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Iran at a glance

Background

The first Iranian state was the Persian empire, which rose in the first millennium BC and was for centuries the largest in the world. It was conquered by Alexander the Great in 330 BC, and later overwhelmed by Arab Muslim conquerors in the 7th century AD. Iran became part of the Abbasid caliphate and its culture was both Islamised and itself exerted an influence on the rest of Islam. The Persian language and a distinct Iranian culture survived, to be reasserted and reinvented by most of the region's rulers.

In the 10th and 11th centuries, the caliphs lost effective control of Iran to Persian and Turkish rulers, and in the 13th century the region was conquered by the Mongols, who themselves later converted to Islam. Mongol control diminished, and by the 16th century the Safavids, a powerful family from the north-west, emerged to unify Iran for the first time in the Islamic era under Ismail I. He proclaimed himself shah, and made Shia Islam Iran's state religion.

Iran was weakened by wars in the 17th and 18th centuries and new dynasties followed the Savafids, notably the Turkic Qajars. New rivals emerged in Russia—to whom Iran lost much of the Caucasus and central Asia in 19th-century wars—and Britain, which sought a buffer between expanding Russia and nearby India. The two European powers came to dominate Iran. By tacit agreement, Russia took a sphere of influence in the north and Britain in the south, and each power interfered in local politics and forced trade concessions on its part of Iran. Large oil deposits were discovered in 1908, and when the monopolist Anglo-Persian Oil Company was formed in 1909, Britain controlled a majority share.

Iran, officially the Islamic Republic of Iran, country in southwestern Asia, located on the eastern shore of the Persian Gulf with an area of 1,648,195 square kilometers, Iran lies at the eastern most edge of the geographic and cultural region known as the Middle East and it is the second largest country in this area. The country is bordered on the north by Armenia, Azerbaijan, the Caspian Sea, and Turkmenistan; on the east by Afghanistan and Pakistan; on the south by the Gulf of Oman, the Strait of Hormuz, and the Persian Gulf; and on the west by Iraq and Turkey. It is divided into 28 provinces and has 241 towns and cities. Iran's capital and largest city is Tehran, located in the northern part of the country.

The country's population, while technically and linguistically diverse, is almost entirely Muslim. For centuries, the region has been the center of the Shia branch of Islam.

Nearly all of Iran's numerous rivers are relatively short, shallow streams unsuitable for navigation. The country's only navigable river, the Karun, flows through the city of Ahvaz in the southwest.

More than half of Iran's international border of 4,430 km (2,750 mi) is coastline, including 740 km (460 mi) along the Caspian Sea in the north and 1,700 km (1,100

mi) along the Persian Gulf and adjacent Gulf of Oman in the south. Both the Caspian Sea and the Persian Gulf have important ports and contain extensive underwater deposits of oil and natural gas. Iran' s largest harbor, Bandæ ' Abbas, is located on the Strait of Hormuz, the narrow passage separating the Persian Gulf and the Gulf of Oman.

Iran' s extensive petroleum and natural gas deposits are located primarily in the southwestern province of Khuzestan and in the Persian Gulf. Iran also has one of the world' s largest reserves of copper; deposits are located throughout the country, but the major lode lies in the central region between the cities of Yazd and Kerman. This region also serves as a center for the mining of bauxite, coal, iron ore, lead, and zinc. Additional coalmines operate throughout the Elburz Mountains; iron ore mines also exist near Zanzan in the northwest, near Mashhad in the northeast, and on Hormuz Island in the Strait of Hormuz. Iran also has valuable deposits of aluminum, chromites, gold, manganese, silver, tin, and tungsten, as well as various gemstones, such as amber, agate, lapis lazuli, and turquoise.

Despite the great climatic variety of Iran, its average annual precipitation is about 250-300 millimeters. On this account, Iran is ranked among the semi _ arid countries of the world. However with the great efforts made by Iranian experts to construct dams and to domesticate wastewater within the past two decades, it is hoped that the problem of water shortage will be solved in a not so remote future. It is worth mentioning that only a quarter of Iran's area is endowed with fertile lands and mild, favorable climate. Small as may seem this figure in comparison with the whole surface area, it represents an area larger than Germany, Belgium and Netherlands grouped together.

The population of Iran was estimated at 67,000,000 in 2001, 36.8 million live in urban, and the rest in rural areas. This figure is more than double the 1975 population of 33,379,000. 44 percent of the population was under age 15, 53 percent was between 15 and 64, and only 4 percent was aged 65 or older. Overall population density in 2001 was 40 persons per sq km (104 per sq mi).

Policy issues

Iran's five - year economic plans have emphasized a gradual move towards a market-oriented economy and the development of the private sector, but political and social concerns have hampered the applications of sound economic policy, and large external debt repayments limited policy options throughout much of the 1990s. The third five- year plan, which came into force in 2000, commits the government to an ambitious program of liberalization, diversification and privatization. The resolution of Iran's external debt problems eased the policymaking environment and facilitated the unification of the exchange rate at the start of 2002, but significant political obstacles to rapid reform remain.

2-Taxation

New Iranian tax laws are simply with the flat rate for corporate tax. The tax rate is 25% fixed rate. The new Tax Law shareholders don't pay any tax.

Salary income of employees subject to the Law of 06/13/1370 concerning the Coordinated System of Payments to Civil Servants, less the exemptions provided in this Act, shall be subject to tax at a flat rate of 10%. As regards the other salary receivers, up to IRR 42,000,000 of their salary income, minus the exemptions envisaged under the present Act, shall be subject to the same rate of 10%, and the rates of the Article 131 hereof shall apply to the rest thereof.

