Oil is Angola's the key growth driver, accounting for over 90% of total exports during the 1980s and 1990s. In 1999 between 75% to 90% of state revenue was generated by oil. These funds came from signature bonuses (used as a bid round mechanism), equity profit oil shares accruing to Sonangol as an investment partner in different producer blocks, and specific contract deals concluded in negotiations. Taxes and duties, including corporate tax, also brought in revenue.

The petroleum industry's relative share of the gross domestic product (GDP) appears to have declined between 1994 and 2000, with about 47% of GDP in 1999. However one has to take into account the fluctuating nature of this share which is influenced by crude prices, exploration cycles, contract terms, the changing locus of discoveries and production profiles. However, the basic fact remains that oil is fundamental to Angola now, and will remain so.

A favourable legal and fiscal framework, comparatively low operating costs, and a relatively high discovery rate of reserves have facilitated this development. Recent oil and gas discoveries have enhanced Angola's upstream potential, viz: the exploration, development and production phases of the petroleum value chain.

While the state company *Sociedade Nacional de Combustiveis de Angola* (Sonangol) dominates the Angolan oil industry, the activity of key foreign companies is critical. These include Agip, BPAmoco, Chevron, TotalFinaElf, Exxon and Texaco as well as numerous independents either as operators, partners or equity players. There are even a few national oil companies involved, such as Statoil, Petrobras and Petronas. Such patterns are common in world petroleum and are a standard mechanism for risk sharing.

Although conflict continues between the government and UNITA, stability (as viewed by corporate investors) has probably increased and is expected to encourage more investment in exploration and development. Additionally, there is a major resurgence in exploration and production activities, with the deepwater areas now being hailed as one of the world's major offshore oil producing areas. Although the bulk of oil production still comes from the offshore Cabinda area, it is expected that the deepwater discoveries further south will dramatically alter this pattern in the 21st century.

The oil industry is not labour intensive, mainly because of the large capital requirements of upstream operations, which attracts most foreign investment. About 10 000 Angolans are employed within the industry, of which 1 700 are employed by Sonangol. This is not large but is typical in the oil industry worldwide. The indirect impact of this employment however is far reaching. It would be unrealistic to expect petroleum to single-handedly solve unemployment in Angola.

The use of international contractors is also a common feature of the industry, particularly in highly specialised spheres related to drilling technologies, design and technical inputs. Ideally, more Angolans should be employed, but this issue runs into the imperatives of globalisation and lowest cost operating strategies now applied worldwide.

The downstream sector (refining, marketing and distribution) however is still struggling to recover from the damage caused by the 25-year civil war. The oil refinery at Luanda is old and needs to be upgraded and the operational bottlenecks removed. On the positive side, there are plans afoot to invest significantly in the downstream and in gas.

Sonangol's provision of better official economic and financial data and standard accounts would improve economic management and evaluation within the industry, yet even this cannot detract from the substantial impact of petroleum on the economy.

Growth in the petroleum industry

To fully appreciate the significance of the Angolan oil industry within the global context it is necessary to consider the dimensions of its rapid oil and gas progress, even amidst difficult internal conditions.

The industry has matured and expanded since 1975 when activity was concentrated in the north around Cabinda, the offshore/onshore Congo basin, and the onshore Kwanza basin. Then, there were five operating areas producing 100 000 barrels of oil per day after a peak of 140 000 barrels of oil per day in 1973, with three operators (Gulf-Cabgoc, Texaco and Petrangol). Sonangol was only established in 1976.

By 1993 there were 18 exploration areas and 13 operators (including Sonangol) producing 504 000 barrels of oil per day. The players included Agip, Exxon, Shell, Elf, Chevron (which acquired Cabgoc), Conoco, Total, Texaco, Fina, Ranger Oil and BPX (now BPAmoco). Only four blocks were leased south of Luanda, but the upstream spread had widened by then. The focus on the offshore related primarily to prospectivity as well as the fact that the conflict had very little impact on operations, despite conflict in onshore Cabinda, at and around Soyo (in 1993 and other occasions).

From 1993 to 1999 Angola put down 166 wells. The government awarded the first three ultra-deep blocks (blocks 31–33) amidst intense competition in May 1999, and later in October awarded block 34. This set of moves made the deepwater areas and ultra-deep zones a major investment target for global players. Discoveries in the deepwaters have attracted global interest, and new players – although current production is still dominated by Chevron in Cabinda (a joint venture in which Sonangol has a 41% equity stake, with other partners Elf and Agip).

By mid-2000 the number of companies and partners had increased to 15 operator groups (seven as producers), sizeable acreage has been leased in the deepwaters and the zonal spread had extended further south. The 15 operators produce nearly 800 000 barrels of oil per day, while independents are also active (e.g. Ocean Energy, Occidental, Energy Africa, Seagull, and BHPP).

Angola is expected to put down another 175 wells by 2003 with an anticipated output of 1,4 million barrels of oil per day by the end of 2003. Investment into the upstream totalled US $12,8 billion from 1993 to end 1999, with another US $18,6 billion expected by the end of 2003. An increased percentage of these investments were used for development in the 1990s and this will probably continue until 2005.

Many more developments are in the pipeline. Consideration is being given to building a new refinery at Benguela to process 150 000 barrels of oil per day (perhaps an optimistic venture at this time). Other projects include the Sanha gas/condensate project at Cabinda, a new LNG venture with Texaco south of the Congo river, a gas pipeline to Luanda, and a gas-power plant in Luanda. Meanwhile, the block 17 partners are considering building a gas pipeline to shore at US $2,3 billion while also re-injecting gas into the reservoirs, given the large amounts of associated gas found in the area.

All of these developments make Angola increasingly important in Africa – as a key producer outside the Oil Producing Export Countries (OPEC), as a major exporter of crude, as a potential liquefied natural gas (LNG) player (alongside Nigeria, Algeria and Libya), and as a world-class deepwater player. More importantly, this places Angola in a prominent position on the global stage. This is already reflected in the quality of companies already in place.

Government management of the petroleum industry

Government manages the industry through several institutional mechanisms. These are the Ministry of Petroleum, Sonangol and indirectly, through the influence of the Presidency. The National Bank of Angola (BNA) and the Ministry of Finance monitor tax and payments.

