

U.S. AND IRANIAN STRATEGIC COMPETITION

Sanctions, Energy, Arms Control, and Regime Change

**Anthony H. Cordesman, Bryan Gold, Sam Khazai, and
Bradley Bosserman**

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Anthony H. Cordesman
Arleigh A. Burke Chair in Strategy
acordesman@gmail.com

**Note: This report is will be updated. Please provide comments and suggestions
to acordesman@gmail.com**

Executive Summary

This report analyzes four key aspects of US and Iranian strategic competition - sanctions, energy, arms control, and regime change. Its primary focus is on the ways in which the sanctions applied to Iran have changed US and Iranian competition since the fall of 2011. This escalation has been spurred by the creation of a series of far stronger US unilateral sanctions and the EU's imposition of equally strong sanctions – both of which affect Iran's ability to export, its financial system and its overall economy.

It has been spurred by Iran's ongoing missile deployments and nuclear program, as reported in sources like the November 2011 IAEA report that highlights the probable military dimensions of Iran's nuclear program. And, by Iranian rhetoric, by Iranian threats to “close” the Gulf to oil traffic; increased support of the Al Quds force and pro-Shiite governments and non-state actors; and by incidents like the Iranian-sponsored assassination plot against the Saudi Ambassador to the US, an Iranian government instigated mob attack on the British Embassy in Tehran on November 30, 2011, and the Iranian-linked attacks against Israeli diplomats.

Sanctions Become Real at the End of 2011

The most important issue now shaping US and Iranian competition is whether the new and growing mix of US and EU sanctions can lead to some negotiated end to those aspects of Iran's nuclear programs that will give the capability to deploy nuclear weapons. More broadly, it is whether these negotiations can go further, and create a more stable relationship between Iran and the US, Europe, and the other Gulf states.

There is nothing new about sanctions per se. Sanctions have been applied to Iran since the fall of the Shah in 1979 and were first applied to Iranian property, assets, and arms transfers. As the following analysis shows, the US steadily applied broader unilateral sanctions and pushed for international action – but until the end of 2011, the end result of unilateral and UN sanctions was far too weak to have a critical impact on impact on Iran.

Earlier efforts did have some impact. They restricted many aspects of Iran's military build-up, but they have also not prevented Iran from making major progress in their asymmetric warfare capabilities, missile programs, and acquisition of nuclear technology. They still, however, had limited practical impact on the Iranian nuclear program. Iran had the time and options to reduce their impact, and many experts felt that Iran's own internal economic policies put more pressure on their economy than US and UN sanctions.

It was only at the end of 2011 and beginning of 2012 that Iran's steady progress towards a nuclear weapons capability led the US and its European allies to pass strong and comprehensive sanctions on Iran's energy exports, ability to trade, and financial system. These sanctions did not go into full effect until the summer of 2012 and still have significant exemptions. It was only then that the US applied a full mix of sanctions on Iranian banks, Iranian companies involved in its nuclear industry, Iranian companies involved in the petrochemical and oil industries, and non-Iranian companies that have invested or have been involved with Iran's petrochemical industries, arms industries, transport, and precious metal trafficking. It was only then that the EU sharply increased its role in sanctioning Iran by imposing an embargo on Iranian petrochemical imports and a ban on European investment in Iran's petrochemical industry.

The US has instituted four major acts sanctioning Iran, impacting hundreds of companies, people, and assets. These include: The Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (signed July 1, 2010), FY 2012 NDAA (signed December 31, 2011), Iran Threat Reduction and Syria Human Rights Act of 2012 (signed August 10, 2012), and FY 2013 NDAA (signed January 2, 2013). They have cut off Iran from the international banking system; declared the entire Iranian banking sector as money laundering entities; increased the number of sanctions the president is to impose; targeted Iran's petrochemical industry, the CBI, the financial sector, and transportation infrastructure; and forced countries to curtail their purchases of Iranian oil in the face of sanctions.

The EU has joined the US in pressuring Iran by passing six major Council Decisions in the past three years - Council Decisions 2010/413/CFSP (issued July 27, 2010), 2011/235/CFSP (issued April 14, 2011), 2012/35/CFSP (issued January 23, 2012), 2012/152/CFSP (issued March 15, 2012), 2012/168/CFSP (issued March 23, 2012), and 2012/365/CFSP (issued October 15, 2012).

These EU sanctions have targeted various dual-use items, Iranian transportation and shipbuilding services, oil and gas technology, investments in the Iranian petrochemical industry, and maritime insurance. They also cut Iran off from the international banking system. The EU embargoed Iranian oil and natural gas, which accounted for roughly 23% of Iran's total exports. The EU embargo prohibits the purchase, transportation, and importation of Iranian crude oil, the exportation of petrochemical equipment and technology, as well as related financial investments including insurance.

Additionally, the EU froze the Central Bank of Iran's European assets, and banned the trade of gold and other precious materials between Europe and the CBI.¹ US and EU sanctions took time to become fully effective, but they have had a major impact as time has gone on. Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA) sanctions have progressively increased the pressure on Iran by mandating that all countries that import Iranian oil reduce their purchases to win a 180-day renewable sanctions waiver. This has continually reduced other country's purchases of Iranian oil. Other sanctions that have gone into effect in 2012: the FY2012 NDAA and the Iran Threat Reduction and Syria Human Rights Act, have in effect cut Iran off from the international financial, insurance, and reinsurance industries.

These sanctions, in addition to the EU's embargo of Iranian petroleum products that entered into force on July 1, 2012, have further impacted Iran's economy and oil industry. The combined actions has had a major impact on Iran's oil exports, as oil sales to the EU accounted for roughly 23% of Iran's total exports. Total Iranian oil exports in July were estimated at 940,000 bpd, down from 1.7 million bpd in June and 2.8 bpd in July 2011. Oil export revenue fell from \$9.8 billion in July 2011 to \$2.9 billion in July 2012.

There are still significant exemptions and waivers to these sanctions for some countries that have grown particularly dependent on Iran's exports – namely China, India, South Korea, and Japan – but have slowly reduced their importation levels. China, Iran's largest export target, has reduced their imports by roughly 22% in 2012; India, Iran's second largest customer, has reduced their imports by roughly 15% and will further reduce their purchase by 10-15% this year; South Korea has reduced their imports by roughly 39% and will reduce Iranian imports by 20% this year;

¹ "EU Iran sanctions: Ministers adopt Iran oil imports ban", BBC News, January 23, 2012.

Japan's imports fell 18% and the government has pledged to reduce Iranian imports by about 15%.

The Timing and Impact of Key New Sanctions to Date

The end result is that US and EU actions have put far more pressure on Iran since the end of 2011:

- On January 9, 2013, the Iranian Central Bank disclosed that the annual inflation rate hit 27.4%.²
- On January 8, 2013, the US Energy Information Administration (EIA) released their short-term energy outlook report. The report estimates that Iranian crude production has been falling since the last quarter of 2011 due to the lack of funds available for upkeep and natural decline in production. The report also estimates that Iranian supply averaged 3.4 million barrels per day (mbpd) during the first quarter of 2012 and declined to an average of 2.6 mbpd during the fourth quarter of 2012.³
- On January 2, 2013, President Obama signed into law the FY 2013 National Defense Authorization Act that blocks property and imposes at least five sanctions on entities that provide goods or services to energy, shipbuilding, shipping, or port operations or provides insurance for those operations and blacklists foreign banks which do provide such services from using the US banking system. These sanctions do not apply for countries with exemptions or to purchases of natural gas from Iran. The law imposes at least five sanctions on any entity that provides precious metals to Iran (such as gold), or semi-finished metals or software for integrating industrial processes. It also imposes human rights abuser sanctions on Islamic Republic of Iran Broadcasting. On February 6, any funds used to purchase Iranian oil must be credited to an account located in the purchasing country and can only be used for the purchase of non-sanctioned goods. This will reduce the hard currency earnings Iran receives from oil sales.
- On December 12, 2012, the International Energy Agency (IEA) released its monthly oil market report. The report estimated that Iranian crude production was lower in November at 2.7 mbpd and may reach 1.0 mbpd into 2013. It also estimates that Iran's exports in 2012 have fallen 50% compared to 2011, however, imports of Iranian oil edged upwards to 1.3 mbpd in November 2012 compared to 1.07 mbpd in September 2012. US sanctions continued to exert pressure on the remaining major importers of Iranian oil: China, South Korea, Japan, and India; the share of Iranian oil to these importers has dropped since the summer.⁴
- On December 10, 2012, the Institute for International Finance released a report that estimates the impact of sanctions has greatly affected the Iranian economy. The report says that Iran's GDP is expected to contract by 3.5% in 2012, opposed to 1.2% growth in 2011. Inflation is also expected to have increased from 26.5% in 2011 to nearly 50% in 2012. Government revenues from oil exportation, if the current price of \$110 a barrel holds, could be 40% less than in 2011.⁵
- In October 2012, the Iranian Rial dropped to record lows against the US Dollar, at an unofficial rate of 37,000 to one USD, down from 28,000 Rials in September and 13,000 in September 2011.⁶ The Rial has lost roughly 80% of its value since 2011. This devaluation has increased everything from Iranian energy prices, food prices, trade, and imports. It has also vastly increased the rate of inflation and it may be as high as 70%. There have been sporadic reports of 40-50% inflation on consumer goods, striking workers due to

² The Associated Press, "Iran: Inflation Soars," The New York Times, January 9, 2013. <http://www.nytimes.com/2013/01/10/world/middleeast/iran-inflation-soars-officials-say.html>

³ US Energy Information Agency, "Short-Term Energy Outlook," January 8, 2013. http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf

⁴ International Energy Agency, "Monthly Oil Market Report," December 12, 2012, pg 19. <http://omrpublic.iea.org/omrarchive/12dec12full.pdf>

⁵ "Sanctions push Iran into recession: IIF," Reuters, December 10, 2012. <http://www.chicagotribune.com/news/sns-rt-us-iran-sanctions-economybre8b90of-20121210.0.1288929.story>

⁶ Thomas Erdbrink, "Iranian currency slides under latest U.S. sanctions," *Washington Post*, January 2, 2012.

unpaid wages, bankrupt Iranian companies, and the government's inability to pay worker's wages. Iran has also begun "means testing" to reduce social spending and has forced Tehran to ban the importation of luxury goods. Analysts at one outside group have predicted Iran's economy will shrink by 3.5% in 2012, a reversal from the 1.2% positive growth in 2011.

- On October 15, 2012, the EU issued Council Decision 2012/365/CFSP, instituting additional sanctions against Iran's banking system, oil and petrochemical industry, and shipping industry. The EU decision prohibits any transactions between European and Iranian banks except for those authorized in advance. It also bans the export of graphite, aluminum, steel, and industrial facility control software. The decision prohibits the provision of flagging and classification services to Iranian tankers and cargo vessels in the EU or by EU nationals. Finally, the decision also forbids EU companies from providing shipbuilding technology and naval equipment to Iran and broadens the export ban on equipment for Iran's oil, gas, and petrochemical industries.
- On July 1, 2012, the EU's embargo of Iranian petroleum products entered into force. This has had a major impact on Iran's oil exports, as oil sales to the EU accounted for roughly 23% of Iran's exports. Total Iranian oil exports in July were estimated at 940,000 bpd, down from 1.7 million bpd in June and 2.8 million bpd in July 2011. Oil export revenue fell from \$9.8 billion in July 2011 to \$2.9 billion in July 2012.
- On August 10, 2012, President Obama signed into law the "Iran Threat Reduction and Syria Human Rights Act of 2012," which strengthened sanctions on Iran's energy sector by increasing the number of sanctions the Administration is required to impose from three to five. The law also imposes sanctions against foreign companies who conduct business in Iran's energy sector and any company that insures, sells, or leases tankers to Iran. This action has resulted in higher insurance costs for Iranian tankers and has resulted in major insurance companies refusing to insure Iranian ships.
- On March 14, 2012, the Society for Worldwide Interbank Financial Telecommunication, or SWIFT, complied with EU instructions to, "discontinue its communications services to Iranian financial institutions that are subject to European sanctions."⁷ SWIFT is essential to international banking because it provides a secure worldwide financial communication and transaction network to more than 10,000 financial institutions and corporations in 210 countries. In 2010, SWIFT reported that 19 Iranian banks and 25 Iranian financial institutions used the network over 2 million times during the course of the year.⁸ All banking transactions with Iran, international insurance coverage in Iran or for Iranian oil transportation, and all transactions with Iran's state-owned oil company and its main tanker fleet, are affected by this decision.⁹
- On February 27, 2012, the Treasury Department strengthened the preexisting Iranian Financial Sanctions Regulations (IFSR) with the implementation of subsection 1245(d). The amendment extends sanctions to "foreign financial institutions that knowingly conduct or facilitate certain significant financial transactions

⁷ Rick Gladstone and Stephen Castle, "Global Network Expels as Many as 30 of Iran's Banks in Move to Isolate Its Economy," New York Times, March 16, 2012, http://www.nytimes.com/2012/03/16/world/middleeast/crucial-communication-network-expelling-iranian-banks.html?_r=1

⁸ Rick Gladstone and Stephen Castle, "Global Network Expels as Many as 30 of Iran's Banks in Move to Isolate Its Economy," New York Times, March 16, 2012, http://www.nytimes.com/2012/03/16/world/middleeast/crucial-communication-network-expelling-iranian-banks.html?_r=1; Thomas Endbrink and Joby Warrick, "Grim Outlook on Nuclear Talks," Washington Post, March 16, 2012, p. A7.

⁹ Indira A.R. Lakshmanan, "Iran Sanctions Bid Targets Oil, Tanker Companies to Cut Exports," Bloomberg, Feb 6, 2012; Indira A.R. Lankshmanan, "Global Insurers Targeted in Latest U.S. Bid to Expand Sanctions on Iran," Bloomberg, Mar 8, 2012; Al-Arabiya, U.S. Lawmakers Take Next Step on New Iran Sanctions on Heels of European Embargoes, Jan 31, 2012; <http://english.alarabiya.net/articles/2012/01/31/191608.htm>; AP sources: Congress to seek new sanctions targeting all Iranian banks Associated Press, March 6, 2012, http://www.washingtonpost.com/politics/federal_government/ap-sources-congress-to-seek-new-sanctions-targeting-all-iranian-banks/2012/03/06/gIQA1p0XvR_print.html, "Iran Sanctions Bid Targets Oil, Tanker Companies to Cut Exports," Bloomberg, Feb 6, 2012 2:26 PM ET; Indira A.R. Lakshmanan, Global Insurers Targeted in Latest U.S. Bid to Expand Sanctions on Iran, Bloomberg, Mar 8, 2012 11:10 AM ET; Al Arabiya, U.S. lawmakers take next step on new Iran sanctions on heels of European embargoes, Tuesday, 31 January 2012;

with the Central Bank of Iran (CBI) or a U.S.-designated Iranian financial institution.” In accordance with these actions, the Secretary of the Treasury will impose sanctions on privately-owned foreign institutions, as well as government-owned or controlled financial institutions that conduct business with the Central Bank of Iran (CBI).¹⁰

- On February 5, 2012, President Obama issued Executive Order 13599, which implemented section 1245 of the FY 2012 NDAA which froze the assets of the Iranian government and prevented all Iranian financial assets in the US from being “transferred, paid, exported, withdrawn, or otherwise dealt with.”¹¹ The order also implemented new sanctions that required US banks to seize the funds of those on the Specially Designated Nationals (SDN) list, even if the funds are not destined to a US entity or firm. Previously, US banks were required to block the transaction and return the funds to the sender. This order effectively blocks Iranians from using the US banking system.
- On January 23, 2012, the EU – which accounts for roughly one-fifth of Iran’s oil exports – introduced new sanctions to be phased in over the course of 2012. The EU enacted an embargo on the purchase, transportation, and importation of Iranian crude oil; the exportation of petrochemical equipment and technology; as well as related financial investments including insurance. Existing European contracts were allowed to continue until July 1, 2012. Additionally, the EU froze the Central Bank of Iran’s European assets, and banned the trade of gold and other materials between Europe and the CBI.¹²
- On December 31, 2011, President Obama signed the FY2012 National Defense Authorization Act (NDAA) (S.1867) that contained an amendment that required the President to bar foreign banks from opening accounts in the US if that bank processed payments for oil through the CBI. Section 1245 of the FY2012 NDAA imposed unilateral sanctions on the CBI in ways that impose major penalties against entities – including corporations and foreign central banks – which engage in transactions with the CBI. The sanctions on transactions unrelated to petroleum were to come into force 60 days after the bill was signed. Sanctions on transactions related to petroleum were to take effect a minimum of 180 days after the bill's signing. The amendment provided for a renewable waiver of 120 days if the President determined that doing so is in the interest of the US.
- On December 5, 2011, the State Department launched a “virtual embassy” for Iran. This consisted of a website which was quickly blocked by Tehran amidst allegations that the US was attempting to recruit spies and foster regime change. US State Department officials claimed that the site was merely an attempt to inform Iranians about student visas and explain US policy towards Iran. It appears that the effort intended to weaken support for the regime among young, technically savvy Iranians. This was one in a series of attempts to make pro-American media and resources available to populations inside Iran.
- In November 2011, the US Treasury Department introduced new unilateral sanctions under the auspices of the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (CISADA). These new sanctions targeted Iran’s petrochemical industry, the CBI and financial sector, transportation infrastructure, and added dozens of names to the list of sanctioned individuals. These restrictions bar institutions from conducting any business with any Iranian banks – including the CBI and its affiliates – as well as expanding sanctions on Iranian individuals and placing new restrictions on the importation of Iranian goods.
- On November 21, 2011, the US Treasury Department designated Iran’s entire financial sector, including the CBI, as “money laundering entities” under Section 311 of the USA Patriot Act.
- On July 27, 2010, the EU issued Council Decision 2010/413/CFSP that establishes an embargo on nearly all dual-use goods, military arms, and nuclear-related items; bans EU exports of key equipment and

¹⁰ U.S. Department of the Treasury, “Factsheet: Treasury Amends Iranian Financial Sanctions Regulations to Implement the National Defense Authorization Act”, February 27, 2012.