The rates of income tax of real persons, except where separate rates are provided under the present Act, shall be as follows:

Annual taxable income			Rates	Of the excess over
Up to	IRR	30,000,000	15%	
Up to	IRR	100,000,000	20%	IRR 30,000,000
Up to	IRR	250,000,000	25%	IRR 100,000,000
Up to	IRR	1,000,000,000	30%	IRR 250,000,000
Over	IRR	1,000,000,000	35%	IRR 1,000,000,000

3-Foreign trade

Oil earnings dominate Iran's external trade, generating over 80% of revenue, although non-oil exports have begun to rise. High oil prices from 2000-03 have allowed Iran to record substantial trade surpluses, even though import spending has also risen quickly as strong foreign-exchange earnings and the easing of the country's debt repayment schedule have allowed Bank Markazi (the central bank) to relax its import compression program.

4- Economic forecast

We have revised our forecasts for Iran's external accounts in 2004/05 following the release of interim data, which show a continued rapid rise in imports. We now expect Iran to register current-account deficits of US\$5.2bn (3.6% of GDP) in 2004, and US\$5.6bn (3.4% of GDP) in 2005.

Iran's economy, which relies heavily on oil export revenues (around 80% of total export earnings, 40%-50% of the government budget, and 10%-20% of GDP), was hit hard by the plunge in oil prices during 1998 and early 1999, but with the rebound in oil prices since then, has recovered to a great degree. For 2002, Iran's real GDP grew by around 5.9%; for 2003 and 2004 it is expected to grow at slightly slower, but still healthy, 4.5% and 4.4% rates, respectively. Relatively high oil exports revenues the past year or two have allowed Iran to set up an oil stabilization fund. For 2003, Iran's budget anticipated a price of around \$18.50 per barrel, well below current levels.

Despite relatively high oil export revenues, Iran continues to face budgetary pressures, a rapidly growing, young population with limited job prospects and high levels of unemployment; heavy dependence on oil revenues; significant external debt (including a high proportion of short-term debt); high levels of poverty; expensive state subsidies (billions of dollars per year) on many basic goods; a large, inefficient public sector and state monopolies (bonyads, which control at least a quarter of the economy and constitutionally are answerable only to supreme leader Ayatollah Ali Khamenei); international isolation and sanctions.

Iran is attempting to diversify by investing some of its oil revenues in other areas, including petrochemicals. Iran also is hoping to attract billions of dollars worth of foreign investment to the country by creating a more favorable investment climate (i.e., reduced restrictions and duties on imports, creation of free-trade zones). In May 2002, the country's Expediency Council approved the "Law on the Attraction and Protection of Foreign Investment," which aims at encouraging foreign investment by streamlining procedures, guaranteeing profit repatriation, and more. This Law, which was sent to the government for implementation in January 2003, represents the first foreign investment act passed by Iran's legislature since the 1978/79 revolution. The legislation was delayed for several years due to disagreements between reformers

and conservatives. In June 2001, the Council of Guardians had rejected the bill as passed by the Majlis the previous month. In November 2001, the Majlis had passed a second, heavily amended, version of the bill. Although this version was far weaker than the first bill, the Council of Guardians again rejected it (in December 2001).

5-Sanctions

In March 2003, President Bush extended sanctions originally imposed in 1995 by President Clinton for another year, citing Iran' s support for international terrorism, efforts to undermine the Middle East peace process, and acquisition of weapons of mass destruction." The 1995 executive orders prohibit U.S. companies and their foreign subsidiaries from conducting business with Iran, while banning any "contract for the financing of the development of petroleum resources located in Iran." In addition, the U.S. Iran-Libya Sanctions Act (ILSA) of 1996 (renewed for 5 more years in July 2001) imposes mandatory and discretionary sanctions on non-U.S. companies investing more than \$20 million annually in the Iranian oil and natural gas sectors. In May 2002, the United States announced that it would review an \$80 million contract by Canada' s Sheer Energy (see below) to develop an Iranian oilfield to determine whether or not it violates ILSA.

6-Oil

Iran holds around 90 billion barrels of proven oil reserves, roughly 7% of the world' s total, and claims another 30 billion barrels. The vast majority of Iran' s crude oil reserves are located in giant onshore fields in the southwestern Khuzestan region near the Iraqi border and the Persian Gulf. Iran has 32 producing oil fields, of which 25 are onshore and 7 offshore. Major onshore fields include the following: Ahwaz-Asmari (700,000 bbl/d); Bangestan (around 245,000 bbl/d current production, with plans to increase to 550,000 bbl/d), Marun (520,000 bbl/d), Gachsaran (560,000 bbl/d), Agha Jari (200,000 bbl/d), Karanj-Parsi (200,000 bbl/d); Rag-e-Safid (180,000 bbl/d); Bibi Hakimeh (130,000 bbl/d), and Pazanan (70,000 bbl/d). Major offshore fields include: Dorood (130,000 bbl/d); Salman (130,000 bbl/d); Abuzar (125,000 bbl/d); Sirri A&E (95,000 bbl/d); and Soroush/Nowruz (60,000 bbl/d). Iran' s crude oil is generally low in sulfur, with gravities mainly in the 28°-35° API range. During the first eight months of 2003, Iran produced 3.9 million bbl/d of oil (of which 3.7 million bbl/d was crude oil), up from 3.5 million bbl/d in 2002. Iran' s current sustainable crude oil production capacity is estimated at around 3.75 million bbl/d, which is around 0.15 million bbl/d above Iran' s latest (November, 2003) OPEC production quota of 3.597 million bbl/d. Some analysts believe that Iran' s capacity is lower, perhaps 3.6 million bbl/d, and that it could fall even further until new oilfield developments (Azadegan, Bangestan -- see below) come online in a few years.