In early 1991 the management of the energy sector was reorganised resulting in the creation of the Ministry of Petroleum, with responsibilities then limited to the petroleum industry. A separate Secretariat of State for Energy and Water was also created to supervise and coordinate all activities in the energy sector and particularly the electric power industry. Luis Filipe has looked after the energy portfolio since early 1999.

Until late January 1999, the Minister of Petroleum was Mr Albina Africano Assis who was then nominated to become Minister of Industry. He was replaced by Mr Botelho Vastoncelos – previously deputy general manager for Sonangol's downstream operations.

The legal framework

The legal framework ensures that petroleum activity is governed by the Petroleum Law (Law 13 of 1978), foreign investment is covered by Law 15 of 1994 and key instruments include the application of a Concession Decree, a Production Sharing Agreement, a Joint Operating Agreement and operating committee rules.

Under the Petroleum Law the state owns all hydrocarbon resources and Sonangol is the sole concessionaire for oil exploration and production in the country. Sonangol's role as concessionaire is to ensure efficient operations in the interests of the state.

The Production Sharing Agreement (PSA) is a legal instrument requiring the contractor to finance all exploration and production operations which, if successful, leads to cost recovery plus a share of profit via a production share. It sets out concession boundaries, accounting needs, and financial/bank guarantees and enables a corporate guarantee for commitments. This PSA is a standard mechanism worldwide and was selected in 1979 after the government considered then existing models. It was adapted to meet local needs, especially for the shallow waters (under 200 metres), and later modified with fiscal incentives applying specifically to the demarcated deepwater zones. The system is fiscally efficient and ensures that more goes to government if fields are highly profitable and, if not, company returns are protected by 'adequacy'.

Through the Joint Operation Agreement (JOA) Sonangol can also be an associate with foreign companies, participating as a partner in the management of oil operations. The government approves such agreements on a case-by-case basis. Similar legal structures are found around the world.

As an associate, or equity participant, Sonangol's primary obligation is to maximise profit. While there appears to be a conflict of interests with its role as concessionaire, this is resolved in practice by placing the emphasis on efficient operations. Interestingly, this is not unique to Angola or even Africa. Only privatisation, or the establishment of an independent licensing system, preferably both, would wholly remove this ambiguity. Nonetheless, it is expected that Sonangol will assume a more supervisory role in future and privatisation while not yet slated may well emerge in some form or another, as it has elsewhere in the world.

The operating committee rules ensure that Sonangol participates in operating committees, consisting of two representatives of the contractor and two Sonangol members, with Sonangol appointing the voting chairperson. The committee monitors, controls and regulates the technical and financial performance of the contractors.

Ministry roles in the petroleum industry

The Ministry of Petroleum has specific managerial responsibilities within the overall Angolan hydrocarbon industry. These are:

- the designation and opening of blocks for bids;
- approving field development programmes;
- authorising the commercialisation of production;
- regulating field production levels;
- defining policy on the flaring of natural gas, in special cases;
- establishing crude prices for tax purposes; and
- reviewing Sonangol's investment programmes and the accounts of foreign venturers.

The director-general of Sonangol reports directly to the Minister of Petroleum. Sonangol provides detailed information and itemised financial statements on all oil-related activities, enabling the ministry to control and coordinate ongoing operations. In performing these functions, the ministry uses external assistance from Sonangol or foreign advisers.

Sonangol and upstream partners

As Angola's national oil company Sonangol has specific and critical roles to play in the country's petroleum industry. It is 100% owned by the state and serves as the business arm of the government in petroleum related activities.

Sonangol's main function is to oversee the petroleum operations of foreign companies. It makes recommendations to the government in respect to areas that should be open for exploration, conducts the bidding process, and handles negotiations. Sonangol reviews the foreign companies' proposals, and evaluates work programmes, budgets and operations. The production-sharing contract empowers Sonangol to audit and evaluate the past activities of oil companies, who are obliged by law to provide the necessary information.

The main activities of Sonangol are the exploration and production of petroleum; the development of services to support petroleum operations; the commercialisation and distribution of refined petroleum products; the export of crude oil; and the management of hydrocarbons and gas development policy. The company also acts in partnership with qualified foreign companies in order to obtain the required financial and technical resources for exploration, development, and production. Hydrocarbon deposits declared non-commercial are the property of the state, and revert to Sonangol.

Sonangol's global strategy has three key aims:

- The preparation of an appropriate legal and contractual framework to promote inward investment;
- The acquisition of new geophysical and geological data to improve knowledge of the hydrocarbon potential of Angola; and
- The promotion of Angolan hydrocarbon opportunities in order to create a competitive climate amongst the companies in the allocation of new exploration licenses.

Sonangol is presently being restructured into a group of companies linked together in a state holding company. Each company is responsible for defined business interests. It is hoped this will create clearer divisions of activity, improve management performance and increase flexibility to meet the needs of the market.

As a result, Sonangol will be in a position to play an upstream role and it is likely that it will be the key partner in projects with foreign companies. The general manager is Dr Syanga Abilio, formerly vice-president of Sonangol. Dr Abilio is also a member of the executive board of the African Institute of Petroleum, an industry-government-NOC entity that promotes partnership and cooperation in African petroleum.

Sonangol is a lynchpin in the government's apparatus and its former head (Joaquim David) is now Minister of Finance. It acts as a revenue conduit for the state and interfaces with the global industry as a joint-venture partner. In addition Sonangol is a bilateral partner with Namibia's Namcor (the state NOC) in a joint study on the Namibe basin, and is a member of the African Petroleum Producers Association (APPA). As the major player in the country's key industry – for foreign exchange, revenue, and tax receipts – Sonangol is a form of state within a state. It has influence, policy significance, direct contractual status, ability to shape block awards, oil trading capacities (operated from Luanda and London), downstream investments, and growing economic influence. The company has reach in and throughout the areas under government control, and a status locally that surpasses any other state company (or even private Angolan company).

Key foreign company players and partners

An appraisal of the Angolan petroleum industry also requires an understanding of the key competitors, their positions, general strategies and relationships in ventures and projects. Some are large companies, while others are small – and this is characteristic of the engagement between the worldwide petroleum industry and a country of the size and with the petroleum quality of Angola.