¹¹ “Executive Order—Blocking Property of the Government of Iran and Iranian Financial Institutions”, The White House, Office of the Press Secretary, February 6, 2012.

¹² “EU Iran sanctions: Ministers Adopt Iran Oil Imports Ban”, *BBC News*, January 23, 2012.
<http://www.bbc.co.uk/news/world-europe-16674660>

technology for oil and natural gas production, exploitation, and refining; bans technical assistance, training, and financing in Iran's energy sector; bans access to EU airports for Iranian cargo flights; and bans the provision of bunkering or ship services to Iranian or Iranian contracted vessels and aircraft if they have been involved in sanctions violations.

- On July 1, 2010, President Obama signed the Comprehensive Iran Sanctions, Accountability, and Disinvestment Act (CISADA). The act imposes sanctions on any person that makes an investment of \$20 million or more in Iran's petroleum industry, any person that provides Iran with goods, services, technology or information with a fair market value of \$1 million or more for the maintenance or expansion of Iran's production of refined petroleum products, and/or any person that exports more than \$1 million worth of gasoline to Iran or provides \$1 million worth of goods or services that could contribute to Iran's ability to import gasoline.¹³

Much now depends on how the US and EU sanctions effort is handled in the future. The Obama Administration and Congress are steadily tightening sanctions, but it is doing so carefully and in ways that focus on multilateral, rather than unilateral US action. Additional sanctions will be pursued gradually and in ways that maximize multilateral buy-in. The Iranian financial, oil, transportation, and petrochemical sectors will continue to be isolated to the extent possible. And the Administration will attempt to inform and empower population centers within Iran through channels such as the State Department's "Virtual Embassy" program, in hopes that an opposition movement will again challenge the regime as external financial constraints, economic mismanagement, and domestic pressure increase.

The Obama administration is also continuing military pressure by showing that "all options are on the table." Statements by top US officials seek to communicate in clear terms the costs Tehran faces for continued obstinate and uncooperative behavior. On September 25, President Obama said in a speech to the UN General Assembly, "[a] nuclear-armed Iran is not a challenge that can be contained...the United States will do what we must to prevent Iran from obtaining a nuclear weapon."¹⁴

Other Administration officials have echoed this sentiment. On March 7, 2012, Defense Secretary Leon Panetta told the *National Journal* that the Pentagon is preparing an "array of military options for striking Iran if hard-hitting diplomatic and economic sanctions fail to persuade Tehran to drop its nuclear ambitions."¹⁵ However, the US has refrained from such statements as of late as the Administration continues to attempt a diplomatic resolution to the conflict.

¹³ US Department of State, "Fact Sheet: Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA)," May 23, 2011. <http://www.state.gov/e/eb/esc/iransanctions/docs/160710.htm>

¹⁴ Jeffery Goldberg, "Obama's Crystal-Clear Promise to Stop Iran From Getting a Nuclear Weapon," *The Atlantic*, October 2, 2012. <http://www.theatlantic.com/international/archive/2012/10/obamas-crystal-clear-promise-to-stop-iran-from-getting-a-nuclear-weapon/262951/>

¹⁵ Yochi Dreazan, "Panetta: Pentagon Planning for Potential Strikes," *The National Journal*, March 8, 2012.

The Iranian Reaction

Iran's reactions have been mixed as the impact of the new US and EU sanctions have continued to reduce Iranian energy exports and revenues, crippled foreign direct investment in Iran, and created serious banking and trade problems. The Iranian government has had to deal with the fact that the Iranian Rial has become destabilized, and has steadily fallen to record lows as currency markets have reacted to the prospect of limited foreign trade, declining Iranian reserves, declining Iranian oil income, growing problems in working with Iran's financial system, and growing detection efforts and penalties for violating sanctions.

Most Iranian official statements minimized or discounted the impact of sanctions through the end of 2012. They blamed other problems, such as economic mismanagement, corruption, or "rouge elements," as the true reasons for Iran's economic difficulties.

Iranian officials also continued to state that sanctions have been helpful to Iran by increasing its self-reliance, and attacked the US and the EU for instituting sanctions that are "illegal."

- "Sanctions have caused an economic advantage for the production sector, and we should use this opportunity in the best way." - Iranian Minister of Industry, Mines, and Trade, Mehdi Ghazanfari, December 23, 2012.
<http://www.presstv.ir/detail/2012/12/23/279789/sanctions-advantageous-to-iran/>
- "By relying on their capabilities and knowledge, Iranian experts and manufacturers have been able to nullify the impact of sanctions so that at present many parts and equipment needed in petrochemical industry are being manufactured at home." - Head of Iran' National Petrochemical Company, Abdolhossein Bayat, December 23, 2012.
<http://english.farsnews.com/newstext.php?nn=9107129647>
- "Our enemies helped us today and we managed to cut Iran's dependence on oil revenues in a short time which is a great development in the country's economy...One of the problems that we were facing for a century was reliance on oil revenues...The sanctions imposed on us have created an opportunity to prepare the ground for cutting the connection between the (country's) budget and oil (revenues)..." - Vice-Speaker of the Majlis, Mohammad Hassan Aboutorabi-Fard, December 12, 2012.
<http://english.farsnews.com/newstext.php?nn=9107124602>
- "[T]hey (the westerners) think that the Iranian nation is dependent on a number of goods (which they have sanctioned) and foreign currency and they don't understand that the Iranian nation can pass through obstacles whenever it wants...Such hues and cries will not affect the Iranian nation and 10 years later such words (uttered by the western officials about sanctioning Iran) will be jokes that people will laugh at." - President Mahmoud Ahmadinejad, December 11, 2012.
<http://english.farsnews.com/newstext.php?nn=9107126163>
- "The sanctions (against Iran over its nuclear program) are illegitimate and illegal and they are imposed due to the Islamic Revolution's nature and the Iranian nation's independence." - Iranian Foreign Ministry Spokesman, Ramin Mehman-Parast, December 4, 2012.
<http://english.farsnews.com/newstext.php?nn=9107124294>
- "These sanctions present an opportunity, and the harsher they are, the speedier oil industry development becomes. Thanks to the embargo, Iran has become an important exporter of petroleum products and equipment related to the oil industry. Iran is an important country in the region and in the world, and has many friends. We therefore have no concerns or difficulties selling our oil." - Oil Minister, Rostam Qassemi, July 2, 2012.
<http://www.irandailybrief.com/2012/07/02/oil-minister-sanctions-on-iran-are-opportunity-to-accelerate-development/>
- "The reality is that the smallest part of our economic problems are caused by sanctions, and our economic problems are due to domestic mechanisms... Our economic problems have roots, and if we treat these

roots, foreign exchange prices will drop on their own.” - Chairman of the Majlis, Ali Larijani, October 3, 2012.

<http://www.irandailybrief.com/2012/10/03/majlis-speaker-poor-economic-management-not-sanctions-led-to-recent-fluctuations-in-forex-rates-robin-hood-methods-are-never-effective-in-the-economy/>

However, there have been increasingly frank admissions that sanctions were having a major impact.

- “On the basis of the report, oil sales are down 40 percent and income has dropped 45 percent in the last nine months.” - Head of the parliament’s budget committee, Gholam Reza Kateb, January 7, 2013. http://www.washingtonpost.com/business/report-iran-oil-revenues-drop-45-percent-in-9-months-because-of-sanctions-on-nuclear-program/2013/01/07/e525461e-58ea-11e2-b8b2-0d18a64c8dfa_story.html
- “Liquidity disproportional to national production, (western) sanctions, the trend of fluctuations combined with the incompetency of the government’s monetary and economic affairs officials have been the key factors behind the rising currency exchange rate.” - Member of the Iranian Majlis, Ahmad Tavakkoli, January 7, 2013. <http://www.irandailybrief.com/2012/12/21/governments-mismanagement-sanctions-behind-rise-in-currency-exchange-rate/>
- “All people who believed that the sanctions were nothing, but a worthless piece of paper and did not make the necessary arrangements to handle them will be required to account for their actions since the country is now suffering from the problem.” - Chief of the General Inspection Office, Mostafa Pourmohammadi, December 31, 2012. <http://www.irandailybrief.com/2012/12/31/anyone-who-has-failed-to-prepare-to-cope-with-the-sanctions-will-be-required-to-account-for-their-actions/>
- “We can’t say that sanctions have not hurt us. They have, but we devised plans to control the damage and have been able to avoid serious damage to our economy...It’s a temporary high rate of inflation in Iran, and we are trying our best to control it and bring it down to where it should be in the near future.” – Central Bank of Iran Governor, Mahmoud Bahmani, November 22, 2012. <http://www.irandailybrief.com/2012/11/22/cbi-governor-iran-has-avoided-a-serious-dent-to-its-economy-from-western-sanctions-thanks-to-large-gold-reserves-high-oil-prices-and-reduced-foreign-imports/>
- “There is no precedence in the world for a central bank to be sanctioned. But they have done this and they may even expand the sanctions further to include logistics issues. Today we are in a serious and dangerous confrontation. We must realize that confronting the enemy requires serious thought and intelligence.” - Minister of Industries and Business, Mehdi Ghazanfari, July 17, 2012. <http://iranprimer.usip.org/blog/all/Helia%20Ighani>
- “One factor is from outside, and one factor is from inside. The enemy has stated that it will impose (more) sanctions, and part of the oil purchases from Iran has decreased, and a considerable segment of our foreign currency revenues was generated through oil sales...What is worse than the oil sanction is the sanctions on banking transactions. If oil is sold, the payment cannot be transferred, and a massive and great secret war (against Iran) is actually underway in the world. This war has led to a decrease in oil sales, but we are making endeavors to make up for this decrease.” – President Mahmoud Ahmadinejad, October 2, 2012. <http://www.mehrnews.com/en/NewsDetail.aspx?NewsID=1710947>
- “...the heaviest economic onslaught on a nation in history ... every day, all our banking and trade activities and our agreements are being monitored and blocked.” - President Mahmoud Ahmadinejad, January 23, 2012. <http://www.cnn.com/2012/01/23/world/meast/iran-sanctions-effects/index.html>

Evaluating the Impact of Sanctions on Iran’s Oil and Gas Exports

Evaluating the effect of sanctions on a macroeconomic level is difficult because of the structural deficiencies of Iran’s underlying economy, one that is based almost totally on oil exports and domestic subsidies. The basic economic data on Iran are notoriously uncertain, and far too much

analysis focuses on macroeconomic estimates for the total economy that do not provide any reliable way to estimate the impact of sanctions in any detail. Yet uncertain as most spot macroeconomic data are, it is possible to stitch together long term trends based on year-to-year and quarter-to-quarter data. The trends over the past few years indicate that sanctions have had a serious effect on the Iranian economy.

All signs point to an economy under siege, production is down, industry is at a standstill, and there is a massive brain drain, estimated at 200,000 Iranians that try to leave the country annually.¹⁶ There have also been sporadic reports of workers striking due to unpaid wages; inflation on consumer goods is 40-50%, and the Iranian government being unable to pay wages of government employees.¹⁷

As early as July 2012, the US Energy Information Agency (EIA) estimated that the growing impact of sanctions was impacting Iran's ability to produce oil. The EIA announced that it "expects Iran's crude oil production to fall by about 1 million bpd by the end of 2012 relative to an estimated output level of 3.6 million bpd at the end of 2011, and by an additional 200,000 bpd in 2013. Iran has no chance for the foreseeable future of meeting its stated goal of some 5.3 m/bpd of production capacity."¹⁸ Those estimates appear to be correct as Iranian oil production hit 2.63 million bpd in August according to the IEA.¹⁹

Recent data from sources such as Reuters, the EIA, and the IEA point to a substantial reduction in Iranian crude production and exports. According to these sources, Iran is now exporting roughly 1.1-1.3 mbpd down from an average of 2.5 mbpd in 2011 and 2010. Iranian oil production has also continued to drop due to the lack of investment and now totals between 3.2 mbpd and 2.6 mbpd according to outside sources and roughly 3.7 mbpd according to Iranian sources. This is costing Iran roughly \$100 million a day and roughly \$5 billion a month.²⁰ The US Treasury announced in September 2012 that it estimated that Iranian oil exports had dropped

¹⁶ "Iran's Brain Drain: 200,000 Graduates Trying to Go Abroad," *Payvand Iran News*, April 24, 2006. <http://www.payvand.com/news/06/apr/1188.html>

¹⁷ "Government Not Able to Pay Wages of Maritime Workers," *Iran Daily Brief*, December 26, 2012. <http://www.irandailybrief.com/2012/12/26/government-not-able-to-pay-wages-of-maritime-workers/>; "Sharp Decline in Number Employed in Agricultural Sector Under Ahmadinejad," *Iran Daily Brief*, December 25, 2012. <http://www.irandailybrief.com/2012/12/25/sharp-decline-in-number-employed-in-agricultural-sector-under-ahmadinejad/>; "More Workers Strike Due to Unpaid Wages," *Iran Daily Brief*, November 29, 2012. <http://www.irandailybrief.com/2012/11/29/more-workers-strike-due-to-unpaid-wages/>; "Workers Strike in South Fars," *Iran Daily Brief*, December 11, 2012. <http://www.irandailybrief.com/2012/12/11/workers-strike-in-south-fars/>; "In Contrast with the President's Statements, Inflation on Consumer Products is 40-50%," *Iran Daily Brief*, December 26, 2012. http://www.irandailybrief.com/2012/12/26/in-contrast-with-the-presidents-statements-inflation-on-consumer-products-is-40-50/?utm_source=rss&utm_medium=rss&utm_campaign=in-contrast-with-the-presidents-statements-inflation-on-consumer-products-is-40-50

¹⁸ UPI, "Iran's Oil Production Slumps, EIA Says," *UPI*, July 11, 2012. http://www.upi.com/Business_News/Energy-Resources/2012/07/11/Irans-oil-production-slumps-EIA-says/UPI-75241342016878/

¹⁹ "UPDATE 3-Iran's Oil Exports Fall in Sept, May Slip Further," *Reuters*, October 12, 2012. <http://www.reuters.com/article/2012/10/12/iran-oil-exports-idUSL5E8LCK5M20121012>

²⁰ Jonathan Spicer, "U.S. Says Iran oil Exports Down Dramatically," *Reuters*, September 13, 2012. <http://in.reuters.com/article/2012/09/12/usa-sanctions-idINL1E8KCKRX20120912>

by 1 million barrels of oil from levels of 2.4 million barrels a day in 2011 – or roughly \$80 billion in currency reserves it had had a year ago.²¹

Although Iran remains a relatively minor natural gas exporter, it has the second largest proven natural gas reserves and some maintain that Iran's gas sector can more than compensate for declining oil exports.²² However, given the level of sanctions now imposed on all aspects of Iran's energy sector, it is highly unlikely that it will be able to attract the \$145 billion in new investment by 2018 that Tehran's deputy Oil Minister has said Iran needs in order to develop its gas sector.²³

Evaluating the Impact of Sanctions on Iran's Financial, Banking, and Trade Sectors

US financial sanctions and EU insurance provisions have also impeded other countries' ability to finance and pay for transactions in Iranian oil, leading to reports that Iran's ability to produce oil has outstripped its ability to sell it.²⁴ Due to the difficulty in lowering production by capping wells, Iran is preparing to store more oil and add 8 million barrels of storage capacity in the coming year in preparation for continuing lower sales.²⁵ Iran has been forced to use its own tankers to transport oil, reducing its storage capacity.