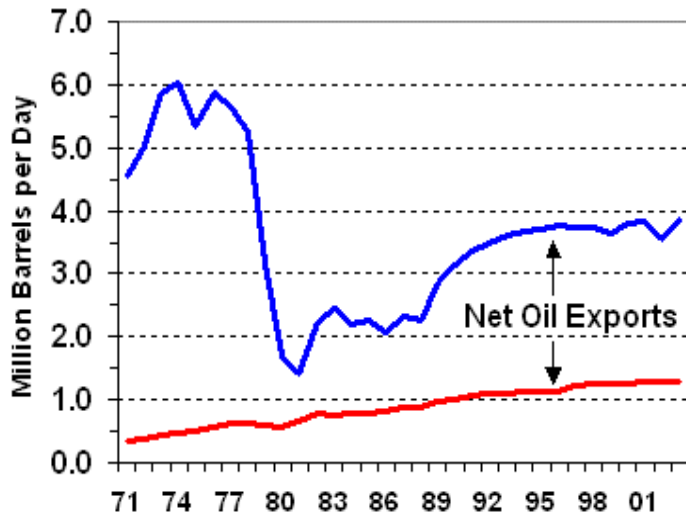
Iran has net exports of around 2.6 million bbl/d Major customers for Iranian oil include Japan, China, South Korea, Taiwan, and Europe. Iran' s main export blends include Iranian Light (34.6° API, 1.4% sulphur); Iranian Heavy (31° API, 1.7% sulphur); Lavan Blend (34°-35° API, 1.8%-2% sulphur); and Foroozan Blend/Sirri (29-31° API). Iran is also the largest heavy fuel oil exporter in the Middle East. Iranian oil is traded on the spot market by NIOC' s London division.

Iran' s domestic oil consumption, 1.3 million bbl/d in 2003, is increasing rapidly (about 7% per year) as the economy and population grow. Iran subsidizes the price of oil products heavily, to the tune of \$3 billion or so per year, resulting in a large amount of waste and inefficiency in oil consumption. Iran also is forced to spend around \$1 billion per year to import oil products (mainly gasoline) which it cannot

produce locally. In early April 2003, as part of an effort to curtail the rise in gasoline subsidy expenditures, gasoline consumption and imports (both of which are growing rapidly), Iran raised gasoline prices by 30%-35%, to around 31-44 cents per gallon. In November 2003, Iran announced that it might even be forced to start rationing gasoline.

It is possible that, with sufficient investment, Iran could increase its oil production capacity significantly. Iran produced 6 million bbl/d in 1974, but has not surpassed 3.8 million bbl/d on an annual basis since the 1978/79 Iranian revolution. During the 1980s, it is believed that Iran may have maintained production levels at some older fields only by using methods which have permanently damaged the fields. Also, Iran's oilfields are -- according to Oil Minister Zanganeh -- experiencing a depletion rate of 200,000-300,000 bbl/d per year, and are in need of upgrading and modernization. Despite these problems, Iran has ambitious plans to double national oil production --

**Iran's Oil Production and Consumption
1971-2003E**



Note: 2003 values are forecasts. Oil includes crude production and natural gas liquids.

investment.

In October 1999, Iran announced that it had made its biggest oil discovery in 30 years, a giant onshore field called Azadegan located in the southwestern province of Khuzestan, a few miles east of the border with Iraq. Reportedly, the Azadegan field contains in-place oil reserves of 26-70 billion barrels, with potential production of 300,000-400,000 bbl/d (and possibly higher) over a 20-year period. On November 1, 2000, agreement was reached between Japan and Iran for Japanese firms (Japex, Indonesia Petroleum, and Tomen) to receive priority-negotiating rights in developing Azadegan. In exchange, Japan was to loan Iran \$3 billion. In January 2001, the Majlis approved development of Azadegan by foreign investors using the so-called "buyback" model (see below). In early March 2003, however, the Iranian official in charge of developing Azadegan said that Iran and Japan had not yet reached a final agreement on the \$2.5 billion project.

Meanwhile, Japan has come under pressure from the United States to hold off on signing a deal with Iraq on Azadegan until Iran allows international inspectors greater access to its nuclear facilities (see below). In September 2003, Iran's oil minister said

to more than 7 million bbl/d by 2015 or so. The country is counting on foreign investment to accomplish this, possibly as high as \$5 billion per year.

NIOC's onshore field development work is concentrated mainly on sustaining output levels from large, aging fields. Consequently, enhanced oil recovery (EOR) programs, including natural gas injection, are underway at a number of fields, including Marun, Karanj, and the presently inactive Parsi fields. EOR programs will require sizeable amounts of natural gas, infrastructure development, and financing. Overall, Iran's oil sector is considered old and inefficient, needing thorough revamping, advanced technology, and foreign

that Japan had lost its exclusive rights on Azadegan, and that Iran would negotiate with other companies, but President Khatami said in late October 2003 that Japan still had "priority" on the field. Reportedly, the Japanese are pushing for a long-term presence at Azadegan, possibly 20 years, while the Iranians are offering less than 10 years. In early November 2003, Iran disclosed that it was in advanced negotiations with Total and Stat oil on Azadegan development. It is possible that Stat oil would be at a disadvantage vis-à-vis Total due to a kickback and corruption scandal involving Stat oil and various Iranian officials, including Mehdi Hashemi Rafsanjani, son of the country' s former President and Chairman of an NIOC subsidiary.

Since 1995, NIOC has made several sizable oil discoveries, including the 3-5-billion-barrel Darkhovin onshore oilfield, located near Abadan and containing low sulfur, 39° API crude oil. In late June 2001, Italy' s ENI signed a nearly \$1 billion, 5 1/2-year buyback deal to develop Darkhovin, with the added incentive of a limited risk/reward element (payment is to be linked to production capacity). ENI has a 60% stake in the project, with NIOC holding the remaining 40%. Ultimately, production at Darkhovin is expected to reach 160,000 bbl/d.