The Angolan offshore is dominated by the so-called super-major and major oil corporations. These are the largest oil companies worldwide with the funds to carry out expensive exploration and development programmes. Chevron is the key producer but with the deepwaters now opened, ExxonMobil and TotalFinaElf – both super-majors, as well as BPAmoco – have become critical players offshore. However, some smaller independent companies are expanding their upstream interests in the country: e.g. Ranger Oil, Energy Africa, Nafta, Ina-Naftaplin, Svenska, Petrogal and Petro-Inett. There are also some national oil companies in place: e.g. Petrobras (Brazil), Petronas (Malaysia), Pedco (now Korean National Oil Corporation) and Statoil (Norway).

There are some large companies noticeably absent from Angola, several Latin American and Asian players for instance, as well as smaller independents with limited capacity who have selected portfolios elsewhere (e.g. Novus Petroleum in Egypt). Many national oil companies are not players outside their national boundaries including many African state companies. Nonetheless the positioning of companies in Angola reflects history, opportunity, competitivity and strategy – amongst a multitude of other considerations.

Agip

Agip is the former Italian state upstream company and part of the ENI Group, now privatised, and a global player. It holds several interests in the Angolan upstream including in the producing zones of Cabinda, and also block 25 for which it is operator with a 40% equity stake. Other interests are in block 14 and 15.

BHP Petroleum

BHP Petroleum, the 'big Australian', has gone global in a highly focused manner, and is the largest upstream player in Australia. While it has targeted the Atlantic margins for some time, including Angola, BHP Petroleum is still a minor player in the Angolan game. It has operatorship of deepwater block 21 with 30% equity.

BPAmoco / Statoil

BPAmoco, a super-major, emerged from a consolidation in 1999, and has now acquired Arco, following which it has become the third largest oil company world-wide. BPAmoco expects that in a few years its Angola operations will be as large as all its North Sea interests put together. BPAmoco holds block 18 where a discovery has been made in deepwater (Platina) on a flow rate of 6 500 barrels of oil per day – signaling perhaps that it is sub-giant in size. In Angola, the BPAmoco/Statoil alliance is aiming for 200 000 barrels of oil per day production by 2005. The two companies hold 16,67% and 13,33% respectively in the Elf-operated offshore block 17 where the Girassol, Dahlia, Lirio and Rosa fields, and other discoveries, have been found with giant reserves. On ExxonMobil's important deepwater block 15, BPAmoco holds 26,67% and Statoil has 13,33%. BPAmoco also obtained a 26,7% operator stake in deepwater block 31 with ExxonMobil (25%) Sonangol (20%), Statoil (13,33%), Marathon (10%), and Elf (5%). BPAmoco has said it plans to invest US $5 billion in Angola in the near term to 2006.

Chevron

Chevron is a major, but smaller than any of the four super-majors (ExxonMobil, Shell, BPAmoco and TotalFinaElf). It has recently been in abortive merger negotiations with Texaco. Chevron is the largest producer in Angola, with the bulk of its production coming from fields in block O in offshore Cabinda (in areas A, B, C). The company acquired its interests via the Gulf Oil takeover in 1984 and it operates under the Cabgoc venture with partners including Agip, Elf and Sonangol. In block 14 offshore Cabinda adjacent to block O, Chevron operates the country's first deepwater oilfield (Kuito), a giant that will produce at peak around 100 000 barrels of oil per day in 2000. TotalFinaElf, Petrogal, Agip and Sonangol are partners (Chevron has 31%). Chevron is planning to increase crude production to 600 000 barrels of oil per day in 2001, while it has plans to invest some US $4 billion in Angola from 1999 to 2004. There is no doubt that this asset is one of Chevron's 'cash cows', and a key element in Angolan crude exports, as well as an important field supply zone for the United States crude market.

Ultra-deep	Deeper than 1 000 m
Deep	Between 200m –1 000 m
Shallow	Less than 200 m

Daewoo / Pedco

These Korean players have small interests in Angola including in block 2. Pedco is the Korean national oil company, recently having altered its name to KNOC. Daewoo is a Chaebol conglomerate with a modest upstream strength.

TotalFinaElf (formerly Elf)

Elf has long had a dominant position in Western African petroleum. It was acquired in 1999 by Total, another former state-owned French player, which had also just taken over Petrofina (Fina). The Elf acquisition allowed Total to secure prime positions in Western Africa and notably Angola's block 17, one of the most prolific offshore finds in the world in recent years. Elf operates block 17 in the offshore, a block which contains the massive Girassol and Dalia discoveries, as well as half a dozen others. These first two discoveries flowed at combined rates of 18 000 and 16 000 barrels of oil per day respectively. In early 1998, Elf drilled a well on the Rosa structure on block 17 that also resulted in an oil discovery. Girassol is due to produce 200 000 barrels of oil per day from an estimated reserve of 725 million barrels of oil by mid 2001. The Dalia field reserves are put at in excess of 1 billion barrels and in block 17 as a whole, reserves could now exceed 3,5 billion barrels. Another six fields (including Rosa, Lirio, Orquidea, Camelia, Cravo and Tulipia) on block 17 will come on stream in due course to make this one of the most important blocks in the world. Elf paid US $300 million in signature bonus for block 32 in deepwater. Elf acquired an operator stake in deepwater block 32 (30%) with Sonangol (20%), ExxonMobil (15%), Marathon (10%), Petrogal (5%) and Prodev (20%). Elf has expressed interest in buying a minority stake of 20–25% in an oil refinery that Sonangol is planning to build in Angola.

Energy Africa

Energy Africa is a majority-owned subsidiary of Engen, South Africa's major downstream company, itself now 100% owned by Petronas (Malaysia), which has an upstream subsidiary (Petronas Carigali) that is also active in Africa, and now Angola. The South African explorer has a 15% share in block 1 with Texaco, a partner also in Namibia's Kudu gas field.

Falcon Oil

A little known player in the industry, with 10% of ExxonMobil's block 33, Falcon is reported by some sources (e.g. Global Witness) to be US-based (if Panamanian registered) and linked with influential Brazilian interests, as well as having some role in military matters.