According to the IEA, Iran has a total onshore storage capacity of 25 million barrels and is estimated to be filled to capacity; Iran had stored between 20-25 million barrels of crude in floating storage in April but it has been reduced to 13 million barrels in October, whether this reduction is due to more Iranian tankers being used to transport oil or other reasons is unknown.²⁶ IEA's December Monthly Oil Report details 13 million barrels in floating storage in either the Arabian Gulf or off Malaysia.

Iran's currency, long held artificially high by a regime that could afford to subsidize it, has nose-dived since the implementation of more stringent sanctions. It has lost more than 80% of its value relative to the dollar since 2011, and was trading at a record low of 37,000 to one Dollar in October 2012, down from 28,000 Rials in September 2012 and 13,000 in September 2011.²⁷ According to some reports, this raised the real rate of annual inflation from the 29% the government claimed to almost 70%.

²¹ Jonathan Spicer, "U.S. says Iran oil exports down dramatically," <http://in.reuters.com/article/2012/09/12/usa-sanctions-idINL1E8KCKRX20120912>

²² Kenneth Katzman, "Iran Sanctions," CRS, 22 June 2011.

²³ Government Accountability Office, "Firms Reported to Have Sold Iran Refined Petroleum Products or Engaged in Commercial Activities in Iran's Energy Sector," March 23, 2010. GAO-10-515R Iran Energy Sector

²⁴ UPI, "Iran's Oil Production Slumps, EIA Says," *UPI*, July 11, 2012. http://www.upi.com/Business_News/Energy-Resources/2012/07/11/Irans-oil-production-slumps-EIA-says/UPI-75241342016878/

²⁵ Daniel Fineren, "UPDATE 1-Iran may slash oil sales outlook, store more as sanctions bite," November 26, 2012. <http://www.reuters.com/article/2012/11/26/iran-oil-storage-idUSL5E8MQ6ZW20121126>

²⁶ Daniel Fineren, "UPDATE 1-Iran may slash oil sales outlook, store more as sanctions bite," November 26, 2012. <http://www.reuters.com/article/2012/11/26/iran-oil-storage-idUSL5E8MQ6ZW20121126>

²⁷ Thomas Erdbrink, "Iranian currency slides under latest U.S. sanctions," *Washington Post*, January 2, 2012.

By October 2012 food prices were rising so quickly that major changes were taking place by the day, and key foods like chicken had become unaffordable for many Iranians. The first public riots about the economy and rising prices took place, and some outside experts estimated Iran had lost half of the \$80 billion in currency reserves it had in 2011.²⁸

The Economist Intelligence Unit estimated in September that they would cut the Iranian GDP by at least 1.2% in 2012-2013 – a forecast that seemed highly optimistic as the impact of sanctions accelerated later in the fall of 2012.²⁹ The Institute for International Finance has estimated that Iran's economy will shrink by 3.5% this year compared with 1.2% growth in 2011. Inflation is also expected to have increased from 26.5% in 2011 to nearly 50% in 2012. Government revenues from oil exportation, if the current price of \$110 a barrel holds, could be 40% less than in 2011.³⁰

These problems with the Rial and oil income sharply affected access to food in a country that received some 70% of its finances from oil exports, and that the World Trade Organization estimates imported \$8.2 billion worth of food and \$9.4 billion worth of agricultural products in 2010.³¹ It has reduced meat consumption, led to the buying and hoarding of gold and dollars, sharply reduced foreign and domestic investment, strained government revenues, and forced Iran into massive new efforts to use third parties and other nations to disguise its economic activities.

It is still unclear how these forces will play out. The initial popular protests in the fall of 2012 seemed to focus more on Ahmadinejad than the Supreme Leader and regime as a whole, but it was far too early to determine how serious they would become.

There were reports in early October 2012 that Iran had offered a new plan to end the nuclear confrontation.³² The plan was said to be largely a rehash of past negotiating proposals that called for early dismantling of the sanctions, and a slow dismantling of the key enrichment sites like Fordow in ways that could allow Iran to move its enriched stocks and send them to other concealed centrifuge facilities or store them for a future breakout attempt.

In recent weeks there has been talk of new negotiations between Iran and the Permanent Members of the UN Security Council and Germany (P5+1) and that the current round of sanctions has pressed Iran's hand, with evidence that Iranian decision-makers are looking for a way out.³³ However, the US has warned that it will not let the negotiations continue on endlessly

²⁸ Joby Warwick and James Ball, "Iran's economy may offer opening," *Washington Post*, October 5, 2012, p. A1 and A8; Jay Newton-Small, "The Iranian currency Crisis: Three Possible scenarios," *Time*, October 4, 2012, <http://swampland.time.com/2012/10/04/the-iranian-currency-crisis-three-possible-scenarios/>; Thomas Erdbrink, "As Iran Currency Keeps Tumbling, anxiety is Rising," *New York Times*, October 5, 2012, p. A1.

²⁹ Economist Intelligence Unit, "Iran," September 2012, p. 3.

³⁰ "Sanctions push Iran into recession: IIF," Reuters, December 10, 2012. <http://www.chicagotribune.com/news/sns-rt-us-iran-sanctions-economybre8b90of-20121210,0,1288929.story>

³¹ James Ball, "Tensions over Iran's currency spark clashes between protesters, security forces," *The Washington Post*, October 3, 2012. http://www.washingtonpost.com/world/national-security/tensions-over-irans-currency-spark-clashes-between-protesters-security-forces/2012/10/03/e8c95678-0d7e-11e2-a310-2363842b7057_story.html; EIU, "Iran," September 2012, p. 6.

³² David E. Sanger, "Iranians Offer Plan to End Nuclear Crisis," *New York Times*, October 5, 2012, p. A6.

³³ Joby Warrick, "New nuclear talks with Iran may be possible in coming weeks, U.S. says," *The Washington Post*, December 14, 2012. http://www.washingtonpost.com/world/national-security/new-nuclear-talks-with-iran-said-to-be-imminent/2012/12/14/8f02b5bc-462c-11e2-8061-253bccfc7532_story.html

and that it could refer the matter to the UN Security Council if the deadlock is not broken by March 2013. “If by March Iran has not begun substantive cooperation with the IAEA, the United States will work with other board members to pursue appropriate board action, and would urge the board to consider reporting this lack of progress to the U.N. Security Council,” said Robert Wood, acting US Permanent Representative to the International Organizations.³⁴

Despite taking a far harsher tone with the IAEA and accusing the international agency’s inspectors of sabotaging Iran’s electrical grids supplying Iran’s Fordow and Natanz enrichment plants during August’s IAEA inspection, the IAEA has continued to meet with Iran during this time. The most recent meeting, on December 15th, was reported as a “good meeting” and there are media reports that Iran and the IAEA may come together on an agreement that resolves some of the issues between the international nuclear energy organization and the Islamic Republic of Iran.³⁵ It is not known if the deal includes IAEA visitation to the Parchin military facility, other specifics, or if the deal will even happen. Previously optimistic predictions in January 2011 and May 2012 did not come to fruition.³⁶ A final agreement could be signed as soon as January.

Implications for US Policy

It is not clear whether the regime will react to these pressures by negotiating a meaningful agreement with the P5+1 and actually ending the weapons-related aspects of its nuclear program, or whether it will react by pursuing such programs regardless of their cost and/or lashing out at targets in the Gulf, other US targets, or US allies. Iran has long pursued a mix of diplomatic defiance and “negotiate, stall, and continue” tactics, while moving forward with its nuclear programs. Its efforts to acquire nuclear weapons seem to be a critical part of its efforts to become the dominant military power in the region and protect its regime from a US military challenge.

Iran has steadily strengthened its internal security efforts since its last Presidential election, and its instruments of regime control now seem capable of suppressing a considerable level of internal dissent. While any polls are uncertain, the “green” dissent that followed the 2009 Presidential election does not seem to have had the nationwide scale that coverage of the demonstrations in Tehran and social networking once implied, and there did seem to be substantial popular support for Iran’s nuclear efforts through at least mid-2012.

The US and its allies need to be extremely cautious about claims that the regime is fragile and unpopular. Reliance on such claims by exiles and various conservative and liberal groups presented major problems in Iraq, and has in many other historical cases as well. Whether the issue is sanctions or preventive strikes, there needs to be far more evidence of major public unrest and willingness to trade nuclear programs for an end to sanctions or given them up after a preventive strike, than has surfaced to date.

Past cases have also shown that repressive regimes can ride out the impact of even serious sanctions for some time, and Iran’s nuclear programs are moving forward relatively rapidly. At

³⁴ “U.S. gives Iran until March to cooperate with IAEA,” Reuters, November 29, 2012.
<http://www.reuters.com/article/2012/11/29/us-nuclear-iran-usa-idUSBRE8AS0VS20121129>

³⁵ Rick Gladstone, “Iran: Progress on Nuclear Talks,” The New York Times, December 15, 2012.
http://www.nytimes.com/2012/12/15/world/middleeast/iran-progress-on-nuclear-talks.html?_r=0

³⁶ Simon Sturdee, “Mooted IAEA-Iran ‘deal’ just the beginning: analysts,” AFP, December 17, 2012.
<http://www.google.com/hostednews/afp/article/ALeqM5hWZCLkpvmljXfi8NwMEZsSBajlmg?docId=CNG.35f97d6d5a43bc48fb75934c43f11660.b1>

some point in the next two years, Iran may be able to test a weapons design either passively or in a fissile event, have made enough progress in its centrifuge designs so inspection and control will be far more difficult, and disperse enough material and technology to carry on covert programs indefinitely.

Moreover, the US, EU, and other states putting pressure on Iran have not yet presented a well-defined mix of incentives to give Iran a reason to negotiate, nor have they made it clear that they only want an end to Iran's most threatening military programs and not regime change. If Iran has pursued "negotiate, stall, and continue" tactics, the US and other members of the P5+1 have kept changing the terms of their demands regarding Iran's overall nuclear programs, failed to offer a strong and credible incentive package, and presented very mixed national views regarding regime change.

As the reports for Chapters III and IV in this series discuss, there is a very real prospect that sanctions will fail and the US and its allies must be ready. The end result could be contingencies like a significant clash or conflict in the Gulf, where Israeli preventive strikes or US military action escalates to the point where the US might have to strike at Iran's asymmetric or conventional forces in the Gulf and/or nuclear and missile programs.

While the US should pursue sanctions and diplomatic options, it must also begin to make hard long-term plans regarding the possibility that sanctions and diplomacy fail. If negotiations do fail, the US, its Gulf and European allies, and Israel must make national choices between containment and preventive strikes. As other sections of this analysis show, both options present serious risks as well as advantages.

The analysis of these choices is sharply limited by the fact that so much of the information required is highly classified. As the report in this series on "US-Iranian Competition: The Gulf Military Balance – II: The Missile and Nuclear Dimensions" shows, however, the US is the only power that can credibly use force to suppress Iran's nuclear programs for an extended period of time, and this requires a major act of war and lasting ongoing efforts that have unpredictable consequences

If the US does decide to strike, it will need the support of at least key Gulf allies, and make every possible effort to win the support of other countries and global public opinion. If its strikes are to have lasting effects, the US must be prepared to strike decisively against the full range of Iranian capabilities, take the time to do effective damage assessment, constantly monitor Iran's actions after the first series of strike, carry out restrikes as needed, and be prepared to provide a lasting military overwatch as long as Iran shows any sign of rebuilding its nuclear program.

Containment presents major challenges of its own – as do all military options unless negotiations become successful or Iran's regime makes fundamental changes in its current nature and behavior. Containment is almost certain to mean a growing nuclear arms race in the region – adding some Arab Gulf states and possibly Turkey to the existing nuclear-missile race between Iran and Israel. It will mean a heightened arms race at every other level from low-level covert action to conventional weapons and long-range missiles, struggles for influence throughout the region and especially in Iraq and Syria, and a heightened struggle between Sunni and Shia.

At the same time, the choice between preventive strikes and containment is to some extent artificial. Barring political upheavals in Iran that fundamentally change its regime's behavior, the US must continue to make major efforts to contain Iran at the non-nuclear level if negotiations

do succeed and will have to deploy forces and work with Arab state and other regional powers to contain Iran indefinitely after the initial round of preventive strikes.

Key Near-Term Choices

There are no “good” or “certain” options, but until Iran moves decisively to acquire nuclear weapons, the US needs to do everything it can to ensure that sanctions lead to successful negotiations. This means pursuing the following options:

- *The US should do everything possible to create UN, multilateral, and unilateral sanctions that are as effective as possible.* The time for gradual approaches is over. If there is to be a peaceful outcome to this conflict, it must come before Iran tests a nuclear device or deploys a nuclear weapon. It must come before Israel takes preventive action, the region becomes locked into a nuclear arms race, or Iran creates a technology base so advanced that current IAEA inspection methods cannot detect a covert nuclear weapons program.
- *Make it clear that the US and its allies offer Iran incentives to halt and reverse sanctions continuously.* Show other countries that the US and the P5+1 offer Iran real incentives to halt illicit weapons related activities, and explain and justify sanctions in terms that nations in other regions can understand. Sanctions relief is not enough. Iran needs to see that the US and the rest of the P5+1 will offer incentives in terms of fuel supplies, trade, investment, and energy development. If sanctions are the “stick”, the US must act to ensure that there are real and immediate “carrots”.
- *Work closely with European, Gulf, and Israeli allies.* The US cannot assume its allies will follow if it does not communicate, consult, and treat them as partners. This is an area where the US must be transparent enough to convince the world it is not repeating the mistakes it made in going to war in Iraq, that it will not act rashly, and it will listen as much as it attempts to lead.
- *Make a convincing case to the Iranian people, its allies and the world that Iran is seeking to obtain nuclear weapons.* It is not enough to cite IAEA reports and continue diplomatic pressure. The US must continue to work with the IAEA and key allies to show the dangers in Iran’s actions and make the threat it poses convincing. Explain how a crisis in the Gulf could threaten all countries - including the developing countries outside the region. Make the case through effective strategic communications and as objectively as possible.
- *Use arms transfer efforts to supplement sanctions.* The US must continue to ensure that China, Russia, and other nations will not from transfer advanced arms and military technology to Iran, nor any technology and equipment that could be used to develop nuclear weapons. In the past few years, Russian and Chinese arms transfers to Iran have dropped significantly - this needs to continue. At the same time, as is outlined in Chapter VI, it must work with its Arab Gulf allies and Turkey to give them a strong a mix of defenses and deterrents, help Israel the security needed to reduce the incentive for preventive strikes, and - as is discussed in Chapter VII - do what it can to make Iraq secure and a real security partner.
- *Work with the UN, IAEA, and its allies to update the agreements necessary to ensure full compliance with a meaningful and verifiable agreement.* It will not be enough for Iran to allay with the immediate concerns raised by the IAEA. It must be clear that any negotiation ends in a viable agreement.
- *Avoid aggressive interference in the form of regime change, but support strategic communications from Iranian exiles and encourage internal movement towards moderation and democracy.* Focus on regime modification when dealing with the nuclear issue and the threat in the Gulf, and leave regime change to Iranians.