7-Foreign Investment/Buybacks

The Iranian constitution prohibits the granting of petroleum rights on a concessionary basis or direct equity stake. However, the 1987 Petroleum Law permits the establishment of contracts between the Ministry of Petroleum, state companies and "local and foreign national persons and legal entities." "Buyback" contracts, for instance, are arrangements in which the contractor funds all investments, receives remuneration from NIOC in the form of an allocated production share, then transfers operation of the field to NIOC after the contract is completed. This system has drawbacks for both sides: by offering a fixed rate of return (usually around 15%-17%), NIOC bears all the risk of low oil prices. If prices drop, NIOC has to sell more oil or natural gas to meet the compensation figure. At the same time, companies have no guarantee that they will be permitted to develop their discoveries, let alone operate them. Finally, companies do not like the short terms of buyback contracts.

The first major project under the buyback investment scheme became operational in October 1998, when the offshore Sirri A oil field (operated by Total and Malaysia' s Petronas) began production at 7,000 bbl/d (Sirri A currently is producing around 20,000 bbl/d). The neighboring Sirri E field began production in February 1999, with production at the two fields expected to reach 120,000 bbl/d.

In March 1999, France' s Elf Aquitaine and Italy' s Eni/Agip were awarded a \$1 billion contract for a secondary recovery program at the offshore, 1.5-billion-barrel Doroud oil and natural gas field located near Kharg Island. The program is intended to boost production from around 136,000 bbl/d to as high as 205,000 bbl/d by 2004. TotalFinaElf is operator of the project, with a 55% share, while Eni holds the other 45%.

In April 1999, Iran awarded TotalFinaElf (46.75% share), along with Canada' s Bow Valley Energy (15% share), a buyback contract to develop the offshore Balal field. The field, which contains some 80 million barrels of reserves, started producing at a 20,000-bbl/d rate in early 2003, reportedly reached 40,000 bbl/d in October 2003. In February 2001, ENI-Agip acquired a 38.25% share in Balal.

In November 2000, Norway' s Statoil signed a series of agreements with NIOC to explore for oil in the Strait of Hormuz area. The two companies also will cooperate on developing a natural gas-to-liquids processing plant for four southern onshore fields, and possibly will develop the Salman offshore field at a cost of \$850 million, with

eventual production of 130,000 bbl/d. Iran appears to be accelerating its plans to boost production of natural gas liquids (NGL), as well as liquefied petroleum gas (LPG). NGL expansion plans, including a \$500 million plan to build two NGL plants on the south coast of Iran, are aimed mainly at making ethane feedstock available for Iran's growing petrochemical industry.

A much-sought-after deal to develop the giant Bangestan field has been delayed several times after an expected award in 2001. Bangestan includes three oilfields (Anwaz, Mansuri, Ab-Teymour) which currently produce about 250,000 bbl/d of oil. In April 2003, Shell stated that it was frustrated with the slow pace of negotiations on Bangestan, including numerous changes to terms of the project.

In May 2002, Iran's Oil Ministry signed a \$585 million buyback contract with local company PetroIran to develop the Foroozan and Esfandiar offshore oilfields. PetroIran is expected to increase production at the fields from around 40,000 bbl/d at present to 109,000 bbl/d within 3 years. The two oilfields straddle the border with Saudi Arabia's Lulu and Marjan fields.

In other news related to "buyback" deals, the Cheshmeh-Khosh field, which had been awarded to Spain's Cepsa for \$300 million, is likely to be re-awarded to a consortium of Cepsa and OMV. The two companies are to raise crude production at the field from 30,000 bbl/d to 80,000 bbl/d within four years.

Recently, Iran appears to have had some second thoughts about buybacks (including charges of corruption, insufficient benefits to Iran, and also worries that buybacks are attracting too little investment), and reportedly is considering substantial changes in the system. In late May 2002, Canada's Sheer Energy became the first foreign company since ENI's Darkhovin deal to reach agreement (\$80 million to develop the Masjed-I-Suleyman, or MIS, field) under the ENI terms. Sheer aims to boost MIS production from 4,500 bbl/d to 20,000 bbl/d. In general, however, the addition of a limited risk/reward element has not attracted the flood of foreign energy investment which Iran both needs and wants. As a result, Iran reportedly is considering a further modification to its "buy-back" model, possibly extending the length of such contracts from the current 5-7 years.

In early November 2003, NIOC announced the launch of a new tender for 16 oil blocks. The contracts reportedly are to be based on the buyback model, but for the first time will cover exploration, appraisal, and development. In September 2003, Russia's Lukoil said it had been granted approval by NIOC to explore for oil in the Anaran block along the border with Iraq. Norsk Hydro is currently in charge of the project.

8-Offshore Developments

The Doroud 1&2, Salman, Abuzar, Foroozan, and Sirri fields comprise the bulk of Iran's offshore oil output. Iran plans extensive development of existing offshore fields and hopes to raise its offshore production capacity to 1.1 million bbl/d (from around 675,000 bbl/d currently). It is estimated that development of new offshore Persian Gulf and Caspian Sea oil fields will require investment of \$8-\$10 billion. In early October 2003, Iran re-launched a tender for eight exploration blocks in the Persian Gulf after receiving little interest from a January 2003 announcement. One area considered to have potential is located near the Strait of Hormuz. Another interesting area is offshore near Bushehr, where Iran claimed in July 2003 to have discovered three fields with potentially huge -- 38 billion barrels oil reserves.

In late 2001 and early 2002, Shell brought part of the \$1.1 billion Soroush-Nowrooz development online, with production of around 60,000 bbl/d. The two fields are

located offshore, about 50 miles west of Kharg Island, and contain estimated recoverable reserves of around 1 billion barrels of mainly heavy oil. Although Soroush was shut down briefly in March 2003 at the outset of war with Iraq, output from the field is still expected to reach 190,000 bbl/d by the end of 2003 (the first of four new oil platforms at Soroush was launched in October 2003). In early 2003, a consortium of three Japanese companies bought a 20% share in the Soroush/Nowrooz development project.