Naptha

A small player, Naptha has a 5% interest in the deepwater block 33 held by operator ExxonMobil. The company has reported Israeli origins and is 96% owned by Jerusalem Oil, while having several cross-shareholdings including with Houston-based Isramco. Some sources state that the company has been also involved through its principals in presidential security.

ExxonMobil (Esso)

ExxonMobil is a super-major, and was formed after a merger with Mobil in 1999. It has size, technology and deepwater capacities, and is known in the industry as a leader in several respects. Esso has participated in at least six deepwater discoveries offshore Angola and is the largest deepwater acreage holder in the country. Esso is operator of the recently awarded block 24 (50% working interest) and Esso also has interests in blocks 15 (40%), 16 (20%), 17 (35%), the latter with eight major discoveries so far, as well as block 25. In block 15 it is estimated that oil and gas reserves already exceed 2,0 billion barrels of oil equivalent. ExxonMobil has made six major discoveries offshore in this block. Exxon also acquired an operator stake (45%) in deepwater block 33 with Sonangol (20%), Elf (15%), Falcon Oil (10%), Naptha (5%) and Petrogal (5%).

Norsk Hydro

Norsk Hydro is majority-owned by the Norwegian state and operates commercially. It acquired Saga Petroleum (Norway) in 1999 and is now the second largest oil company in Norway. Norsk Hydro and Sonangol have established a strategic alliance in order to coordinate activities in the petroleum industry in Angola. The two companies intend to cooperate around business development onshore and offshore with the goal of making a joint application for new petroleum licenses. The two companies established a non-profit oil company, Sonap, with integrated capabilities in exploration, development and production. Sonap will operate new licenses where the alliance partners have been designated operatorship. The first block to be operated by Sonap is block 34 with Norsk Hydro and Sonangol as equity holders. In late 1999, Sonap was offering to farm out up to 40% non-operator interests in the block. Norsk Hydro is also a partner in exploration activities in block 5, block 9 and block 17 in offshore Angola.

Occidental Petroleum

Occidental is a leading global independent with a long history in Africa (e.g. Gabon, Libya) and it is considered a significant US-based explorer and producer. After taking position in block 4, Oxy and partner Ranger Oil relinquished it in late 1999, when only two small discoveries were made.

Ocean Energy

Ocean has 15% of block 24 (operator Exxon) and recently entered Angola, after considerable success in Equatorial Guinea. Ocean, a fast growing US independent, had previously acquired UMIC’s assets worldwide. Ocean declined a 10% interest in deepwater block 33 in early 1999, a block that went to ExxonMobil, at a time of very soft crude prices.

Petrobras / Braspetro

Braspetro is the overseas and international upstream subsidiary of Petrobras, the Brazilian national oil company. It has an interest in the analogous offshore geology of Angola and is a company with globally recognised deepwater exploration and production experience. Braspetro is seeking to augment its interests in the Angolan upstream given geological analogues with the Campos basin offshore Brazil and its deepwater capacities.

Petrogal

A Portuguese based company, Petrogal's main assets are downstream, but through colonial relationships, it has an interest in accessing Angolan crude, especially on an equity basis. The company has selected Western Africa as a target zone for the upstream. Petrogal has acquired important interests in Angola's upstream with assets in block 14 where it holds a 9% stake.

TotalFinaElf (formerly Petrofina / Fina)

Petrofina (or Fina) was acquired by Total and now forms part of the TotalFinaElf group. Petrofina was at one time abandoning its Kwanza acreage in favour of the Congo basin. Fina was producing 25 000 barrels of oil per day in the Congo basin in 1992–3 before the Soyo base was over-run, and has recently brought output back up to 19 000 barrels of oil per day. In 1998 Petrofina was appointed operator of block 19 offshore Angola. Fina has a 30% stake in the block, with partners Ranger (25%), Sonangol (20%), UMIC (now Ocean Energy with 20%) and Naptha (5%). Through blocks 31 and 32, TotalFinaElf has acquired deepwater positions and an operatorship on block 31.

Petronas (Carigali)

Malaysia's national oil company, with wide ranging capacities, Petronas has several targets in Africa (including South Africa, Sudan). Carigali is the unquoted subsidiary of parent company Petronas that has integrated operations in Malaysia. Petronas entered Angola in 1999 with a position (15%) in block 24 in which ExxonMobil is operator.

Prodev International

The Swiss based company with Mideast investment backing took a 20% exposure in the deepwater Elf operated block 32, for which a large signature bonus (over US $ 300 million) was paid. However, it signaled its intention to dilute its commitment only a few months after entry. Prodev's entry and little known experience raised eyebrows in global exploration circles. Other majors would be interested in the asset (e.g. Texaco). Prodev has been reported by Global Witness to have links to security and armaments purchases. It is also reported that the principals of Prodev are three Syrians and that the block allocation was an offset for government military purchases.

Ranger Oil

Ranger Oil is a Canadian independent with several interests in Africa and elsewhere. Ranger relinquished block 4 with partners (Occidental and Sonangol) in late 1999 after two small discoveries (Kiame and Kiabo) were 100% licensed to Ranger and Sonangol.

Shell

Royal Dutch Shell is a super-major and an acknowledged industry leader with widespread upstream positions in Western Africa and downstream assets throughout the continent. Shell took deepwater block 16 (45%) with ExxonMobil (20%), Texaco (15%), Elf (10%) and Sonangol (10%) but in late 1999 relinquished this acreage following a disappointing exploration experience when nine wells were drilled with only one non-commercial discovery (Bengo). As part of a restructuring and cost-cutting exercise, Shell sold its 50% interest in block 1 in the Congo basin to Texaco. The company sought block 34 in the ultra-deep without success, and it also holds 50% in block 18 (with BPAmoco) with 10% in block 21. Of all the majors, Shell has yet to have any significant success in Angola.

Statoil

Statoil is the national oil company of Norway and has been targeting overseas countries including Nigeria and Angola. Statoil has had an alliance with BPAmoco and holds two deepwater positions: in blocks 15 and 17. Statoil also signaled its interest to have a stake in BPAmoco's block 31.