Arms Control Offers Hope But a WMD Free Zone Offers Little Probability of Success

The US must support arms control as a policy option through enforcement of the Nuclear Non-Proliferation Treaty (NPT) and provide the IAEA the necessary tools and freedom of action.

However, a weapons of mass destruction free zone has virtually no chance of being negotiated in a meaningful form for seven key reasons:

- Iran's emphasis on its nuclear and missile programs, and the practical problems in denying it a future nuclear weapons breakout capability.
- Israel's need to maintain nuclear and missile forces, and the practical impossibility of confirming whether Israel declares and destroys its entire nuclear stockpile.
- The lack of any real prospects for a full Arab-Israeli peace.
- Arab, Iranian, and Israeli missile, chemical, and biological weapons programs and growing Arab interest in nuclear programs.
- The steadily growing transfer of civil biological and chemical technology that can support national chemical and biological weapons (CBW) programs in the region.
- The eventual ability of regional states to develop a mix of precision-guided ballistic and cruise missile programs and supporting attack methods like cyberwarfare that can create the equivalent of "weapons of mass effectiveness" when applied to critical infrastructure facilities like desalination, power, and energy export targets.
- The growing difficulty in creating verification and inspection regimes.

The Uncertain Result: Giving Diplomacy Priority While Preserving Security

Sanctions and diplomacy are the best of a bad (or at least highly uncertain) set of options, but it is far from clear that they will stop Iran's progress toward a nuclear weapons capability. Despite the lack of diplomatic progress, and the appearance that the Iranians are stalling for time, negotiations can still be successful. Negotiations can bring about long-term change in the US-Iranian relationship where military strikes or more sanctions cannot.

The risks become higher as time goes on and if this aspect of US and Iranian competition turns into a "long game." So far, Iran has backed away from military confrontation, but it is far less clear what will happen if sanctions result in a prolonged confrontation. Iran has at least as much to lose as any other Gulf state if it halts oil traffic through the Gulf. Iran also cannot hope to win any serious conventional conflict with the US and its Gulf allies, and will therefore attempt to use asymmetric means to confront the US.

Iran's increasingly belligerent statements and actions have already affected the price of oil. Oil prices rose around the world in February 2012 when Iranian officials responded to new European sanctions by halting exports to Britain and France. Two days later, the head of Iran's armed forces, Mohammad Hejazi, hinted at Iranian preemptive action, stating, "[o]ur strategy now is that if we feel our enemies want to endanger Iran's national interests...we will act without waiting for their actions."³⁷

If a period of confrontation and sanctions lasted for several years, there may be a long-term increase in oil prices and pressure on the world economy. This period of time will also allow Iran time to steadily improve its asymmetric capabilities and political warfare. And if Iran did complete a nuclear weapon during this time, it may lead many nations to abandon sanctions or aggressive posturing in fear of Iranian retaliation.

³⁷ Saeed Kamali Dehghan, "Iran Raises Tension by Threatening Preemptive Action," *The Guardian*, February 21, 2012. <http://www.guardian.co.uk/world/2012/feb/21/iran-tension-threat-pre-emptive-action>

Iran will have to take risks of its own, and has no inherent advantages in playing the “long game.” Hostile Iranian actions and Iran’s movement towards a nuclear weapons capability would probably strengthen the US, European, and Southern Gulf state’s resolve and support for sanctions. Iran would pay a steadily higher cumulative cost as a result of sanctions over time, and popular support for the regime will most likely continue to erode. In addition, Iran cannot be certain that the use of low level asymmetric tactics can be used without provoking the US and other states to escalate the conflict economically or militarily. Nor does Iran hold escalation dominance, which risks a spiral escalation, leading to the destruction of Iran’s military forces and other assets.

Rising pressure on Iran can lead it to take risks, and exercise the kind of military options described in Chapters III and IV. Limited or demonstrative military actions can become serious clashes and accidents can escalate into war. At the same time, Iran’s progress towards a nuclear weapons capability may lead Israel to carry out preventive strikes, which will force the US to choose between launching its own strikes to “finish the job” or doing nothing and wasting an opportunity to set back the nuclear program for a longer period of time.

The end result is that the US, its Arab allies, and Israel may face years of continuously stringent sanctions on banking and financing, energy exports, and arms controls that results in increasing confrontation with Iran. What today is defined as a “crisis” may become an enduring reality that can only be contained by close cooperation between the US and its allies and may only end with regime change in Iran.

The Prospects for Negotiations

At the same time, even successful negotiations will have to be conducted on a “verify without trust” basis. Negotiations that focus on Iran’s nuclear program will have limited achievements even if they are successful. Iran is building up its conventional long-range missile force, it is seeking to give them far more accuracy and terminal guidance which would allow them to be used against key point targets, and is examining options for similarly precise drones and long-range cruise missiles which could be used against critical targets as “weapons of mass effectiveness.”

Depending on the final course of negotiations and the following level of Iranian compliance in actual inspections, Iran can seek to maintain a nuclear weapons program by continuing to develop more efficient centrifuges, by carrying out covert nuclear weapons design efforts including testing of weapons designs using non-fissile cores and flying or launching bomb and missile warhead designs and testing reliability and safety. It could make significant progress towards developing boost and thermonuclear weapons using such efforts. It might be able to create and conceal small chains of centrifuges; and make progress in small, more concealable, heavy water reactor designs.

Iran has all the technology base necessary to become a major chemical and biological weapons power. It has years in which to develop better chemical weapons and a surge capability to produce and load them even if it appears to comply with the Chemical Weapons Convention. It has all of the research, development, and production equipment and technology for the production of advanced biological weapons. Unlike chemical weapons, such weapons can match or exceed the lethality of fission nuclear weapons, and there currently is no credible inspection or verification regime that could determine whether Iran was substituting a biological capability for a nuclear one.

As its recent military exercises in the Gulf show, Iran is also building up its capabilities for asymmetric warfare in ways that can threaten conventional navies and employ a wide range of tactics. It continues to use its Al Quds force, intelligence services, and diplomats to pose a growing threat to the Arab states and Israel, in addition to controlling an axis of influence that includes Iraq, Syria, and Lebanon. Iran is a sponsor of movements that might support its proxy attacks like Hezbollah, some Shia extremist groups in Iraq, and similar Hazara movements linked to the Al Quds force in Afghanistan.

This means that a continued focus on sanctions and arms control efforts must be supported by the continued development of military capabilities to deter and contain Iran. The US should preserve and enhance its ability to use force against Iran. The US and its allies should make it clear to Iran that if it conducts nuclear tests, is found to be assembling nuclear weapons, or deploys a nuclear weapon it will justify the use of military force.

The US and its allies should also find ways to warn Iran that any major Iranian effort to “close the Gulf,” or a large-scale clash between Iran and the US or its allies could lead to escalating military action. At the same time, the need to deter and contain Iran while sanctions and negotiations are still a somewhat viable option is very different from giving military options a priority. The real world political and strategic results of replacing sanctions and diplomacy with the use of force are so unpredictable, and the risks are so high, that force must be a last resort.

Preventive attacks might end the chance of successful negotiations for the life of the Islamic Republic, and usher in a period of containment analogous to the Cold War. Application of this level of military force might also convince the Iranian regime that nuclear weapons are required in order to prevent future attacks and will redouble their efforts to produce a weapon. A single series of military strikes might also only delay Iran for several years, lead it use them as an excuse to withdraw from the NPT and IAEA inspections, and use even more resources to surge towards the deployment of nuclear-armed forces. Such action should only be taken if it becomes clear that Iran’s regime has reached such ideological extremes where it cannot be deterred or that there is evidence Iran will produce and quickly use a nuclear weapon.

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Introduction

This report analyzes US and Iranian strategic competition in four key areas – sanctions, energy, arms control, and regime change. Shifts in the nature and intensity of sanctions on Iran have radically changed this aspect of US and Iranian competition since the fall of 2011. This escalation has been spurred by Iran’s ongoing missile developments and nuclear program, the November 2011 IAEA report highlighting the possible military dimensions of Iran’s nuclear program, an alleged Iranian assassination plot against the Saudi Ambassador to the US, an Iranian-government-sponsored mob attack on the British Embassy in Tehran in November 2011, and Iranian threats to “close” the Gulf to oil traffic.

A New Round of Sanctions

Iran’s steady progress towards a nuclear weapons capability has led to a new round of sanctions from the US and its allies. Washington has sought to further isolate Iran economically through new sanctions on the Iranian Central Bank (ICB) and Iranian companies involved in the nuclear, hydrocarbon, and petrochemical industries. The EU has also taken steps of its own to isolate and pressure Iran by enacting an oil embargo, prohibiting investment in Iran’s oil industry, and sanctioning maritime insurance, among other restrictions.

The US has instituted four major Iran sanctions acts, impacting hundreds of companies, people, and assets. The Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (signed July 1, 2010), FY 2012 NDAA (signed December 31, 2011), Iran Threat Reduction and Syria Human Rights Act of 2012 (signed August 10, 2012), and FY 2013 NDAA (signed January 2, 2013), have cut off Iran from the international banking system; declared the entire Iranian banking sector as money laundering entities; increased the number of sanctions the president is to impose; targeted Iran’s petrochemical industry, the CBI, the financial sector, and transportation infrastructure; and forced countries to curtail their purchases of Iranian oil in the face of sanctions.

The EU joined the US to pressure Iran by instituting six major Council Decisions in the past three years - Council Decisions 2010/413/CFSP (issued July 27, 2010), 2011/235/CFSP (issued April 14, 2011), 2012/35/CFSP (issued January 23, 2012), 2012/152/CFSP (issued March 15, 2012), 2012/168/CFSP (issued March 23, 2012), and 2012/365/CFSP (issued October 15, 2012). These sanctions have targeted various dual-use items, Iranian transportation and shipbuilding services, oil and gas technology, investments in the Iranian petrochemical industry, and maritime insurance. They also cut Iran off from the international banking system.

The EU embargoed Iranian oil and natural gas, which accounted for roughly 23% of Iran’s total exports. The EU embargo prohibits the purchase, transportation, and importation of Iranian crude oil, the exportation of petrochemical equipment and technology, as well as related financial investments including insurance. Additionally, the EU froze the CBI’s European assets, and banned the trade of gold and other precious materials between Europe and the CBI.³⁸

Chronology of US and EU actions against Iran:

³⁸ “EU Iran Sanctions: Ministers Adopt Iran Oil Imports Ban,” *BBC News*, January 23, 2012.

<http://www.bbc.co.uk/news/world-europe-16674660>

- On January 9, 2013, the ICB disclosed that the annual inflation rate hit 27.4%.³⁹
- On January 8, 2013, the US Energy Information Administration (EIA) released their short-term energy outlook report. The report estimates that Iranian crude production has been falling since the last quarter of 2011 due to the lack of funds available for upkeep and natural decline in production. The report also estimates that Iranian supply averaged 3.4 million barrels per day (mbpd) during the first quarter of 2012 and declined to an average of 2.6 mbpd during the fourth quarter of 2012.⁴⁰
- On January 2, 2013, President Obama signed into law the FY 2013 National Defense Authorization Act that blocks property and imposes at least five sanctions on entities that provides goods or services to energy, shipbuilding, shipping, port operations, or provides insurance for those operations and blacklists foreign banks which do provide such services from using the US banking system. These sanctions do not apply for countries with exemptions, nor do they apply to purchases of natural gas from Iran. The law imposes at least five sanctions on any entity that provides precious metals to Iran (such as gold), or semi-finished metals or software for integrating industrial processes. It also imposes human rights abuser sanctions on Islamic Republic of Iran Broadcasting. On February 6, any funds used to purchase Iranian oil must be credited to an account located in the purchasing country and can only be used for the purchase of non-sanctioned goods. This will reduce the hard currency earnings Iran receives from oil sales.
- On December 12, 2012, the International Energy Agency (IEA) released its monthly oil market report. The report estimated that Iranian crude production was lower in November at 2.7 mbpd and may reach 1.0 mbpd into 2013. It also estimates that Iran's exports in 2012 have fallen 50% compared to 2011, however, imports of Iranian oil edged upwards to 1.3 mbpd in November 2012 compared to 1.07 mbpd in September 2012. US sanctions continued to exert pressure on the remaining major importers of Iranian oil: China, South Korea, Japan, and India. The share of Iranian oil to these importers has dropped since the summer.⁴¹
- On December 10, 2012, the Institute for International Finance released a report that estimates that the impact of sanctions has greatly affected the Iranian economy. The report says that Iran's GDP is expected to contract by 3.5% in 2012, opposed to 1.2% growth in 2011. Inflation is also expected to have increased from 26.5% in 2011 to nearly 50% in 2012. Government revenues from oil exportation, if the current price of \$110 a barrel holds, could be 40% less than in 2011.⁴²
- In October 2012, the Iranian Rial dropped to record lows against the US Dollar, at an unofficial rate of 37,000 to one US Dollar, down from 28,000 Rials in September 2012 and 13,000 in September 2011.⁴³ The Rial has lost roughly 80% of its value since 2011 and in October 2012 was trading at roughly 37,000 Rials to the US Dollar. This devaluation has increased everything from Iranian energy prices, food prices, trade, and imports. It has also vastly increased the rate of inflation, which may be as high as 70%. There have been sporadic reports of 40-50% inflation on consumer goods, striking workers due to unpaid wages, bankrupt Iranian companies, and the government's inability to pay worker's wages. Iran has also begun "means testing" to reduce social spending, leading to a ban on the importation of luxury goods. Analysts at one outside group have predicted Iran's economy will shrink by 3.5% in 2012, a reversal from the 1.2% positive growth in 2011.
- On October 15, 2012, the EU issued Council Decision 2012/365/CFSP, instituting additional sanctions against Iran's banking system, oil and petrochemical industry, and shipping industry. The EU decision

³⁹ The Associated Press, "Iran: Inflation Soars," *The New York Times*, January 9, 2013. <http://www.nytimes.com/2013/01/10/world/middleeast/iran-inflation-soars-officials-say.html>

⁴⁰ US Energy Information Agency, "Short-Term Energy Outlook," January 8, 2013. http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf

⁴¹ International Energy Agency, "Monthly Oil Market Report," December 12, 2012, pg 19. <http://omrpublic.iea.org/omrarchive/12dec12full.pdf>

⁴² "Sanctions push Iran into recession: IIF," Reuters, December 10, 2012. <http://www.chicagotribune.com/news/sns-rt-us-iran-sanctions-economybre8b90of-20121210.0,1288929.story>

⁴³ Thomas Erdbrink, "Iranian currency slides under latest U.S. sanctions," *Washington Post*, January 2, 2012.

prohibits any transactions between European and Iranian banks except for those authorized in advance. It also bans the export of graphite, aluminum, steel, and industrial facility control software. The decision prohibits the provision of flagging and classification services to Iranian tankers and cargo vessels in the EU or by EU nationals. Finally, the decision also forbids EU companies from providing shipbuilding technology and naval equipment to Iran and broadens the export ban on equipment for Iran's oil, gas, and petrochemical industries.