9-Caspian Sea Region

Aside from acting as a transit center for other countries' oil and natural gas exports from the Caspian Sea, Iran has potentially significant Caspian reserves of its own, including up to 15 billion barrels of oil and 11 trillion cubic feet of natural gas. It is important to note, however, that almost none of this is "proven" to be recoverable (although preliminary seismic surveys conducted by Lasmo and Shell indicated 2.5 billion barrels of oil). Currently, Iran has no oil or natural gas production in the Caspian region, although in March 2001, NIOC signed a \$226 million deal with Sweden's GVA Consultants and Iran's Sadra to build an oilrig in the Caspian Sea off Mazandaran province. This marks Iran's first exploration attempt in the Caspian Sea, whose legal status among regional states remains in dispute.

At the present time, Iran maintains the most isolated position among the Caspian Sea's littoral states on the division of the Sea. Iran insists that regional treaties signed in 1921 and 1940 between Iran and the former Soviet Union, which call for joint sharing of the Caspian's resources between the two countries remain valid. Iran has rejected as invalid all unilateral and bilateral agreements on the utilization of the Sea. As such, Iran is insisting that either the Sea should be used in common, or its floor and water basin should be divided into equal (20%) shares. Under this plan, the so-called "condominium" approach, the development of the Caspian Sea would be undertaken jointly by all of the littoral states. However, using the equidistant method of dividing the seabed on which Kazakhstan, Azerbaijan, and Russia have agreed, Iran would only receive about 12%-13% of the Sea. In March 2002, Iran's Oil Minister Zanganeh asserted that Iran would begin exploiting its fifth of the Sea within a short time, and would not permit "any other party to engage in oil exploration" in this area. In January 2003, Iranian Foreign Minister Kamal Kharrazi reiterated the country's claim to a 20% share of the Caspian, and in early April 2003, Oil Minister Zanganeh said that Iran would start Caspian drilling within a year or two.

As of April 2003, no agreement has been reached among Caspian Sea region states on this matter. In March 2003, Iran and Turkmenistan noted "the need to achieve a consensus between the five [littoral] countries," while the two countries reportedly moved ahead in charting their common border in the Sea. In late April 2002, a meeting between the five Caspian littoral states ended without agreement on a new treaty. On May 20, 2002, Iran and Azerbaijan also failed to reach agreement on Caspian Sea division. On July 23, 2001, tensions flared in the Caspian Sea region when an Iranian gunboat intercepted two BP oil exploration vessels off Azerbaijan's coast. Following the incident, BP suspended exploration in the disputed block (which Iran calls Alborz).

10-Crude Swaps

In order to get around restrictions in dealing with Iran, several firms have proposed oil "swaps" involving the delivery of Caspian (Azeri, Kazakh, Turkmen) oil to refineries in northern Iran, while an equivalent amount of Iranian oil is exported through Persian

Gulf terminals. According to Iranian Oil Minister Bijan Namdar-Zangeneh, Iran is planning to retool its oil infrastructure to accommodate such swaps, including construction of a \$400 million, 240-mile pipeline from the Caspian area via Iran's Caspian port of Neka to refineries in northern Iran and to Tehran. Eventually, this could lead to the transport of 370,000 bbl/d of Caspian crude. Iran also plans to boost capacity at its northern refineries at Arak, Tabriz, and Tehran to about 800,000 bbl/d in order to process this oil (in August 2003, a \$500 million tender was issued to upgrade the Tehran and Tabriz refineries).

As of the summer of 2003, about 50,000 bbl/d of Turkmen oil were being shipped to Neka, and then on to Tehran by the existing Neka-Tehran pipeline. Iran is aiming to increase this volume to 150,000 bbl/d in the near term and as much as 500,000 bbl/d in the long term, with a new pipeline carrying crude from Neka to the Tehran refinery. Meanwhile, in November 2002, Russia's Lukoil began sending around 25,000 bbl/d of Russian Siberian Light crude from the Caspian port of Astrakhan to Neka, and Kazakhstan reportedly is shipping around 20,000 bbl/d to Iran. Finally, Iran reportedly has proposed that its refinery at Abadan be used to process up to 350,000 bbl/d of Iraqi crude oil in yet another swap arrangement.

11- Refining and Transportation

As of January 2003, Iran had nine operational refineries with a combined capacity of 1.47 million bbl/d. Major refineries include: Abadan (400,000-bbl/d capacity); Isfahan (265,000 bbl/d); Bandar Abbas (232,000 bbl/d); Tehran (225,000 bbl/d); Arak (150,000 bbl/d); and Tabriz (112,000 bbl/d). There reportedly are plans to increase capacity at Abadan to 540,000 bbl/d and at Bandar Abbas to around 320,000 bbl/d.

In order to meet burgeoning domestic demand for middle and light distillates, Iran has imported refined products since 1982, and is attempting to boost its refining capacity to 2 million bbl/d. Two planned grassroots refineries include a 225,000-bbl/d plant at Shah Bahar and a 120,000-bbl/d unit on Qeshm Island. The \$3 billion Shah Bahar refinery project was approved by the government in late 1994 and would be built by private investors. Under Iranian law, foreign companies are permitted to own no more than 49% of Iranian oil refining assets.

Iran exports crude oil via four main terminals -- Kharg Island (by far the largest), Lavan Island, Sirri Island (reopened on April 13, 2003 for the first time since 1988, when it was damaged by an Iraqi air raid), and Ras Bahregan. Refined products are exported via the Abadan and Bandar Mahshahr terminals. Many Iranian oil export terminals were damaged during the Iran-Iraq War, but all have been rebuilt.