Texaco

Texaco is a major player with Western African core areas in Nigeria and has a deepwater and technology capacity. In 1998 the government approved the final shareholdings of the consortium working on block 9 operated by Texaco. Texaco is also operator of deepwater block 22 and block 2, and is a shareholder on onshore producing fields near Soyo and offshore on blocks 16 and 20. Texaco now also has 71% of block one in the Congo basin, with Energy Africa and Saga (now part of Norsk Hydro). Texaco's equity production in Angola is now around 85 000 barrels of oil per day and it has also now developed a concept for a major LNG venture in the country given that up to 85% of gas is flared due to the lack of local and foreign market offtake. Texaco aims to start operations in or after 2004/5. Gas will come from several offshore fields holding up to 4 trillion cubic feet of gas of associated and/or non-associated reserves. A second train would also be considered if there was a market upswing in Europe, Asia and South America. Cost would be US $2,3 billion at the outset.

Competition in Angolan oil and gas

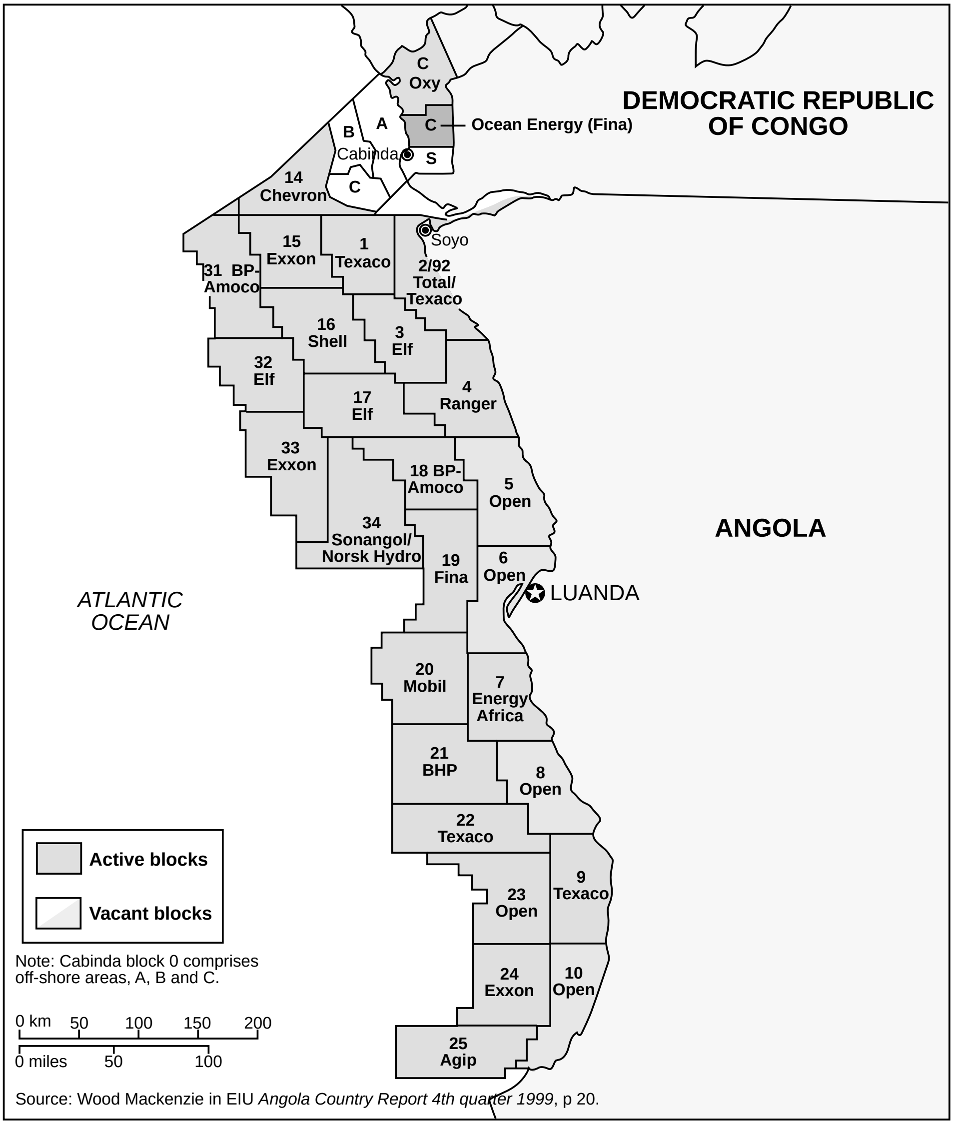
The Angolan petroleum scene is highly competitive especially given the stakes and opportunities in play. Yet the companies operate largely independently of one another (except where there is joint venture and/or equity interest). While it is natural for players from country-of-origin to share some common ground (US, French, British, Norwegian) it would be a mistake to automatically link the commercial interests of a company with those of their respective governments. Chevron operated in Angola for years before the United States government recognised the *Movimento Popular de Libertação de Angola* (MPLA) and French players were active via Elf in Angola from an early period. South African companies do not enjoy any special privileges in block allocations and South African refineries do not draw much of Angolan crude as feedstock intake.

There are many reasons why some companies outperform others and one needs to challenge the assumption that success is mainly the result of special deals or is related to a company's country of origin. There are a host of factors to consider. Some, like Chevron, have the advantage of early entry and hence geological choice in what at one time might have been a frontier basin. Others may have capacities and *savoir-faire* in certain specialised areas, such as deepwater exploration and production, as do ExxonMobil, TotalFinaElf. Some may target a country or zone for significant commitment, which allows for a long-term and sizeable drilling programme that is necessary to reap both technical and commercial success. Indeed the highly competitive nature of Angolan block allocations seems at odds with the perception of special deals while the diversity of foreign companies operating in Angola largely dismisses the consideration of favouritism.

The fact that Angola is not a member of OPEC makes it somewhat more attractive to companies (and perhaps governments of consumer countries) but this is a small part of the overall commercial-policy nexus. Angola's total crude exports do not weigh that heavily in world crude supply although such volumes will rise. Even more important, the excess capacity in Angola is marginal and it is this potential excess production – export capacity that has the power to move crude markets – that can be critical, hence the influence of Saudi Arabia and other Gulf states, Mexico and Venezuela.

While conspiracy theorists make much of the Franco-American competition in African petroleum, this is not at the cutting edge of commercial deals for the most part. Successful deals hinge more on company strategy, contractual terms, portfolio requirements and geo-technical considerations.