- On July 1, 2012, the EU's embargo of Iranian petroleum products entered into force. This has had a major impact on Iran's oil exports, as oil sales to the EU accounted for roughly 23% of Iran's exports. Total Iranian oil exports in July were estimated at 940,000 bpd, down from 1.7 million bpd in June and 2.8 million bpd in July 2011. Oil export revenue fell from \$9.8 billion in July 2011 to \$2.9 billion in July 2012.
- On August 10, 2012, President Obama signed into law the "Iran Threat Reduction and Syria Human Rights Act of 2012" which strengthened sanctions on Iran's energy sector by increasing the number of sanctions the Administration is required to impose from three to five. The law also imposes sanctions against foreign companies who conduct business in Iran's energy sector and any company that insures, sells, or leases tankers to Iran. This action has resulted in higher insurance costs for Iranian tankers and has resulted in major insurance companies refusing to insure Iranian ships.
- On March 15, 2012, the Society for Worldwide Interbank Financial Telecommunication, or SWIFT, complied with EU instructions to, "discontinue its communications services to Iranian financial institutions that are subject to European sanctions."⁴⁴ SWIFT is essential to international banking because it provides a secure worldwide financial communication and transaction network to more than 10,000 financial institutions and corporations in 210 countries. In 2010, SWIFT reported that 19 Iranian banks and 25 Iranian financial institutions used the network over 2 million times during the course of the year.⁴⁵ All banking transactions with Iran, international insurance coverage in Iran or for Iranian oil transportation, and all transactions with Iran's state-owned oil company and its main tanker fleet, are affected by this decision.⁴⁶
- On February 27, 2012, the Treasury Department strengthened the preexisting Iranian Financial Sanctions Regulations (IFSR) with the implementation of subsection 1245(d). The amendment extends sanctions to "foreign financial institutions that knowingly conduct or facilitate certain significant financial transactions with the Central Bank of Iran (CBI) or a U.S.-designated Iranian financial institution." In accordance with these actions, the Secretary of Treasury will impose sanctions on privately-owned foreign institutions, as well as government-owned or controlled financial institutions that conduct business with the CBI.⁴⁷

⁴⁴ Rick Gladstone and Stephen Castle, "Global Network Expels as Many as 30 of Iran's Banks in Move to Isolate Its Economy," New York Times, March 16, 2012, http://www.nytimes.com/2012/03/16/world/middleeast/crucial-communication-network-expelling-iranian-banks.html?_r=1

⁴⁵ Rick Gladstone and Stephen Castle, "Global Network Expels as Many as 30 of Iran's Banks in Move to Isolate Its Economy," New York Times, March 16, 2012, http://www.nytimes.com/2012/03/16/world/middleeast/crucial-communication-network-expelling-iranian-banks.html?_r=1; Thomas Endbrink and Joby Warrick, "Grim Outlook on Nuclear Talks," Washington Post, March 16, 2012, p. A7.

⁴⁶ Indira A.R. Lakshmanan, "Iran Sanctions Bid Targets Oil, Tanker Companies to Cut Exports," Bloomberg, Feb 6, 2012; Indira A.R. Lankshmanan, "Global Insurers Targeted in Latest U.S. Bid to Expand Sanctions on Iran," Bloomberg, Mar 8, 2012; Al-Arabiya, U.S. Lawmakers Take Next Step on New Iran Sanctions on Heels of European Embargoes, Jan 31, 2012; <http://english.alarabiya.net/articles/2012/01/31/191608.htm>; AP sources: Congress to seek new sanctions targeting all Iranian banks Associated Press, March 6, 2012, http://www.washingtonpost.com/politics/federal-government/ap-sources-congress-to-seek-new-sanctions-targeting-all-iranian-banks/2012/03/06/gIQA1p0XvR_print.html, "Iran Sanctions Bid Targets Oil, Tanker Companies to Cut Exports," Bloomberg, Feb 6, 2012 2:26 PM ET; Indira A.R. Lakshmanan, "Global Insurers Targeted in Latest U.S. Bid to Expand Sanctions on Iran," Bloomberg, Mar 8, 2012 11:10 AM ET; Al Arabiya, U.S. lawmakers take next step on new Iran sanctions on heels of European embargoes, Tuesday, 31 January 2012;

⁴⁷ U.S. Department of the Treasury, "Factsheet: Treasury Amends Iranian Financial Sanctions Regulations to Implement the National Defense Authorization Act", February 27, 2012.

- On February 5, 2012, President Obama issued Executive Order 13599, which implemented section 1245 of the FY2012 NDAA that froze the assets of the Iranian government and prevented all Iranian financial assets in the US from being “transferred, paid, exported, withdrawn, or otherwise dealt with.”⁴⁸ The order also implemented new sanctions that required US banks to seize the funds of those on the Specially Designated Nationals (SDN) list, even if the funds are not destined to a US entity or firm. Previously, US banks were required to block the transaction and return the funds to the sender. This order effectively blocks Iranians from using the US banking system.
- On January 23, 2012, the EU, which accounts for roughly one-fifth of Iran’s oil exports, introduced new sanctions to be phased in over the course 2012. The EU enacted an embargo on the purchase, transportation, and importation of Iranian crude oil; the exportation of petrochemical equipment and technology; as well as related financial investments including insurance. Existing European contracts were allowed to continue until July 1, 2012. Additionally, the EU froze the CBI’s European assets, and banned the trade of gold and other materials between Europe and the CBI.⁴⁹
- On December 31, 2011, President Obama signed the FY2012 National Defense Authorization Act (NDAA) (S.1867) that contained an amendment that required the President to bar foreign banks from opening accounts in the US if that bank processed payments for oil through the CBI. Section 1245 of the FY2012 NDAA imposed unilateral sanctions on CBI in ways that impose major penalties against entities – including corporations and foreign central banks – which engage in transactions with the CBI. The sanctions on transactions unrelated to petroleum were to come into force 60 days after the bill was signed. Sanctions on transactions related to petroleum were to take effect a minimum of 180 days after the bill’s signing. The amendment provided for a renewable waiver of 120 days if the President determined that doing so is in the interest of the US.
- On December 5, 2011, the State Department launched a “virtual embassy” for Iran. This consisted of a website which was quickly blocked by Tehran amidst allegations that the US was attempting to recruit spies and foster regime change. US State Department officials claimed that the site was merely an attempt to inform Iranians about student visas and explain US policy towards Iran. It appears that the effort intended to weaken support for the regime among young, technically savvy Iranians. This was one in a series of attempts to make pro-American media and resources available to populations inside Iran.
- In November 2011, the US Treasury Department introduced new unilateral sanctions under the auspices of the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (CISADA). These new sanctions targeted Iran’s petrochemical industry, the CBI and financial sector, and transportation infrastructure and added dozens of names to the list of sanctioned individuals. These restrictions bar institutions from conducting any business with any Iranian banks – including the CBI and its affiliates – as well as expanding sanctions on Iranian individuals and placing new restrictions on the importation of Iranian goods.
- On November 21, 2011, the US Treasury Department designated Iran’s entire financial sector, including the CBI, as “money laundering entities” under Section 311 of the USA Patriot Act.
- On July 27, 2010, the EU issued Council Decision 2010/413/CFSP that establishes an embargo on nearly all dual-use goods, military arms, and nuclear-related items; bans EU export of key equipment and technology for oil and natural gas production, exploitation, and refining; bans technical assistance, training, and financing in Iran’s energy sector; and bans access to EU airports for Iranian cargo flights as well as the provision of bunkering or ship services to Iranian or Iranian contracted vessels and aircraft if they have been involved in sanctions violations.
- On July 1, 2010, President Obama signed the Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA). The act imposes sanctions on any person that makes an investment of \$20

⁴⁸ “Executive Order—Blocking Property of the Government of Iran and Iranian Financial Institutions”, The White House, Office of the Press Secretary, February 6, 2012.

⁴⁹ “EU Iran Sanctions: Ministers Adopt Iran Oil Imports Ban”, *BBC News*, January 23, 2012.
<http://www.bbc.co.uk/news/world-europe-16674660>

million or more in Iran's petroleum industry; any person that provides Iran with goods, services, technology, or information with a fair market value of \$1 million or more for the maintenance or expansion of Iran's production of refined petroleum products; and/or any person that exports more than \$1 million worth of gasoline to Iran or provides \$1 million worth of goods or services that could contribute to Iran's ability to import gasoline.⁵⁰

A high-level State Department official summarized the US reasons for taking a much stronger stand on sanctions as follows in December 2011: "Our policy leverages the power of multilateral action and of like-minded countries to pressure Iran to comply with its international obligations, coupled with an offer to engage diplomatically...if Iran is serious about negotiating and addressing our and the world's concerns about its nuclear program."⁵¹

Unless US policy changes, the US will focus on checking Iranian efforts to avoid or end sanctions, and pursue additional sanctions gradually and in ways that maximize multilateral buy-in. It will seek to isolate the Iranian financial, oil, transportation, and petrochemical sectors to the extent possible. The Administration will attempt to inform and empower population centers within Iran through channels such as the State Department's "Virtual Embassy" program, in hopes that an opposition movement will again challenge the regime as external financial constraints and domestic mismanagement continue to cause economic stagnation.

This helps explain why past statements by the President, Secretary of State Clinton, Secretary of Defense Panetta, and Chairman of the US Joint Chiefs indicated that military strikes - while "on the table" - were unlikely to be pursued as long as negotiations seem to be a viable option... A range of senior US officials and officers have said that preventive military strikes on Iran would not destroy Iran's nuclear ambitions, but only delay them for several years. As Secretary of Defense Panetta has said, the relevant targets "are very difficult to get at."

As for Iran, its reactions since late 2011 indicate that stronger sanctions and diplomacy are a source of increasing pressure. As the following chronology of sample statements by Iranian leaders shows, Iran's leaders still take a mixed stand on the effectiveness of sanctions, but they scarcely disregard them and much of the rhetoric is obviously more propaganda than a serious reflection of their views:⁵²

- On January 7, 2013, Gholam Reza Kateb, head of the parliament's budget committee said of the impact of sanctions, "On the basis of the report, oil sales are down 40 percent and income has dropped 45 percent in the last nine months."⁵³
- On January 7, 2013, Ahmad Tavakkoli, a member of the Iranian Majlis discussed the reasons behind the currency depreciation, "Liquidity disproportional to national production, (western) sanctions, the trend of

⁵⁰ US Department of State, "Fact Sheet: Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA)," May 23, 2011. <http://www.state.gov/e/eb/esc/iransanctions/docs/160710.htm>

⁵¹ Wendy Sherman, Statement before the Senate Foreign Relations Committee, 1 December 2011.

⁵² For a chronology that provides much fuller historical depth, see Varun Vira, Henry A. Ensher, David Pupkin, Stephen Szrom, Maseh Zarif, Daniel Katz, Eiman Behzadi, Kerry Harris, John Karian, Sanctions on Iran: Reactions and Impact, AEI, November 1, 2011, <http://www.irantracker.org/us-policy/sanctions-iran-reactions-and-impact>.

⁵³ The Associated Press, "Report: Iran oil revenues drop 45 percent in 9 months because of sanctions on nuclear program," The Washington Post, January 7, 2012. http://www.washingtonpost.com/business/report-iran-oil-revenues-drop-45-percent-in-9-months-because-of-sanctions-on-nuclear-program/2013/01/07/e525461e-58ea-11e2-b8b2-0d18a64c8dfa_story.html

fluctuations combined with the incompetency of the government's monetary and economic affairs officials have been the key factors behind the rising currency exchange rate."⁵⁴

- On December 11, 2012, President Ahmadinejad declared Iran has made progress despite sanctions, "they (the westerners) think that the Iranian nation is dependent on a number of goods (which they have sanctioned) and foreign currency and they don't understand that the Iranian nation can pass through obstacles whenever it wants...Such hues and cries will not affect the Iranian nation and 10 years later such words (uttered by the western officials about sanctioning Iran) will be jokes that people will laugh at."⁵⁵
- On December 5, 2012, Vice-Speaker of the Iranian Parliament Mohammad Hassan Aboutorabi-Fard said that the sanctions have allowed Iran to reduce its dependence on oil exports, "Our enemies helped us today and we managed to cut Iran's dependence on oil revenues in a short time which is a great development in the country's economy. One of the problems that we were facing for a century was reliance on oil revenues...The sanctions imposed on us have created an opportunity to prepare the ground for cutting the connection between the (country's) budget and oil (revenues)."
- On December 12, 2012, Iranian Parliament Speaker Ali Larijani said that US and other sanctions have not crippled Iran's economy, "Americans imagined that Iran's economy will be crippled through sanctions after a while, but this did not happen..."⁵⁶
- On October 10, 2012, Supreme Leader Ali Khamenei downplayed the impact of sanctions, "Today, our enemies magnify sanctions. Sanctions are not an issue of yesterday or today. Sanctions have existed from the very beginning; they intensified the sanctions, which didn't work; they intensified them again; these won't work either...They pretend that the sanctions will be lifted if the Iranian nation gives up nuclear energy. They lie. They make decisions out of grudge and aversion [toward Iran] and impose irrational sanctions."⁵⁷
- On October 15, 2012, Supreme Leader Ali Khamenei declared that the West could not harm Iran's economy, "With God's grace, as was the case in other issues which the enemies were not able to do anything, they can do no damn thing in their economic confrontation with our people...This is a war against a nation...But the Iranian nation will defeat them."⁵⁸
- On October 2, 2012, President Ahmadinejad admitted that oil and banking sanctions have had an impact saying, "One factor is from outside, and one factor is from inside. The enemy has stated that it will impose (more) sanctions, and part of the oil purchases from Iran has decreased, and a considerable segment of our foreign currency revenues was generated through oil sales...What is worse than the oil sanction is the sanctions on banking transactions. If oil is sold, the payment cannot be transferred, and a massive and great secret war (against Iran) is actually underway in the world."⁵⁹ However, he blamed physiological pressures rather than government policies for the economic problems, "Are these currency fluctuations because of

⁵⁴ Iran Daily Brief, "Government's mismanagement, sanctions behind rise in currency exchange rate," December 21, 2012. <http://www.irandailybrief.com/2012/12/21/governments-mismanagement-sanctions-behind-rise-in-currency-exchange-rate/>

⁵⁵ Fars News, "Ahmadinejad Underlines Iran's Continued Progress despite Pressures, Sanctions," December 11, 2012. <http://english.farsnews.com/newstext.php?nn=9107126163>

⁵⁶ Fars News, "Speakers: Sanctions Fail to Cripple Iran's Economy," December 12, 2012. <http://english.farsnews.com/newstext.php?nn=9107126637>

⁵⁷ Press TV, "Iran will weather sanctions, overcome problems as always: Leader," October 10, 2012. <http://www.presstv.ir/detail/2012/10/10/265904/iran-to-weather-sanctions-leader/>

⁵⁸ AFP, "West plotting to disrupt Iran's 'calmness': Khamenei," October 15, 2012. <http://www.google.com/hostednews/afp/article/ALeqM5iM-IjGUz6UP3aoMlfrKdJxG2lq4A?docId=CNG.c36ac90c578becd9b22b3b70fe27a38e.741>

⁵⁹ Tehran Times, "Iran Will Overcome Economic Problems: Ahmadinejad," October 3, 2012. <http://www.tehrantimes.com/politics/102022-iran-will-overcome-economic-problems-ahmadinejad>

economic problems? The answer is no...Is this because of government policies? Never...It's due to psychological pressure. It's a psychological battle."⁶⁰

- On September 10, 2012, Iran's Oil Minister, Rostam Qasemi declared that the sanctions have had little effect on ongoing oil development projects and sanctions have made Iran increasingly self-reliant, "Previously, we used to import most of the commodities from abroad. We do so to some extent at present as well, but thanks to the sanctions and our own capabilities, we hope that we would be able to manufacture all the [needed] equipment domestically and even become an exporter of equipment."⁶¹
- On September 5, 2012 President Ahmadinejad stated in an interview that sanctions were a "...all-out, hidden, heavy war" and that sanctions were impeding the economy, "there are barriers in transferring money, there are barriers in selling oil, but we are removing the barriers."⁶²
- On July 31, 2012, Iran's Central Bank Governor, Mahmoud Bahmani, stated that the CBI had started an asymmetric war against sanctions saying, "...like military wars that we have a series of asymmetric tactics, we should start a series of asymmetric economic wars under these sanctions since these embargos are no less than a military war."⁶³
- On March 8, 2012, Ayatollah Khamenei responded to President Obama's stated preference for diplomacy over war, Khamenei said "The US president has said...that he wants to bring the Iranian nation to its knees through sanctions, which reflects a continuation of [being under] a delusion in this regard...The lingering of this illusion will deal a blow to the US officials and will lead their calculations to failure."⁶⁴
- On January 24, 2012, Mohsen Qamsari of the National Iranian Oil Company declared to Mehr News Agency that "Iran can readily find new customers for its oil. We have no problem in selling oil."⁶⁵ However, two days prior, on January 26, the former Iranian Oil Ministry deputy, Mehdi Hosseini, admitted that "Losing the European oil market will have an impact on Iran's economy which needs rational planning by the authorities. Selling oil at sub-market level prices is not a good way to counter the oil embargo."⁶⁶
- On October 29, 2011, National Iranian Oil Company deputy, Mohsen Qamsari, said Iran "reached new agreements for receiving money for Iran's oil exports" and that "Iran's central bank has different and diversified ways and methods for receiving its money from selling oil to India...at the moment there is no Indian accumulated oil debt to Iran." An Iranian state media outlet claimed Indian firms are making payments for oil imports through Russia's Gazprombank. An "Indian industry source" told Reuters there have only been discussions about opening Indian accounts with Gazprombank, and that India continues to