12- Natural Gas

Iran contains an estimated 812 trillion cubic feet (Tcf) in proven natural gas reserves -- the world's second largest and surpassed only by those found in Russia. Around 62% of Iranian natural gas reserves are located in non-associated fields, and have not been developed, meaning that Iran has huge potential for gas development. Major non-associated gas fields include: South Pars (280-500 Tcf of gas reserves), North Pars (50 Tcf), Kangan (29 Tcf), Nar (13 Tcf), Khangiran (11 Tcf), and several others.

Despite the fact that domestic natural gas demand is growing rapidly, Iran has the potential to be a large natural gas exporter due to its enormous reserves. In 2001, Iran produced about 2.2 Tcf of natural gas. Of this, around 10% is flared, and approximately 30% is reinjected -- in part for enhanced oil recovery efforts. Natural gas treatment and processing plants include Kangan-Nar, Aghar-Dalan, Ahwaz, Marun-4, Bid Boland, and Asaluyeh.

Currently, natural gas accounts for nearly half of Iran' s total energy consumption and the government plans billions of dollars worth of further investment in coming years to increase this share. The price of natural gas to consumers is state-controlled. In March 2003, Russia' s Gazprom said that it might form a joint company with Iran to develop Iranian gas resources.

13-South Pars

Iran' s largest non-associated natural gas field is South Pars, geologically an extension of Qatar' s 380 Tcf North Field, most likely the largest non-associated gas field in the world. South Pars was first identified in 1988 and originally appraised at 128 Tcf in the early 1990s. Current estimates are that South Pars contains 280 Tcf or more (some estimates go as high as 500 Tcf) of natural gas, of which a large fraction will be recoverable, and over 17 billion barrels of liquids. Development of South Pars is Iran' s largest energy project, and already has attracted billions of dollars in investment. In early March 2003, the chairman of Petropars stated that another \$8 billion would be spent on South Pars development during the Iranian year starting March 21, 2003. South Pars development is proceeding, but has been delayed by various problems -- technical (i.e., high levels of mercaptans -- foul-smelling sulfur compounds -- in the South Pars gas), contractual (i.e., controversy over "buy-back" arrangements), etc. Phase 1, for instance, which is being handled by Petropars (owned 60% by NIOC), has been delayed several times and now is scheduled for completion in mid-2004 (around 3 years behind schedule), involves production of 900 million cubic feet per day (Mmcf/d) of natural gas and 40,000 bbl/d of condensate.

Natural gas from South Pars largely is slated to be shipped north via the planned 56-inch, 300-mile, \$500 million, IGAT-3 pipeline (a section of which is now being built by Russian and local contractors), as well as possible IGAT-4 and IGAT-5 lines. Gas also will be reinjected to boost oil output at the mature Agha Jari field (output peaked at 1 million bbl/d in 1974, but has since fallen to 200,000 bbl/d), and possibly the Ahwaz and Mansouri fields (which make up part of the huge Bangestan reservoir in the southwest Khuzestan region).

South Pars natural gas also is intended for export, by pipeline and also possibly by liquefied natural gas (LNG) tanker. Sales from South Pars could earn Iran as much as \$11 billion per year over 30 years, according to Iran' s Oil Ministry. However, Iran likely will face stiff competition for LNG customers, particularly given the fact that many other LNG suppliers (Oman, Qatar, the UAE) are already in the market, having locked up much of the Far East market. U.S. sanctions also mean that Iran is limited to non-U.S. liquefaction technology. For now, Iran appears intent on moving ahead with two LNG trains, each of which will likely have a capacity of around 4.8 million tons per year.

On September 29, 1997, Total signed a \$2 billion "buy back" deal (along with Russia' s Gazprom and Malaysia' s Petronas) to explore South Pars and to help develop the field during Phases 2 and 3 of its development. Total has a 40% share of the project, with the other two companies each having 30% shares. NIOC estimates that South Pars has a natural gas production potential of up to 8 billion cubic feet per day (Bcf/d) from four individual reservoirs.

In February 2003, Oil Minister Zanganeh officially inaugurated Phases 2 and 3 of South Pars development, which began to come on stream in September 2002. Already, Phases 2 and 3 reportedly are producing around 2 Bcf per day of natural gas, and 85,000 bbl/d of condensates. Twin undersea pipelines will carry gas from South Pars to onshore facilities at Asaluyeh. In March 2002, Hyundai signed another

contract, this one for \$1 billion, to build four natural gas processing trains. The Asaluyeh facility comprises four natural gas processing trains, sulphur recovery units, condensate stabilization and storage units, and export compressors.

Phases 4 and 5, estimated to cost \$1.9 billion each, are being handled by ENI and Petropars, and involve construction (by Agip and Petropars) of onshore treatment facilities at the port of Bandar Asaluyeh. These two phases are expected to come online by late 2004 or early 2005 at around 2 Bcf per day, plus 1 million tons per year of liquefied petroleum gas (LPG).

Phases 6-8, which are to produce a combined 3 Bcf/d of natural gas and 120,000 bbl/d of condensate at a cost of \$2.6 billion, are being handled by Petropars and Norway's Statoil, which signed an agreement in October 2002. First stages of the project are scheduled to come online in late 2004, with gas being transported via the planned \$235 million IGAT-5 pipeline to the Agha Jari oilfield for injection as part of enhanced oil recovery efforts. NIOC is to take over as operator when development is finished. In May 2003, Iran signed a \$1.2 billion deal with a Japanese-led consortium for construction of an onshore natural gas and condensate processing facility for Phases 6-8.

Phases 9 and 10, being developed by South Korea's LG Engineering and Construction Corp., are expected to supply 2 Bcf per day to the domestic market, possibly by 2007. In September 2002, South Korea's LG signed a \$1.6 billion deal with NIOC on phases 9 and 10. LG's share is 42%, and the deal reportedly uses international bank project financing rather than a "buy-back" model. Bids on Phase 11, which is slated for LNG export, were opened in March 2003. Possible consortia include Iran LNG (BP, Reliance of India, NIOC), Pars LNG (Total, Petronas, NIOC), Persian LNG (Shell, Repsol, NIOC), and NIOC LNG (BG, Eni, and NIOC).