Angolan oil licence blocks



Source: Wood Mackenzie in EIU *Angola Country Report 4th quarter 1999*, p 20.

The much discussed US political tilt in recent years towards MPLA-led government and away from UNITA has many roots and perhaps the control of oil interests from Luanda is one of these elements. However, there are also others of a regional strategic nature as well as of a policy and political character related to the aftermath of the Lusaka Protocol.

Strategic significance: acreage, awards and discoveries

A country's petroleum outlook is governed by certain key factors. These include:

- the availability of acreage, in other words its size, type and quality, whether onshore or offshore;
- awards given and the acquisition of properties;
- discoveries made in relation to field size, reserve potential and production profiles; and,
- the commercial and technical oil and gas targets that companies seek, especially given their different philosophies, capacities, technologies and skills.

Acreage

Sonangol opened ultra-deep blocks 31, 32 and 33 for bidding on 1 April 1998 and bidding closed on 29 May 1998. Block 34 had earlier been included in the grouping, but Sonangol decided to operate this block partnered by Norsk Hydro. Sonangol will hold no more than 20% of all deep and ultra deep blocks it does not intend to operate.

At the start of 2000, negotiations and renegotiations were scheduled for blocks 8, 23, 34, 16, 10–13, 26–30, and block 35 (then under study), as well as extensions to the production periods for block 3 and block O (Cabinda). This attests to an active industry and provides a positive short-term outlook for Angola.

Sonangol has been seeking private sector partners for a re-evaluation of four undeveloped discoveries located within unlicensed lower Congo basin blocks 5 and 6. Ultimately it is expected to offer all acreage west of block 31 south to the Namibian border as well as the onshore acreage in the Kwanza basin.

Discoveries

Several major oil discoveries have been made in Angola in recent years and future field developments have grown apace making the country one of the most lucrative prospects in the world. The developments include on-going efforts in Girrasol and Kuito, as well as Dalia, Rosa, Lirio, Benguela, Belize, Landana, Hungo, Kissange, Chocalhlo, Marimba, Dikanza, Platina (now commercial), and development wells for Plutonio and Orquideas.

Massive oil discoveries in the deepwaters and ultra-deep, such as on block 17 with Elf's major discoveries (Girassol, Dalia, other), ExxonMobil's in block 15, Recent awards and acquisitions

Block	Location / size	Operator / partners	Signature bonus
1	Offshore	Texaco (50%) Mobil (21%) Energy Africa (15%) Saga Petroleum (14%)	Figures not available
7	Offshore	Phillips (40%) Eagle (30%) Petro-Inett (30%)	Figures not available
9	Offshore Kwanza-Sul province, south of Luanda	Texaco (40%) Mobil (35%) Eagle Energy (15%) Norsk Hydro (10%)	Figures not available
18	5 000 sq km offshore	Amoco (50%) Shell (50%)	Figures not available
19	Offshore Kwanza basin	Petrofina (30%) Ranger Oil (25%) Sonangol (20%) Ocean / UMIC (20%) Nafta Israel Petroleum (5%)	Figures not available
21	Offshore	BHPP (30%) Sonangol (20%) BPAmoco (20%) Shell (10%)	US $40 million paid by BHPP
22	Offshore	Texaco	Figures not available
24	Offshore	Esso (50%) Petronas Carigali (15%) Ocean / UMIC (15%) Sonangol (20%)	US $69 million (plus US $10 million for social projects) paid by Esso
25	Offshore	Agip (40%) Sonangol (25%) Esso (35%)	US $85 million paid by Agip
Cabinda Central	Cabinda Central onshore (acreage under *force majeure* for several years due to the civil war)	United Meridian (assumed operatorship) BPAmoco's 30% Sonangol Petrogal Repsol	Figures not available

and Chevron's deepwater Kuito field, have demonstrated the enormous potential of the offshore fields. Other large finds have been made, and more are expected in future. Development of these recent finds, and anticipated others, could increase Angola's total crude production from 766 000 barrels of oil per day in 1999 to around 1,3 million barrels of oil per day or more by 2003, with that figure possibly going even higher.

This will underpin a rise in crude production, expansion in oil exports, increased foreign exchange and growing state revenues. It is this prospect, rather than claims of past mal-allocation of state funds, that provides the real hope for Angola's population, leading to rising standards of living and a reduction in poverty.

If these fruits are to be reaped, it will be largely due to some 25 years of exploration and development undertaken by the foreign players who have demonstrated their long-term belief in Angolan prospectivity, albeit married with enlightened commercial self-interest.

Opportunities and future potential

To speculate on Angola's opportunities and future potential, it is essential to have some broad measure of the hydrocarbon reserve base and the likely trajectory of oil production. This also has implications for government revenues and the local financial constraints that might apply to issues of poverty in Angola.

Angola holds a plethora of upstream and downstream opportunities for the long-term, to 2020. The country has a substantial proven reserve base in oil and gas, an unexploited domestic and overseas gas-LNG market, and unfulfilled local demands which need to be met through petro-allied industrial ventures. Moreover, the inflow of development capital will undoubtedly add to existing oil and gas reserves and production potential.

Oil and gas reserves

Angola had proven oil reserves of 5,4 billion barrels around 1998, but this figure is expected to have increased to around 12 billion barrels as a result of recent discoveries. This is a significant increase over 1996 when proven oil reserves were estimated at only 3,2 billion barrels. There are also vast tracts of still under-explored offshore and deepwater acreage to be tested before Angola reaches maturity. It would not be unrealistic to expect oil reserves to be in the region of 15–20 billion barrels by 2010, given factors like new block openings, wider opening of the onshore and the impact of new technologies.

Angola has estimated natural gas reserves of around 7–8 trillion cubic feet of gas. To date, gas has yet to be defined as an exploration target. There has been no gas reserve audit but this is likely to happen with the contemplation of LNG ventures.

Oil production

At the beginning of 1999, crude oil production was averaging 750 000 barrels of oil per day, and by 2000 was around 775 000 barrels, and rising fast. Angola's production has increased significantly over the years from 550 000 barrels of oil per day in 1994. According to the head of Sonangol, production could reach 1,5 million barrels of oil per day within four or five years, while the Minister of Petroleum has predicted an output of 1,0 million barrels of oil per day by 2001 and 1,3 million by 2003. Independent analysts have claimed that oil production in 2005 will reach 1,38 million barrels of oil per day, with the deep offshore providing around 825 000 barrels per day in 2005.