⁶⁰ Saeed Kamali Dehghan, "Mahmoud Ahmadinejad: Iran's currency crisis due to psychological war," The Guardian, October 2, 2012. <http://www.guardian.co.uk/world/2012/oct/02/ahmadinejad-iran-currency-psychological-war?newsfeed=true>

⁶¹ Press TV, "Iran oil minister downplays impact of sanctions on projects," September 10, 2012. <http://www.presstv.ir/detail/2012/09/10/260826/iran-oil-minister-downplays-sanctions/>

⁶² Fars News, "Ahmadinejad Warns Western Sanctions Amount to War," September 5, 2012. <http://english.farsnews.com/newstext.php?nn=9106061782>

⁶³ Fars News, "Governor: CBI Starts Asymmetric Economic War against Sanctions," July, 31 2012. <http://english.farsnews.com/newstext.php?nn=9104252239>

⁶⁴ Press TV, "Leader: Obama delusional to think Iranians will buckle under sanctions," March 8, 2012. <http://www.presstv.ir/detail/230591.html>

⁶⁵ Mehr News, "Iran can readily find new customers for its oil," January 24, 2012. <http://www.mehrnews.com/en/newsdetail.aspx?NewsID=1516783>

⁶⁶ AEI Critical Threats Project, "Iran News Round Up," January 26, 2012. <http://www.criticalthreats.org/iran-news-roundup/iran-news-round-january-26-2012>

make oil payments to Iran through Turkey's Halkbank. India previously paid off a \$5 billion oil debt by submitting payments through Halkbank.⁶⁷

- On October 26, 2011, Iranian Deputy Minister of Economy and Finance Mohammad-Reza Farzin, spoke at the German Council on Foreign Relations, and claimed that Iranian imports increased to \$24 billion in six months, \$8 billion of which came from Europe. Farzin predicted that "Iran-East trade" would reach approximately \$140 billion.⁶⁸
- On September 14, 2011, Ali Rafsanjani stated in a speech to Iran's assembly of Experts that, "Gentlemen, you should be vigilant and careful. Do not downplay the sanctions...people should not be tricked...Iran has such a big capacity that it is able to overcome (the sanctions), but I am doubtful that these capacities are being utilized in a proper way, We have never had such intensified sanctions and they are getting more and more intensified every day. Wherever we find a loophole, they (Western powers) block it."⁶⁹

While the usual official Iranian reaction is that sanctions are not affecting Iran's economy, Iranian officials have increasingly admitted that sanctions are having a major impact. At the same time, Iran has issued threats to "close the Gulf", destroy Israel, attack Saudi oil facilities, and destroy American bases in the region – *and*, called for a new round of negotiations and claimed that the US and President Obama had called for such talks. The end result is that the Iranian regime fluctuates between denial and admissions about the effect of sanctions, threats to close the Gulf, and boasting about Iran's capability to deter and retaliate, and calling for negotiations.

While exact information on the effects of sanctions is impossible to obtain, most sources report a steadily tougher economic climate within Iran, with high inflation, high unemployment, and rising consumer goods prices hitting the country. The new sanctions that went into effect over the summer of 2012 have created serious banking and trade problems by cutting off Iranian banks from international finance networks.

The sanctions against foreign banks financing Iranian oil sales and the EU embargo on all Iranian oil which came into full effect July 1, 2012 have dramatically cut the amount of oil products Iran exports and the prices they receive. Even when oil sales are completed, banking sanctions are making it difficult to receive the proceeds of such sales, forcing Iran to trade oil for gold, wheat, or consumer products.⁷⁰

The oil embargo – coupled with the Comprehensive Iran Sanctions, Accountability and Divestment Act in 2010 (CISADA) – has been effective at forcing other nations to reduce or completely eliminate their purchase of Iranian oil products. The US Treasury Department announced in September 2012 that it estimated that Iranian oil exports had dropped by 1 million barrels of oil from levels of 2.4 million barrels a day in 2011.⁷¹ The Undersecretary of the

⁶⁷ Iran Downplays Report India Paying for Oil via Russia," Reuters, October 29, 2011, <http://www.reuters.com/article/2011/10/29/iran-india-oil-idUSL5E7LT06U20111029>

⁶⁸ Top Iranian Economic Official Highlights Futile Western Sanctions," Iranian Student News Agency, October 26, 2011, <http://www.irna.ir/ENNewsShow.aspx?NID=30632263>

⁶⁹ Reuters, "Ahmadinejad under pressure inside and outside Iran," September 14, 2010. <http://www.reuters.com/article/2010/09/14/us-iran-idUSLDE68D1KD20100914>

⁷⁰ Indira A.R. Lakshmanan and Pratih Narayanan, "India and China Skirt Iran Sanctions With 'Junk for Oil'," *Bloomberg*, March 30, 2012. <http://www.bloomberg.com/news/2012-03-29/india-and-china-skirt-iran-sanctions-with-junk-for-oil-.html>

⁷¹ Jonathan Spicer, "U.S. Says Iran Oil Exports Down Dramatically," *Reuters*, September 13, 2012. <http://in.reuters.com/article/2012/09/12/usa-sanctions-idINL1E8KCKRX20120912>

Treasury, David Cohen, stated that, “[t]his decrease in exports is costing Iran about \$5 billion a month, forcing the Iranian government to cut its budget because of a lack of revenue...Sanctions have effectively terminated international access for most Iranian banks...Today, the Iranian government is relegated to the backwaters of the international financial system, and they know it.”⁷²

The US Energy Information Agency (EIA) estimated in December 2012 that the growing impact of sanctions was impacting Iran’s ability to produce and sell oil. The EIA announced that:⁷³

Iran’s crude oil production is estimated at 2.6 million bbl/d in November 2012, indicating at least a temporary bottoming out of Iranian production declines. Iranian production had been falling since at least the last quarter of 2011. The latest round of U.S. and EU sanctions contributed to declines in Iranian production during the second and third quarters of 2012. However, preliminary trade numbers show that exports rose to 1.3 million bbl/d in October, at least temporarily slowing down the production declines. The export numbers are based on commercial data on tanker liftings from Iran, press reports, and other relevant information. However, this tentative interpretation of a very fluid situation could change as EIA revises data, industry sources issue independent estimates of Iranian production, and more details about Iranian storage levels, refinery utilization, and domestic consumption emerge.

Iran is a nation with politicized and inaccurate macroeconomic data, but some other costs are clear. Iran’s currency, long held artificially high by a regime that could afford to subsidize it, has nose-dived since the implementation of more stringent sanctions. It has lost more than 80% of its value against the dollar since 2011 and is currently trading at around 37,500 Rials to one dollar, down from 13,000 in September 2011.⁷⁴

This has led to massive increases in food prices and sharply affected access to food in a country that the World Trade Organization estimates imported \$8.2 billion worth of food and \$9.4 billion worth of agricultural products in 2010.⁷⁵ It has reduced meat consumption, led to the buying and hoarding of gold and dollars, sharply reduced foreign and domestic investment, strained government revenues, and forced Iran into massive new efforts to use third parties and other nations to disguise its economic activities.

Iran is now seen in some countries as an unreliable energy supplier due to the difficulties of the current banking sanctions and is scrambling to find markets for its crude oil. Furthermore, the Iranian Rial’s value has nosed-dived and fell to a record low in September as sanctions continued to bite at the Iranian economy and fears of increased EU sanctions hit the market. Iran’s government, economy, and citizens are feeling the effects of intense sanctions, and indications point to ever worsening economic conditions.

The currency has since become more stable due to Iranian measures to shut down black market money lenders but the currency has not regained much of its previous value. In response to the currency crisis, in October the Iranian government instituted a new tiered exchange rate policy,

⁷² Jonathan Spicer, “U.S. says Iran oil exports down dramatically,” <http://in.reuters.com/article/2012/09/12/usa-sanctions-idINL1E8KCKRX20120912>.

⁷³ U.S. Energy Information Agency, “Short-Term Energy Outlook (STEO),” December 2012, p 3-4. http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf

⁷⁴ “Iranian currency slides under latest U.S. sanctions”, Thomas Erdbrink, Washington Post, January 2, 2012.

⁷⁵ James Ball, “Tensions over Iran’s currency spark clashes between protesters, security forces,” The Washington Post, October 3, 2012. http://www.washingtonpost.com/world/national-security/tensions-over-irans-currency-spark-clashes-between-protesters-security-forces/2012/10/03/e8c95678-0d7e-11e2-a310-2363842b7057_story.html

where another level besides the official rate (used to buy essentials such as medicine, grain, and sugar) has been instituted at the 25,480 Rials to 1 dollar rate.⁷⁶ However, the black market prices are still reported to be significantly higher than this figure.

This does not mean Iran is being forced to negotiate on terms acceptable to the US and the EU. Sanctions could still lead to serious and ultimately successful negotiations between Iran and the P5+1, be the beginning of years of more intense but non-violent US and Iranian confrontation at every level, or create a crisis that leads to armed clashes or serious conflict. In the late spring and summer of 2012, for example, it looked as though successful negotiations were possible.

The negotiations between Iran and the P5+1 in the summer of 2012 did slightly relieve tensions as the first significant meetings in years took place. However, the fact that both parties were talking to each other in the same room had little impact. The differences between Iran and the P5+1 derailed the process and there were statements that no new sessions were planned.

Only an agreement between the two sides can solve the crisis. Since the summer of 2012, Iran has made new threats, carried out new exercises, and announced that it is deploying more efficient centrifuges. This follows a pattern of more than a decade in which Iran has used negotiating efforts as stalling tactics.

Setting the Stage: The Impact of Iran's Dependence on Petroleum Exports and Iran's Vulnerability

In order to understand the pressures Iran faces, it is necessary to understand just how dependent Iran is on petroleum and gas exports. Regardless of what Iranian officials may say, petroleum exports make up the bulk of Iran's revenues, and are highly vulnerable to sanctions, embargoes, or military attacks. Iran's economy is simply not sufficiently diversified that it is able to withstand a large drop in oil exports. The Iran-Iraq War, sanctions, years of mismanagement, badly structured state intervention, and endemic corruption have taken their toll on the Iranian economy.

As **Figure V.1** shows, Iran has massive oil and gas reserves, although it has politicized its estimates of its reserves ever since the beginning of the Iran-Iraq War in order to increase its relative importance. The EIA reports that, "[a]ccording to *Oil & Gas Journal*, as of January 2011, Iran has an estimated 137 billion barrels of proven oil reserves, 9.3 percent of the world's total reserves and over 12 percent of OPEC reserves."⁷⁷ In July 2012, OPEC released its 2012 Annual Statistical Bulletin that raised Iran's proven reserves to more than 154 billion barrels of crude. Some analysts are skeptical of this estimate, however, as Iran revised its reserves a week after Iraq had revised its own, leading some to speculate the move was political.

The EIA also reported that, "Iran has the world's second largest natural gas reserves but the sector is under-developed and used mostly to meet domestic demand. Natural gas accounts for 54 percent of Iran's total domestic energy consumption. Most of the remainder of energy consumption is attributable to oil, with marginal contributions from coal and hydropower. Iran is

⁷⁶ Steve H. Hanke, "Iran's death spiral," Gulf News, November 15, 2012. <http://gulfnews.com/business/economy/iran-s-death-spiral-1.1105374>

⁷⁷ US Energy Information Agency, "Country Analysis Brief: Iran," February 17, 2012. <http://www.eia.gov/cabs/iran/Full.html>

expected to increase natural gas production from its offshore South Pars natural gas field in the Persian Gulf, an integral component of energy sector expansion plans.”⁷⁸

The location of these reserves, Iran’s pipelines and export facilities, and key potential targets in Iran’s petroleum system are shown in **Figure V.2**.

But massive oil and gas reserves do not translate into national wealth unless they are produced and sold. Iran only had a per capita income estimated at around \$12,200 even before the US and Europe imposed new and far more draconian sanctions in late 2011 and early 2012. Iran’s per capita income then ranked 84th in the world and was by far the lowest rank of any major oil producer in the Gulf, except Iraq. Iran also had an unemployment level in excess of 15%, and youth unemployment somewhere between 20-30% – when acute underemployment was taken into account. Some 18.7% of the population was below the poverty line, and Iran’s middle class and business class had already suffered from years of inflation, state intervention, and government corruption.⁷⁹

While Iran’s per capita income has increased slightly to \$13,200, its ranking in the world has dropped to 94th place, and the CIA estimates that its unemployment rate and youth unemployment rate remain above 15% and above 20%, respectively.⁸⁰ Inflation has also risen, from 22.9% in July to 23.5% in August.⁸¹ While current estimates are uncertain, it has risen substantially since that time.

The US Energy Information Agency (EIA) estimates that Iran will receive some \$95 billion in petroleum export revenues in 2012, and \$1,409 in per capita revenues – roughly one-twelfth of the entire per capita income.⁸² Oil revenues were Iran’s only major source of hard currency, and the CIA estimates that they account for 70% of all Iranian exports in 2011, or some \$78 billion out of a total of \$131.8 billion in annual exports. Their value was roughly equivalent to the nation’s entire total for imports in 2011 (\$76.1 billion). The Iranian economy could simply not function without them, and is sufficiently marginal so every dollar equivalent matters – particularly since Iran’s reserves only totaled some \$109.7 billion at the end of December 2011.⁸³

Sanctions and Oil Production Capacity

Sanctions and embargoes affect four major aspects of Iran’s energy income: its ability to exploit its reserves by developing new sites and improve its recovery technology, its ability maintain or increase its production rates, its ability maintain or increase its export capacity, and its ability to

⁷⁸ US Energy Information Agency, “Country Analysis Brief: Iran,” February 17, 2012.

<http://www.eia.gov/cabs/iran/Full.html>

⁷⁹ CIA, World Factbook, “Iran,” March 8, 2102, <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

⁸⁰ CIA, World Factbook, “Iran,” March 8, 2102, <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

⁸¹ Yeganeh Salehi, “Iran Inflation Quickened to 23.5% in 12 Months to Aug. 20,” Bloomberg, September 5, 2012. <http://www.businessweek.com/news/2012-09-05/iran-inflation-quickened-to-23-dot-5-percent-in-12-months-to-aug-dot-20>

⁸² EIA, OPEC Revenues Factsheet, http://www.eia.gov/cabs/OPEC_Revenues/Factsheet.html

⁸³ CIA, World Factbook, “Iran,” March 8, 2102, <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

create new refinery capacity to reduce its dependence on product imports and gain value added through its own product exports.

Experts disagree over how sanctions affect Iran's broader problems in maintaining and increasing its production capacity. The EIA seems to be relatively neutral, and it makes public analyses that seem to track broadly with in-house OPEC and IEA studies.