Phase 12, which had been slated for LNG export and condensate production, possibly by 2008, reportedly is on hold for now. Meanwhile, Shell hopes to win Phase 13, which is slated for LNG production but may be left unused. Phase 14 is slated for gas-to-liquids (GTL) development, with Statoil and Shell reportedly interested. In May 2003, invitations were sent out for bids on Phases 15-16 of the South Pars project, which is to produce 1.8 Bcf/d of natural gas for domestic use, plus 80,000 bbl/d of condensate and 1 million tons per year of LPG for export.

14-Other Natural Gas Development

In addition to South Pars, Iran's long-term natural gas development plans may involve: the 48-Tcf North Pars field (a separate structure from South Pars); the 6.4-Tcf, non-associated Khuff (Dalan) reservoir of the Salman oil field (which straddles Iran's maritime border with Abu Dhabi, where it is known as the Abu Koosh field); the 800-Bcf Zireh field in Bushehr province; the 4-Tcf Homa field in southern Fars province; the 14-Tcf Tabnak natural gas field located in southern Iran; the onshore Nar-Kangan fields, the 13-Tcf Aghar and Dalan fields in Fars province, and the Sarkhoun and Mand fields. In September 2003, President Khatami inaugurated the first phase of Tabnak development, along with a related gas processing plant and combined cycle power facility.

15-Natural Gas Trade

With almost unlimited natural gas production potential, Iran is looking to export large volumes of gas. Besides Turkey (see below), potential customers for Iranian gas exports include: Ukraine (Kiev reportedly is interested in building an Iran-Armenia-Georgia-Crimea-Ukraine line), Europe, India, Pakistan, Armenia, Azerbaijan,

Taiwan, South Korea, and coastal China. Exports could be either via pipeline or by LNG tanker, with possible LNG export terminals at Asaluyeh or Kish Island. In March 2003, BG and NIOC reportedly were in advanced talks on developing a \$1.4 billion LNG plant at Bandar Tombak on the Persian Gulf coast. The plant is to comprise two LNG trains, with capacity of 4.5-5 million tons per year each, with possible completion in 2007-2008.

In late January 2002, Iran and Turkey officially inaugurated a much-delayed natural gas pipeline link between the two countries. This follows several years of delays due to economic, political, and technical factors. In 1996, Iran and Turkey had signed a \$20 billion agreement that called for Iran to supply Turkey with more than 8 Tcf of natural gas over a period of 22 years beginning in late 1999. Officials in Turkey and Iran variously blamed U.S. sanctions, financing problems on the Turkish leg of the \$1.9 billion pipeline, economic recession in Turkey, and delays by the Iranians in completing an important metering station for delaying the project. Exports of Iranian natural gas to Turkey could reach 350 Bcf per year by 2007. There are questions, however, whether Turkish demand will grow rapidly enough to absorb this volume of gas from Iran, in addition to gas slated to be supplied by Russia, Algeria, and Nigeria. In June 2002, for instance, Turkey halted Iranian gas imports, ostensibly due to "quality problems" but more likely due to lack of demand in Turkey. In mid-November 2002, Turkey announced that it was resuming gas imports from Iran.

In October 2002, the International Atomic Energy Agency (IAEA) predicted that "Iran will be a major global natural gas supplier in the future," especially to Europe. Iran reportedly is shooting for around 300 Bcf per year of natural gas exports to Europe via Turkey by 2007. Along these lines, Greece and Iran signed a \$300 million agreement in March 2002 which calls for extending the natural gas pipeline from Iran to Turkey into northern Greece. After that, gas could be transported to Europe via Bulgaria and possibly Romania (a memorandum of understanding -- MOU -- was signed on this possibility in January 2003, and a joint working group set up in October 2003), or via an undersea pipeline to Italy, where gas demand is expected to grow rapidly in coming years. A deep water option could be extremely expensive, however, making an overland route more likely.

In January 2003, Iran and Kuwait signed an MOU on Iranian gas exports of around 110 Bcf per year to Kuwait by 2005. The gas is to be used for power generation.

16- Electric Power

As of 2001, Iran had installed power generation capacity of about around 31 gigawatts (GW), of which three-quarters or more was natural gas-fired, with the remainder either hydroelectric (7%) or oil-fired. As a result of significant state investment in this area, a number of new power plants (mainly hydroelectric and combined cycle) have come online in recent years in Iran, including the 2,000-MW Shahid Rai thermal power station in Qazvin; a 1,290-MW combined-cycle plant in Rasht; a doubling of the Tabriz power plant's capacity to 1,500 MW; two, 200MW, steam-powered units at the Martyr Montazeri plant; a 215-MW steam-powered unit at the Ramin Power Plant; a 107-MW combined cycle generator at Montazer Qa' em Power Plant, and three-fourths of the Shazand power plant near Arak in central Iran. In September 2003, President Khatami inaugurated a 1,053-MW combined cycle power plant in Fars, and the country plans to reach total power generating capacity of 33.4 GW by March 2004.

With power demand growing rapidly (7%-8% annually), Iran is building significant new generation capacity -- both thermal and hydroelectric, with the goal of adding

total generating capacity of 30 GW within 10 years (according to Iran's Energy Minister). Around 3 GW is expected to come online during the current Iranian year, which ends on March 19, 2004. Currently, the largest hydropower projects are the 3,000-megawatt (MW) Karun 3 plant, the 2,000-MW Godar-e Landar facility, a 1,000-MW station in Upper Gorvand, and the 400-MW Karkheh dam (came online in late summer 2003). New thermal projects include two 1,040-MW combined cycle plants in the South, an 1,100-MW combined cycle plant at Arak, and a 1,000-MW facility in Bandar Abbas. In February 2003, 1,272-MW combined-cycle plant came online in Kerman. In January 2003, plans were announced to build Iran's first geothermal plant, in the northwestern province of Ardebil. In early April 2002, the 1,000-MW, natural-gas-fired, combined-cycle Shahid Raja'i power plant came online in the northern Iranian province of Qazvin.