Several large fields are set to come onstream over the next few years. The Girassol and Dalia fields will produce around 200 000 barrels of oil per day each when they reach peak production, while the Kuito field will produce 100 000 barrels daily. Another five producer fields are located in block 17.

The Chevron-operated Cabinda block dominates production and Cabinda output is currently running at around 475 000 barrels of oil per day. The bulk of Angola's production comes from offshore fields and, of these, the 16 Cabinda offshore fields produce over 50% of the country's total output.

Gas production

Reliable figures for Angolan gas production are difficult to obtain. It is understood that gas production is currently around 750 million cubic feet per day, all associated with oil production. This is expected to increase as oil production volumes rise. Up to 85% of the gas produced in association with oil is flared (despite the fact that this is banned in Angola) while the remainder is used for gas lift and injection to boost oil production from declining fields in Cabinda and in other reservoirs.

So far, the lack of gas based infrastructure has hindered Angola's development and usage of gas in its energy sector. Now Elf is studying a project to build a power station in Angola that would use gas produced from oil fields in block 17. The plan envisages some of the power produced being used in Luanda with the rest being transmitted 2 000 km south to South Africa, although this supply would need to compete with Namibia and even South African gas discoveries. Meanwhile, the Texaco LNG venture could be formed with a consortium of producers, although for now Sonangol seeks 40% and Texaco 30%.

Oil revenues

It is estimated that Angola should increase oil revenues to around US $12 billion by 2005. This compares with US $4 billion in 1999 – admittedly a low price year overall. However, with the May 2000 high crude prices in the upper US $25 per barrel range, Angola should be reaping a bonanza in revenue terms. And so, if production in 2000 is around 800 000 barrels of oil per day and crude is at an average price of US $25 per barrel, then gross receipts will be of the order of US $7,3 billion for this year.

Critical issues: bonuses, state funding and transparency

The present debate around global petroleum, and especially how it impacts on Angola, has raised some issues that need to be commented on from an industry viewpoint. These comments should be seen within the context of the long-term strategic and economic future of Angola.

Signature bonuses in contracts

The world industry took notice when signature bonus payments of some US $300 million were made for the deepwater blocks 31 to 33 in 1999, then yielding nearly US $1 billion in revenue to the Angolan government. So too did the critics of government and non-governmental organisations. Most noticeable was Global Witness who, in their 1999 report,[2] criticised the state, presidency, National Bank of Angola, and by implication the foreign oil companies. But in many respects some of these observations, notably on signature bonuses, have been ill informed.

In Angolan bidding rounds, companies bid twice – once for the operatorship and again for rights to non-operating equity, and at both times a signature bonus is required. If companies do not bid they do not stand any hope of entry into open blocks.

Although some critics have portrayed signature bonuses as an 'illicit' levy, this bid differentiation technique is standard global practice and has been accepted by the industry, even if the companies (often the critics of the bonuses) would prefer to avoid these upfront bid payments. For instance, a classic form was encountered in the formal Venezuelan third bid round, when numerous blocks were auctioned, and where several billion dollars changed hands in the space of a few days. In Australia for instance, bids are in the form of work programme bids (effectively a capital expenditure commitment). The amounts paid for the blocks in Angola are not expected to place an unreasonable burden on the oil companies, provided the discovery volumes live up to expectations. In terms of current crude prices, the amount of US $300 million a block translates into only 10 million barrels per block, which should be a fraction of the estimated reserve potential. Such sums only reflect world market realities and it would not make sense for the Angolan government to refuse such an opportunity to maximise state revenues. How the government allocates such funding is part of their governance function and cannot be a matter for the companies – whatever the merits of their advice.

Another criticism has been the claim that the payments by-passed the National Bank of Angola. On this front, the companies have no choice but to execute contractual obligations with the state and Sonangol. No company has the authority to prescribe to state authorities what they must do with such funds. The companies in Angola's petroleum industry are mainly foreign and therefore not wholly within Angolan jurisdictional locus. In such spheres therefore, their direct influence must be seen for what it really is – that of a foreign partner or contractor. It would be exceptional to see foreign players in the Gulf of Mexico and North Sea, or elsewhere, dictate to governments in those countries what must be done by the Congress and Chancellor of the Exchequer.

The final criticism is that the funds directly financed the government's war efforts against UNITA. It would be hard to argue that this did not occur – but it is a fact that all government revenues are by nature open to misuse and their allocation is outside the ambit of foreign company direction.

State funding from oil revenues

Angola's foreign debt is reported to be around US $12 billion, much of it owed to the former-USSR (now Russia). Angola is also reported to have contracted loans with oil-backed funds based on the forward sale of Sonangol's crude production interests. The loans operate through third party accounts offshore and repayment is made from funds received from cargoes of delivered crude. Although the details and extent of such arrangements are private, their impact is the creation of a parallel system of finances and budget accounts. In principle this is not the best manner to operate the fiscus, and it must raise questions (in the absence of evidence) about the real destination and beneficiaries of such funds. Clearly, this is one reason for an International Monetary Fund had some time ago requested an audited set of accounts, which were then not forthcoming and at the time affected access to IMF monies.

Transparency in oil deals

Transparecy has become a byword of Organisation for Economic Cooperation and Development (OECD) companies in regard to overseas investments following OECD's adoption of the principles of the US Foreign Corrupt Practices Act, and a new dictum in the world oil industry that deals are done above-board and in a transparent manner. No major oil company or key independent nowadays could survive otherwise in the face of the laws in their countries-of-origin. Such companies must file annual audited accounts under local conventions and these do not provide for cost deductions for illicit transactions.

Several sources, including Global Witness and diverse media, have recently made claims that transparency is lacking in the Angolan oil and gas industries, and that corruption is evident. In denying these charges, the chairperson of

Sonangol Manuel Vicente noted that some contractors who did not get awards had encouraged these allegations. Clearly, there is a range of opinion around this. The argument here is not whether such practices have taken place, but rather to reiterate that the payment of signature bonuses is not part of this issue. Angola is not alone in having such claims levied in regard to petroleum. Similar comments have been made elsewhere in Africa, Latin America, Asia and the Middle East. Companies have to operate in the environments that exist, and these are often imperfect. It does not follow that to operate in such a *milieu* makes a company, by nature, corrupt and lacking in corporate transparency.