In the case of oil, EIA reporting in February 2012 noted that,⁸⁴

The state-owned National Iranian Oil Company (NIOC), under the supervision of the Ministry of Petroleum, is responsible for all upstream oil projects, encompassing both production and export infrastructure. The National Iranian South Oil Company (NISOC), a subsidiary of NIOC, accounts for 80 percent of oil production covering the provinces of Khuzestan, Bushehr, Fars, and Kohkiluyeh and Boyer-Ahmad. Nominally, NIOC also controls the refining and domestic distribution networks, by way of its subsidiary, the National Iranian Oil Refining and Distribution Company (NIORDC), although functionally there is a separation between the upstream and downstream sectors.

The Iranian constitution prohibits foreign or private ownership of natural resources. The government permits buyback contracts that allow international oil companies (IOCs) to enter into exploration and development contracts through an Iranian affiliate. The contractor receives a remuneration fee, usually an entitlement to oil or gas from the developed operation, leaving the contractor to provide the necessary capital up-front. Once development of a certain field is complete, however, operatorship reverts back to NIOC or the relevant subsidiary.

... Since the 1970s, Iran's production has varied greatly. Iran averaged production of over 5.5 million bbl/d of oil in 1976 and 1977, with production topping 6 million bbl/d for much of the period. Since the 1979 revolution, however, a combination of war, limited investment, sanctions, and a high rate of natural decline in Iran's mature oil fields have prevented a return to such production levels.

An estimated 400,000-700,000 bbl/d of crude production is lost annually due to declines in the mature oil fields. To offset natural decline rates, Iran's oil fields require structural upgrades including enhanced oil recovery (EOR) techniques such as natural gas injection, which has put even greater strain on energy supply due to rising demand for natural gas domestically. Iran's reserves are not confined to the southwest and offshore Persian Gulf, creating potential for further discoveries. Iranian has oil reserves under the Caspian Sea, but exploration and development of these reserves have been at a standstill due to territorial disputes with neighboring Azerbaijan and Turkmenistan. Iran also shares a number of both onshore and offshore fields with neighboring countries, including Iraq, Qatar, Kuwait, and Saudi Arabia.

There were a number of new discoveries in Iran over the past couple of years. In May 2011, NIOC announced a discovery of a deposit of light oil (35° API gravity) in the Khayyam field, offshore in the Hormuzgan province. The field had been discovered in 2010 but was originally classified as a gas field. According to the NIOC, the volume of in-place oil at this field is 758 million barrels, of which around 170 million barrels are recoverable. Also in May 2011, Iran announced the discovery of new onshore oil fields in its south and west with an estimated half a billion barrels of reserves. In late 2010, Iran claimed the discovery of new crude finds near gas reservoirs in the Persian Gulf, holding total in-place reserves of more than 40 billion barrels of oil, however recoverable reserves could be less than 10 billion barrels.

There are few upstream oil projects in development, and those that are proceeding have been slowed by the loss of expertise, technology and funding in the wake of various sanctions. The most promising prospects for a boost in production capacity comes from two specific projects: Azadegan and Yadavaran. Other current oil projects include Jofeir, Resalat, and Forouzan, all of which have been significantly delayed due to sanctions.

The Azadegan field was Iran's biggest oil find in 30 years when announced in 1999. It contains 26 billion barrels of proven crude oil reserves, but its geologic complexity makes extraction difficult. The field is separated into two portions: North and South Azadegan. China National Petroleum Corporation (CNPC) is

⁸⁴ EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

developing North Azadegan in a two-phase development with ultimate total production estimated at 150,000 bbl/d (75,000 bbl/d for each phase). In 2004, a consortium of NIOC (25 percent) and Japan's INPEX (75 percent) signed an agreement for development of the southern portion of the Azadegan field.

In 2006, INPEX lowered its stake to 10 percent and following growing pressure in the wake of sanctions last year; it pulled out of the project completely in October 2010. In September 2009, a subsidiary of CNPC, China National Petroleum Corporation International Limited (CNPCI), signed a memorandum of understanding (MOU) with NIOC to develop South Azadegan in two phases. Yadavaran is the other promising upstream oil development project. China Petroleum & Chemical Corporation (Sinopec) signed a buyback contract at the end of 2007 to develop Yadavaran in two phases. The first will produce at a plateau of 85,000 bbl/d (by 2014), while the second will boost production to 185,000 bbl/d by 2016.

Over the past year, a number of new exploration projects have been undertaken and completed. The completed exploration projects include the Anaran Block, which consists of two large oil fields, Changooleh and Azar (expected to produce 67,000 bbl/d and 68,000 bbl/d, respectively). In addition, exploration projects in the Koohdasht, Garmsar, and Tousan Blocks have been completed, with disappointing results. Some of the exploration projects resulted in no successful gas and/or oil discoveries. Overall, according to FACTS Global Energy (FGE), Iran's discoveries of crude oil and condensates totaled 10.7 billion barrels in 2010.

Iran's development problems have been compounded by the fact that the Iranian National Oil Company and the Iranian government have done a notoriously bad job of structuring attractive proposals for outside investment and participation in petroleum deals – although they sometimes eventually compromise on more financially realistic agreements. Investment in Iranian oil and gas does not give the outside country or company control over Iran's reserves, forces it to sell to the highest bidder at world prices, and presents the constant risk of nationalization, unilateral cancellation without compensation, or sanctions.

Iran's internal political debates over foreign investment and economic policy add to this risk and the end result is that energy investments in other more stable oil exporting countries often offer better terms. Outside powers and companies are also increasingly cautious about dealing with Iran in ways that lead to tensions with the Arab oil and gas exporting states.

Sanctions and Gas Production Capacity

In the case of gas, Iran has roughly 16% of the world's proven *conventional* gas reserves. This distinction is critical since gas extraction technology is changing so rapidly, and past estimates of conventional reserves are losing much of their meaning.

The EIA estimates that Iran has the second largest conventional gas reserves in the world at 1,046 Trillion Cubic Feet (TCF) vs. 1,680 TCF for Russia, and 896 TCF for Qatar.⁸⁵ However, fracturing and other technological developments are quickly reducing the importance of conventional versus total reserves, and Iran's percentage of potentially commercial reserves may be closer to 8% than 16%.⁸⁶ Iran currently produces only 4.3% of world natural gas, and has limited export capability. In contrast the Arab Gulf states have some 26% of world natural gas reserves and are responsible for 10% of world gas production.⁸⁷

⁸⁵ Energy Information Agency (EIA) of the US Department of Energy's country report on Iran as of January 2012: <http://www.eia.gov/countries/cab.cfm?fips=IR>

⁸⁶ Energy Information Agency (EIA) of the US Department of Energy's country report on Iran as of January 2012: <http://www.eia.gov/countries/cab.cfm?fips=IR>

⁸⁷ Energy Information Agency (EIA) of the US Department of Energy's country report on Iran as of January 2012: <http://www.eia.gov/countries/cab.cfm?fips=IR>

The EIA reports that:⁸⁸

The National Iranian Gas Company (NIGC) is responsible for natural gas infrastructure, transportation, and distribution. The National Iranian Gas Exports Company (NIGEC) was created in 2003 to manage and to supervise all gas pipeline and LNG projects. Until May 2010, NIGEC was under the control of the NIOC, but the Petroleum Ministry transferred NIGEC, incorporating it under NIGC in an attempt to broaden responsibility for new natural gas projects.

Due to the poor investment climate and international political pressure, some international oil companies including Repsol, Shell, and Total have divested from Iran's natural gas sector. In response, Iran has looked toward eastern firms, like state-owned Indian Oil Corp., China's Sinopec, and Russia's Gazprom to take an increased role in Iranian natural gas upstream development. Activity from these sources has also been on the decline due to logistical difficulties experienced as a result of sanctions on technology and financial transactions.

Under Iran's buy-back scheme, foreign firms hand over operations of fields to the National Iranian Oil Company (NIOC), and after development they receive payment from natural gas production to cover their investment. National Iranian South Oil Company (NISOC), a subsidiary of NIOC, is responsible for much of the southern natural gas production.

...Iran's natural gas production has increased by over 550 percent over the past two decades, and the consumption has kept pace. As demand growth rates persist, the potential for shortfalls in natural gas supply grows. Iran's natural gas exports likely will be limited due to rising domestic demand, even with future expansion and production from the massive South Pars project, and other development projects.

In 2010, Iran produced an estimated 6 Tcf of marketed natural gas and consumed an estimated 5.1 Tcf. A sizeable volume of the gross natural gas produced (7.7 Tcf in 2010) was reinjected (1.2 Tcf). As Iran implements its plans for increased crude production through EOR techniques, however, the share of natural gas used for re-injection is expected to increase dramatically.

...The most significant energy development project in Iran is the offshore South Pars field, which produces about 35 percent of total gas produced in Iran. Discovered in 1990, and located 62 miles offshore in the Persian Gulf, South Pars has a 24-phase development scheme spanning 20 years. The entire project is managed by Pars Oil & Gas Company (POGC), a subsidiary of the National Iranian Oil Company. Each phase has a combination of natural gas with condensate and/or natural gas liquids production. Phases 1-10 are online. The majority of South Pars natural gas development will be allocated to the domestic market for consumption and gas re-injection. The remainder will either be exported as liquefied natural gas (LNG) and/or used for gas to liquids (GTL) projects.

Kish, with estimated reserves of 50 Tcf, it is expected to produce 3 Bcf/d of natural gas. Phase I of the project, which experienced repeated delays is expected to come online in 2016. Phase I is expected to produce approximately 1 Bcf/d and Phase II of the project will produce an additional 2 Bcf/d. In addition to Kish, there are other promising gas fields that could further boost Iran's production. However, these projects also are characterized by delays and other difficulties. These additional fields include the Golshan, Ferdowsi, and North Pars gas fields although their start-ups are unlikely to occur until the next decade.

This analysis shows that Iran has far greater potential to produce and export gas and oil than it has been able to exploit. Iran's gas and oil production and exportation problems are compounded by old facilities, limited upkeep, and the lack of expertise to reach harder shale deposits. The degree to which past sanctions affected delays, bid failures, and contract cancellations remains uncertain, but it is clear that new sanctions introduced in late 2011 and throughout 2012 have had a major impact. As of July 1st the EU had fully embargoed Iranian oil, India has cut back its purchases, Japan is looking for alternate sources, and Chinese imports have dropped. This, coupled with soaring production from Iraq and increasing production from Libya, makes it easier for countries to find alternate sources of oil.

⁸⁸ EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

More importantly, the new sanctions that the US and EU have imposed will continue to make things worse, and the more draconian sanctions on all Iranian banking activity being suggested by some members of Congress would have even more serious effects. Some powers like China and Russia may be able to ignore such sanctions in making oil and gas investments, but Iran's ability to maintain and expand its production capacity is fragile and sanctions will hit hard over time.

Sanctions and Iranian Oil Exports

The practical impact of Iran's export potential must be kept in perspective. Iran at most has some 10% of the world's proven oil reserves (151 billion barrels versus 267 billion for Saudi Arabia, 211 billion for Venezuela, and 173 billion for Canada), and its percentage of potential reserves is substantially lower.⁸⁹ Iran currently only produces 5.2% of world conventional oil liquids, and has been very slow to increase production.

In contrast the Arab Gulf states have some 72% of the world's conventional oil reserves and produce some 25% of world oil.⁹⁰ Iran lacks refinery capacity, and its large, steadily growing population consumes a significantly larger part of its total production than in the Arab Gulf states. Moreover, Iran has already tapped 75% of its known reserves, so the likelihood of new, major discoveries is low. Recently discovered sources have allowed Iran to hold oil production relatively steady, and they may even help production levels to grow somewhat in the immediate future, but new sources will not be able to offset natural declines beyond the short-term. As a result, Iran will have to rely heavily on proven but undeveloped reserves, which will require major new investments.⁹¹

Impact on Production

It is also clear that the impact of sanctions on Iran's ability to export its oil and gas resources is determined by current production and has been far more immediate. As **Figure V.3** shows, Iran has had major cycles of problems in its oil production and exports ever since the fall of the Shah – a time when Iran's exports peaked at 3 million barrels a day. The EIA reports that Iran exported approximately 2.2 million bbl/d of crude oil in 2010, and that Iranian Heavy Crude Oil was Iran's largest crude export followed by Iranian Light: "In 2010, Iran's net oil export revenues amounted to approximately \$73 billion. Oil exports provided half of Iran's government revenues, while crude oil and its derivatives accounted for nearly 80 percent of Iran's total exports."⁹²

Recent data suggest that the additional US and EU sanctions, especially the July 1st EU embargo, have had dramatic effects on Iranian oil exports. Overall, Iran's oil exports in July were down 45% from a month before due to import reductions from China (down 28%); India (42%); Turkey (71%); and zero imports from Japan, South Africa, Taiwan, and South Korea.⁹³ Revenue was also down in July – \$2.9 billion compared to July 2011 at \$9.8 billion.⁹⁴

⁸⁹ BP, BP Statistical Review of World Energy, June 2011, bp.com/statisticalreview. pp. 6, 8

⁹⁰ BP, BP Statistical Review of World Energy, June 2011, bp.com/statisticalreview. pp. 6, 8

⁹¹ BP, BP Statistical Review of World Energy, June 2011, bp.com/statisticalreview. pp. 6, 8

⁹² EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

⁹³ The Rhodium Group, "Iran Sanctions Update: A Particularly

At the same time, the effectiveness of sanctions is partially dependent on the ability of importing nations to cut back on Iranian oil imports, and there are several important cases where US and EU sanctions have not been fully applied. **Figure V.3** shows that China, Japan, and India were far more dependent on Iranian exports than others before the US and EU imposed new sanctions. Therefore, Section 1245 of the FY2012 NDAA included a provision for a 180 day sanctions wavier if a country had significantly reduced its purchases of Iranian oil. This has allowed countries that depend on Iranian oil time to find alternate sources of supply.

Yet, these same importing states have to carefully consider what happens if they do not comply in the future. As the EIA noted in November 2011:⁹⁵

Iran's oil exports also have been affected by sanctions. In 2011, Iran experienced significant problems with receiving payments from India for its exports, when the Reserve Bank of India halted a clearing mechanism due to sanctions. Some of the payments have been cleared through Turkish and UAE banks. More recently, NIOC announced that India has cleared all oil debts to Iran through Gazprombank of Russia and Iran has already received all overdue payments for its exports to India.

Impact of Domestic Consumption

Iran faces another set of problems because it has very high domestic consumption of petroleum products. In 2011, the energy intensity in Iran was as high as the Middle Eastern average, but twice as high as the world average, and the energy factor, the ratio of final energy use growth to GDP was more than triple the world average at 1.27.⁹⁶ This means that Iran is relatively energy inefficient and has relied on energy subsidies in the past to reduce the price burden on its population. Subsidized prices, coupled with a population that has doubled since 1979, has created excessive demand and inefficient energy uses. Natural gas accounts for half of Iran's total domestic energy consumption, while the remaining half is predominately oil consumption.⁹⁷

A significant portion of what Iran refines is low-value fuel oil, forcing them to rely on imports for higher value-added refined products, such as gasoline, jet fuel, and diesel. These energy imports are essential to accommodate the growing public appetite for subsidized fuels, especially gasoline and gas oil.⁹⁸ While reliable numbers are hard to come by, the EIA estimates that in 2010, Iran imported 78,000 bbl/d of refined oil products, roughly 70% of total imports. The EIA further estimated that Iran would import most of its refined gasoline in 2011, but through increasing capacity and improving energy efficiency, Iran could become a gasoline exporter by 2015.⁹⁹

Tough July," September 5, 2012. <http://msnbcmedia.msn.com/i/msnbc/sections/news/IranSanctionsUpdate.pdf>

⁹⁴ Patti Domm, "Iran Oil Revenue Shrinks as Sanctions Sting," September 6, 2012. http://www.cnbc.com/id/48928507/Iran_Oil_Revenue_Shrinks_as_Sanctions_Sting

⁹⁵ EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

⁹⁶ Atabi, et. al, "Long Run Energy Demand in Iran; Efficiency and Renewable Energy Scenarios," The United States Association for Energy Economics-The International Association for Energy Economics Working Paper. March, 2011, p. 5.