17- Economic Data

Description	1999	2000	2001	2002	2003*
GDP per head (\$ at PPP)	6,614	7,002	7,422	7,820	8,790
GDP (% real change pa)	1.75	5.20	4.97	5.70	3.1
Government consumption (% of GDP)	14.30	14.04	14.61	14.30	14.40
Budget balance (% of GDP)	-0.16	-0.65	-0.51	2.60	2.1
Consumer prices (% change pa;av)	20.08	14.48	11.30	14.30	15.1
Public debt (% of GDP)	46.37	32.90	29.13	23.80	24.6
Labour costs per hour (USD)	22	29	31	38	46
Recorded unemployment (%)	-12.5	-13	-13.6	-14	-14.6
Current- account balance/GDP	12.14	17.97	6.26	3.10	3.30
Foreign-exchange reserves (billion \$)	5,284	12,527	17,468	20,568	27,440
Notes					
GDP (% real change pa)	Years are fiscal years beginning March 20				
Foreign-exchange reserves	Since start 2000, includes Oil Stabilization Fund				

* Estimate

18- Key Points:

18.1. Iran has done three development programs after finish the war with Iraq. Each program has taken 5 years as follows:

First program:	1989 – 1993
Second program:	1994 – 1996
Third program:	1999 – 2005
Fourth program:	2005 – 2010

18.2. Investment in the Second program in oil, gas, and petrochemical has been about US \$21,000 million, including US \$17,000 million in buyback.

18.3. Investment in the Third program equals US \$25,000 million in oil, gas, and petrochemical industries.

18.4. Estimated investment in Fourth program in oil, gas, and petrochemical are about US \$60,000.

18.5. Estimated petrochemical product in the end year of Fourth program will be more than 26,000 MT as follows:

18.6.All buyback contractors must be audited by international audit firms.

18.7. Iranian Association of Certified Public Accountants (IACPA) was established in 2001 and has about 1600 members, 400 of which are working in private audit firms and 350 members are employed in the Audit Organization (governmental firm). 330 members are working individually and others are working in the industry, Banking and Financial affairs.

18.8.The Tehran Stock Exchange (TSE) has accepted only 97 certified audit firms.

18.9. Every audit firm must have three fulltime partners. However, in the new amended law of ICPA this has been changed to two active partners.

18.10.The following audit firms have working relationships with the big four:

<u>Name of the audit firm</u>	<u>Relation</u>
Agahan Moshar	PWC – Co-operation
Tadvin	E & Y – (Tadvin says they are member)
Bayat Rayan	KPMG – Full Member

18.11. The ten big audit firms in Iran are as follows:

Audit Organization, Dayarayan, Agahan Moshar, Bayat Rayan, Behrad Moshar, Behmand, Fater, Iran Mashhood, Raymand & Co and Tadvin.

18.12.Total income of the Audit Organization (The only governmental audit firm) in 2003 was about US \$30 million USD Estimated income from only audit in private sector is about US \$30 million (available sources only) and it may more than 45 million with other financial services same as system, corporate financial and tax.

18.13.The ten big Iranian companies are in the oil, gas, automobile, and banking industries as named:

Razi Petrochemical,
Iran- Khodro
National Petrochemical co.
National Gas Co.
National Iranian Oil Co.
Melli Bank of Iran
Saderat Bank of Iran
Social Security investment Co.
Pension & Fund Investments Co.
Fars & Khozestan Cement Co.

18.14.As of 9th Feb. 2004 the total market capital of companies quoted in TSE is about US \$39 billion. The market capital is to increase to US \$100 billion in 2005.

18.15.Number of companies quoted in TSE by 9th February 2004 is 357.

18.16.Number of graduates per year in the field of Accounting is 18,000.

18.17.Number of Accounting colleges in Iran are 74.

18.18.The Audit Organization is responsible for pronouncement of auditing and accounting standards, and in year 2000, the Audit organization issues Iranian Auditing and Accounting Standards. The standards are based on the International Standards.

18.19.Two NGO auditing and accounting associations have activities in Iran. Iranian Institute of Certified Accountants (IICA), with 30 years of experience has 1,400 members. The Iranian Association of Certified Public Accountants (IACPA) was established in year 2000, and has 1,600 members. IACPA is official and legally in Iran.

Website of IICA www.iranianica.com

Website of IACPA www.iacpas.org

Website of Dayarayan www.Dayarayan.com

18.20.The multinational companies active in Iran are mainly in the oil and gas sector. Some of the most important are Deawoo, Hyundai, Samsung, Faster willer, Toyo, Mitsui, Mitsubishi, shell, Techniq, Total, Start Oil, Petro- Nas, Petro- Pars

18.21.The investment in the oil, gas and petrochemical industry as forecasted in the Third plan (2000 – 2004) is about US \$22 billion. The Fourth plan (2004 – 2008) projects about US \$62 billion.

18.22.The most important project in gas lines are:

Iran – Turkey

Iran – Pakistan – India

Iran – Turkmenistan

Iran- Armenia

18.23.The most important oil and energy websites are:

www.shana.ir

www.Iranenergy.org.ir

18.24. Ministry of Finance & Economy has two big project as follow:

- Vat
- Comprehensive Tax plan

Two project is going to international tender and D&T might be have good chance for those.

18.25- The Iranian banks use the old system and they need new mechanization system and privatization. At present Melli Bank is discuss with D&T Canada about New mechanization system and online web.

Source:

- 1-World bank report
- 2-IMF Special report
- 3-Buliten of Central Bank of Iran