While it is natural for views around such claims and issues to differ, Sonangol meanwhile has earned a strong reputation in money markets for meeting financial and debt obligations. Additionally, the strict controls on foreign companies' makes it extremely hard for them to participate directly in corrupt practices. Nonetheless, the Angolan industry would benefit if there were improvements in accounting procedures, fiscal management, fund control and contract terms.

Conflict and petroleum: strategic risk dimensions

Ideally, the absence of conflict provides the best conditions for petroleum development. Yet on the evidence, the Angolan conflict has not significantly thwarted petroleum development. Moreover, it is unlikely to do so, provided the offshore fields are not affected and Cabinda is able to function effectively. Onshore however, there are many landmines that have to be cleared before any thorough exploration activities can be carried out.

UNITA's failure to damage the oil industry reflects its limited strategic and military reach. Its conflict with central government has mostly been in the southern and eastern areas and it has been progressively squeezed into a marginal territorial position. Despite forays against Soyo/Cabinda and installations there, it has never been in a position to threaten the offshore petroleum industry directly. Nor has it had the international leverage to mount pressure on key companies abroad in regard to their Angolan oil interests. This status quo does not look like altering any time soon.

In spite of stiff competition from other Western African countries, Angola continues to attract a large share of regional foreign investment, as well as investment from the top international oil companies. This reflects its high potential, the relatively fair and workable contracts and terms, and the relative safety of its operations, which are located offshore and away from most civil strife. Companies nonetheless run some risks to their operations, personnel and to their long-term presence. Elf for instance no longer operates from its northern base at Soyo, and other operators are required to increase their security. Yet majors and independents have come to know and understand the Angolan 'risk terrain', and have learnt to adapt, as indeed they have in other countries experiencing enduring conflict, for example in Colombia, Algeria and Indonesia.

For many players the dominant risks are 'inside the portfolio' and not at the much discussed, so-called 'country risk' level. Risk, like beauty, is in the eye of the beholder, and one person's political risk is another's commercial treasure. Therefore, the strategic risks are not uncommon to investors in the Angolan petroleum industry. Which is not to say that they would welcome increased conflict. In the event of any change in government, the companies would be concerned about the implications for operations, block access, contract terms and fiscality.

Policy management and Angolan poverty – the future

The questions here are: could Angolan policy be managed better to reduce poverty and could oil/gas revenues in future be sufficient to make a real difference? The short answer to both is yes.

Angola is a resource rich country and not only in hydrocarbons, although these have borne of the burden of supporting Angola's economy over the last 25 years. Now, with rising crude production, gas-LNG venture potential, and other natural resources, Angola should be in a position to act decisively on matters that will raise income levels and address poverty in urban and rural areas.

An end to conflict would bring onshore investments and would enable the government to reach large segments of the population with poverty-reduction programmes. The government cannot expect the foreign oil companies to carry that burden alone through their increasing corporate social responsibility programmes. The state of Angolan poverty is acute – reflected in low and falling real incomes, chronic unemployment, massive deficits in health and education, disparities in access to facilities and infrastructure, and high infant mortality rates. These must be government priorities, as anywhere in the world. Angola now has the petroleum revenue and tax wherewithal to deal systematically with such issues, and the expected rise in real revenues from the oil and gas industry during the 2000 to 2005 period could be applied to such priorities.

Angola's petroleum status is growing and will continue to do so in the future. Foreign companies in oil and gas therefore play a strategic long-term role and without their contribution the levels of poverty would increase. Admittedly the oil wealth created has not resolved Angolan poverty. However such an expectation is unrealistic given the aggravated, enduring and unforgiving conflict.

The view that companies exhibit poor governance in Angola because they operate in a difficult environment (centralised government, on-going conflict, shortcomings in the state management of funds) is simplistic. The corporate executive's primary responsibility is to shareholders, and in more enlightened corporates, to a more diverse set of 'stakeholders' (including communities and employees). Most foreign companies in Angola are aware of such obligations and encourage corporate social responsibility programmes. If poor governance were regarded as a rationale for withdrawal from Angola, then any company following such a path would merely open the door to competitors. And the status quo would remain unaltered.

Nor can one expect the main oil companies in Angola to be directly (or even indirectly) accountable for the way in which the Angolan authorities manage the fiscus, the state budget and the allocation of funds. None of this detracts from genuine criticisms in these areas – but the place to lay such responsibility and any liability is not in the boardroom. To do so in Angola would mean extending the same expectation to operators in Colombia, Nigeria, Indonesia, Congo, Burma, and elsewhere, where similar conflicts prevail. In today's complex and turbulent world there are many 'grey areas' to negotiate. Much comes down to judgement and imperfect choice. Critics have a responsibility to offer workable ways forward in a context that does not compromise the fundamental economic bases of the future for Angola and its peoples.

The petroleum industry contributes in fundamental ways to Angolan economic sustenance – but this falls short of playing a direct role in fuelling on-going conflict. Nor do the companies sanction poor governance, corruption and lack of transparency. To argue that they do stretches credibility and demonstrates ignorance of the global/African upstream corporate players and industry. Almost all companies and senior executives wish an end to Angola's tragedy. It is time that all Angolans, especially those in positions of influence, were themselves of like mind.

Endnotes

1 The understanding of Angolan petroleum is drawn from diverse experience and public/private sources including inter alia: the research oil and gas database of Global Pacific & Partners and the Company's on-going research published in its Reports on Global Upstream Targets & Strategies, National Oil Company Strategies, and Competitor Strategies, which can be viewed on www.petro21.com; various discussions with Angolan/Sonangol representatives; management presentations to the Africa Upstream Conferences (Cape Town, 1994–99); and business meetings over the years with senior management in the oil and gas industry worldwide.

2 Global Witness, *A Crude Awakening – the role of the Oil and Banking Industries in Angola's Civil War and the Plunder of State Assets*, Global Witness, London, 1999.