⁹⁷ EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

⁹⁸ EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

⁹⁹ US Energy Information Agency, "Iran Country Analysis Brief," February 17, 2012. <http://www.eia.gov/countries/cab.cfm?fips=ir>

The EIA notes that:¹⁰⁰

Iranian domestic oil demand is mainly for diesel and gasoline. Total oil consumption was approximately 1.8 million bbl/d in 2010, about 10 percent higher than the year before. Iran has limited refinery capacity for the production of light fuels, and consequently imports a sizeable share of its gasoline supply. Iran's total refinery capacity in January 2011 was about 1.5 million bbl/d, with its nine refineries operated by the National Iranian Oil Refining and Distribution Company (NIORDC), a NIOC subsidiary.

The Iranian government subsidizes the price of refined oil products, however price reforms instituted in December 2010 removed some of the subsidies, which significantly affected gasoline consumption in Iran (see Gasoline section below). Iran is an overall net petroleum products exporter due to large exports of residual fuel oil.

...Sanctions imposed on Iran have made it difficult for the country to import needed volumes of gasoline. The government has attempted to control consumption by implementing accelerated subsidy reform, resulting in a sharp increase in the price of gasoline. The subsidy reform spurred political opposition because of inflationary fears in the midst of an economic downturn. Furthermore, petrochemical plants were converted so that they can produce gasoline as a short-term measure. However, the converted plants produce low quality gasoline, causing significant environmental problems.

In 2010, Iran consumed around 400,000 bbl/d of gasoline, about 4 percent less than consumed in 2009. Iran does not currently have sufficient refining capacity to meet its domestic gasoline and other light fuel needs. However, the government has approved a number of expansions of existing as well as construction of new refineries with the aim to make Iran self-sufficient (and an exporter of gasoline).

As part of an effort to reduce the wasteful and expensive Iranian government energy subsidies that reportedly cost around \$70 billion year, or nearly 20% of Iran's GDP, President Ahmadinejad instituted a Targeted Subsidy Plan in 2010.¹⁰¹ This plan has since reduced subsidies on staple goods such as bread and gasoline and compensated lower and middle class people with monthly cash handouts of \$40. Prices for bread and some other foods have increased and gasoline is now priced at \$1.60 to \$2.60 per gallon.¹⁰²

An International Monetary Fund (IMF) report indicated the plan has eliminated about \$60 billion in expenses for Iran, but some Iranian economists believe that the number of people taking cash handouts has all but eliminated the savings from the subsidy cut.¹⁰³ As a result, it is unclear what has affected the Iranian economy most: the Targeted Subsidy Plan or additional sanctions. What is clear is that Iran is suffering from stagnant or negative economic growth.

Iran has increased prices to reduce consumption, but still faces problems both in maintaining its volume of exports and because it lacks refinery capacity and has to import product. Past sanctions have helped limit Iran's refinery expansion plans, but the trends are mixed.

The EIA reported in 2012 that:¹⁰⁴

¹⁰⁰ US Energy Information Agency, "Iran Country Analysis Brief," February 17, 2012. <http://www.eia.gov/countries/cab.cfm?fips=ir>

¹⁰¹ Djavad Salehi-Isfahani, "Iran: Subsidy Reform amid Regional Turmoil," Brookings, March 3, 2011. <http://www.brookings.edu/research/opinions/2011/03/03-iran-salehi-isfahani>

¹⁰² Kenneth Katzman, "Iran Sanctions," Congressional Research Service, December 7, 2011, pg 55.

¹⁰³ International Monetary Fund, "IMF Executive Board Concludes 2011 Article IV Consultation with the Islamic Republic of Iran," August 3, 2011. <http://www.imf.org/external/np/sec/pn/2011/pn111107.htm>

¹⁰⁴ EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

Iran has had other difficulties with refinery capacity expansion recently. During the inauguration ceremony (led by Iran's president Mahmoud Ahmadinejad) of the Abadan refinery expansion, a gasoline unit blew up as a result of a gas leak. It took NIORDC four months to rebuild the unit and bring it online.

Finally, Iran plans to increase refining capacity with the aim to become self-sufficient for gasoline. Plans for capacity increases through expansions at existing refineries as well as planned Greenfield refinery construction have been announced. Iran has issued permits to construct six new refineries with a combined refining capacity of 1.2 million bbl/d; however there has been little progress because of financing difficulties.

Iranian gasoline imports were approximately 78,000 bbl/d in 2010, nearly 70 percent of total product imports. Current and proposed expansions of Iranian refineries likely will come online between 2012 and 2017. Iran is expected to remain a gasoline importer next year, however if proposed expansions occur as planned, it is possible the country will become a gasoline exporter in 2015.

Other reports indicate that Iran has been able to cut its imports while increasing its domestic refining capabilities. A Reuters report in early 2012 stated that Iranian imports of gasoline have been reduced from around 40% of total imports to roughly 5% of total imports.¹⁰⁵ A more recent report by Reuters detailed Iran's plan to ration diesel sales, mix gasoline with methanol, and only accept cash from domestic airlines for jet fuel.¹⁰⁶ In another report in the *Washington Post*, Seyyed Abdolreza Mousavi, head of the Iranian Airlines Association, stated that most flights from Tehran, Mashhad, and other airports were canceled due to the failure of domestic airlines to pay their debts. He also said that fuel would only be given to airlines on a cash only basis.¹⁰⁷ In another sign of the worsening situation in Iran, the country is reportedly planning to increase its oil storage facilities by adding nearly 8.1 million barrels of capacity, and has raised the prices of national flag carrier Iran Air – double for some international destinations, and between 70-90% for domestic destinations because of fuel prices.¹⁰⁸

However, the validity of these numbers – especially the gasoline importation number – should be taken with a grain of salt and are most likely extremely optimistic. But this report underscores one of the current questions over sanctions in the past few years, notwithstanding the questionable accuracy of the data, if the sanctions have pressed Iran into moving towards self-sufficiency in gasoline production.

Official pronouncements of domestic Iranian gasoline production seemingly run counter to other news about rising gas prices and new gasoline mixtures. It is too difficult to “balance the equation” when it comes to Iranian oil and natural gas exports because so much of the Iranian data and news is politicized to such a degree that they are useless. Therefore, it is only possible to investigate the trends in the aggregate.

Data from November 2012 indicate that the combined US, EU, and UN sanctions have had a large effect on the amount of oil that Iran has exported in the past year. Exports have declined to

¹⁰⁵ Reuters, “Iran gasoline demand falls as natural gas use rises,” 29 January 2012. <http://english.alarabiya.net/articles/2012/01/29/191249.html>

¹⁰⁶ Daniel Fineren and Yeganeh Torbati, “Iran takes steps to manage diesel, other fuel supplies,” Reuters, November 14, 2012. <http://www.reuters.com/article/2012/11/14/us-iran-diesel-rationing-idUSBRE8AD0X420121114>

¹⁰⁷ Iran Daily Brief, “Oil Ministry stops selling fuel to airlines due to unpaid debts; most flights on January 7 were cancelled,” December 8, 2012. <http://www.irandailybrief.com/2013/01/08/oil-ministry-stops-selling-fuel-to-airlines-due-to-unpaid-debts-most-flights-on-january-7-were-cancelled/>

¹⁰⁸ “Iran plans new oil storage, airline hikes fares,” Associated Press, November 26, 2012. <http://www.usnews.com/news/world/articles/2012/11/26/iran-carrier-hikes-fares-on-international-flights>

about 1.25 million barrels a day in December 2012, down from 2.5 million barrels a day that Iran exported in 2011.¹⁰⁹ The loss in customers due to sanctions and a provision in the FY2012 NDAA that required countries to reduce their Iranian oil purchases has caused Iran to reduce their oil production to about 2.6 million barrels a day, down from a baseline of 4 million barrels per day.¹¹⁰

Sanctions and Iranian Gas Exports

Gas exports are far less important to the Iranian economy than oil exports, but the EIA estimates that,¹¹¹

Iran's natural gas production has increased by over 550 percent over the past two decades, and the consumption has kept pace. As demand growth rates persist, the potential for shortfalls in natural gas supply grows. Iran's natural gas exports likely will be limited due to rising domestic demand, even with future expansion and production from the massive South Pars project, and other development projects.

In 2010, Iran produced an estimated 6 Tcf of marketed natural gas and consumed an estimated 5.1 Tcf. A sizeable volume of the gross natural gas produced (7.7 Tcf in 2010) was reinjected (1.2 Tcf). As Iran implements its plans for increased crude production through EOR techniques, however, the share of natural gas used for re-injection is expected to increase dramatically.

While Iran's production of natural gas has increased, its domestic consumption has increased as well, reducing the amount of gas available for export. This has affected both Iran's imports and exports. In 2011, Iran imported a total 47.983 Tcm with its imports coming from Turkmenistan and Azerbaijan.¹¹² And in 2012, Iran exported 9.11 Bcm, mostly to Turkey and less so to Armenia.¹¹³

This has an impact on an important American ally. Iran plays an important role in Turkish efforts to meet its energy needs and improve its energy diversification, even if Turkey's purchases of energy have decreased due to newly instituted EU and US sanctions. According to the Turkish Ministry of Foreign Affairs, oil and natural gas purchases account for 90% of Iranian exports to Turkey. Turkey imported over 50% of its oil and 21% of its natural gas from Iran in 2011. After US and EU sanctions on Iran's oil and gas industry, however, Iran's share of Turkey's energy imports have decreased to roughly 30% and 19% respectively.¹¹⁴ Iran was still Turkey's largest oil supplier as the next largest supplier, Iraq, only accounted for 11.28% and Russia was third with 8.45%.¹¹⁵

¹⁰⁹ Kenneth Katzman, Iran Sanctions, Congressional Research Service, RS20871, Washington, DC. December 7, 2012 pp. 2

¹¹⁰ Kenneth Katzman, Iran Sanctions, Congressional Research Service, RS20871, Washington, DC. December 7, 2012 pp. 2

¹¹¹ EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

¹¹² OPEC, Annual Statistical Bulletin, 2012.

http://www.opec.org/opec_web/static_files_project/media/downloads/publications/ASB2012.pdf

¹¹³ OPEC, Annual Statistical Bulletin, 2012.

http://www.opec.org/opec_web/static_files_project/media/downloads/publications/ASB2012.pdf

¹¹⁴ CSIS, Proceedings of an International Workshop, "The Turkey, Russia, Iran Nexus: Economic and Energy Dimensions," March 29, 2012. <http://csis.org/publication/turkey-russia-iran-nexus-economic-energy-dimensions>

¹¹⁵ Gareth Jenkins, "Occasional Allies, Enduring Rivals: Turkey's Relations with Iran," Central Asia-Caucasus Institute, Silk Road Studies Program, Johns Hopkins University, May 2012, Pg. 56.

Iran supplies Turkey with natural gas through the Tabriz-Ankara Pipeline that connects Iranian natural gas reserves to Turkey's internal distribution network. However, supplies of gas to Turkey have been routinely disrupted by unexplained Iranian stoppages, Iranian mechanical failures, and PKK attacks in the border region between Iran and Turkey. Iran has repeatedly failed to supply Turkey with its contractually obligated 10 bcm of gas a year and has recently increased the price of gas more than \$100/1,000m³; This has led Turkey to sue Iran. The pipeline was supposed to reach its full capacity of 10 bcm by 2007 but only 6.05 bcm had been pumped through in that year. Later years had still not reached capacity: 4.11 bcm in 2008, 5.24 bcm in 2009, and 7.77 bcm in 2010.¹¹⁶

The main impact of sanctions and US diplomatic pressure to date has been in reducing Iran's capacity to export. The EIA reports that,¹¹⁷

Due to the poor investment climate and international political pressure, some international oil companies including Repsol, Shell, and Total have divested from Iran's natural gas sector. In response, Iran has looked toward eastern firms, like state-owned Indian Oil Corp., China's Sinopec, and Russia's Gazprom to take an increased role in Iranian natural gas upstream development. Activity from these sources has also been on the decline due to logistical difficulties experienced as a result of sanctions on technology and financial transactions.

...In May 2009, Iran began exports of natural gas to Armenia after a couple of years of delays. Exports to Armenia totaled 24 MMcf per day of gas in 2010 in exchange for electricity. Pipeline exports to Armenia are expected to increase to 224 MMcf per day in 2020.

...Iran has an extensive natural gas pipeline system, which includes trunk lines, import/export pipelines, and gathering and distribution lines. The backbone of the domestic pipeline system is the Iranian Gas Trunkline (IGAT) pipeline series, which transport natural gas from processing plants to end-use consumers.

Development of IGAT pipelines, fed by South Pars development phases, is important to Iran's natural gas transport. IGAT-8 (2012/2013) will run nearly 650 miles to Iran's northern consumption centers, including Tehran. IGAT-9 and IGAT-10 are still in the planning phase and are not likely to become operational before 2017. Iran exports natural gas via pipeline to Turkey and Armenia. The Iran-Turkey pipeline began exports in 2001 with 34 million cubic feet (MMcf) per day and exports gradually rose to 762 MMcf per day in 2010.

Future pipeline projects (at various stages of planning) include the Iran-UAE pipeline, Iran-Pakistan pipeline, and Iran-Europe gas export project. Additionally, the governments of Iran and Syria have signed several MOUs to build a pipeline linking the two countries. However, this project is becoming less likely as a result of the unrest in Syria and is predicated upon the survival of the Assad regime.

A controversial pipeline proposal (**Figure V.5**) is the \$7.4-billion Iran-Pakistan-India (IPI) line that would transport Iranian natural gas south to the Asian subcontinent. With a proposed 1,700 miles and a 5.4 Bcf/d capacity, the pipeline has been stalled in the past due in part to disputes over the cost of the shipments. Iran and Pakistan have finalized gas sales and purchase agreements, but without India's participation in the negotiations. It is probable that Iran would extend its domestic Iran Gas Trunkline 7 (IGAT-7) pipeline into Pakistan, avoiding the creation of a new, parallel pipeline.

It again is unclear how much US sanctions and diplomatic efforts have really limited these pipeline developments. Their cost and the risk of going through Afghanistan and Pakistan is a major deterrent without any other factors. This is less true in the case of Turkey, but Iran also has not always presented viable business terms.

¹¹⁶ Gareth Jenkins, "Occasional Allies, Enduring Rivals: Turkey's Relations with Iran," Central Asia-Caucasus Institute, Silk Road Studies Program, Johns Hopkins University, May 2012, Pg. 55.

¹¹⁷ EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

However, sanctions have been less effective against natural gas exportation and field development. And as sanctions have squeezed Iran's refined oil imports, Iran is attempting to increase its reliance on the production and use of natural gas. While Iran does export gas to its neighbors, mostly Armenia and Turkey, the positive impacts on Iran's economy are low due to the technical challenges of producing, storing, and exporting gas and liquefied natural gas (LNG) and the fact that Iran's neighbors are also large gas producers. Moreover, to counter sanctions and the difficulty of using the international banking system, Turkey has paid Iran for its natural gas imports with gold.¹¹⁸ This leaves China, South Korea, and other countries as possible targets for Iranian gas, but without the requisite technology and infrastructure, the economic impact of natural gas exports will be small.

Iran's Energy Targets

While it is not directly related to sanctions, **Figure V.2** highlights the fact that Iran has many highly vulnerable energy targets that are potential hostages to any Iranian effort to "close the Gulf" described in Chapter III. Iran's main oil export terminals and other ports could easily be mined by air, or be hit surgically with precision-guided munitions or cruise missiles.¹¹⁹

Iran's main oil terminal is at Kharg Island and is easy to "close" or destroy using mines, cruise missiles, and stand-off air munitions. The EIA reports that Kharg Island has a crude storage capacity of 20.2 million barrels of oil and a loading capacity of 5 million bbl/d, but it is along the upper coast of the Gulf, and any ships or tankers moving in or out could be easily embargoed or attacked. Lavan Island is closer to the Strait, but only has the capacity to store 5 million barrels and load 200,000 bbl/d. Other terminals that are potential – but much less important targets – include Kish Island, Abadan, Bandar Mahshar, and Neka (which helps facilitate imports from the Caspian region).¹²⁰

As **Figure V.2** shows, many of Iran's refineries are near the coast and easy to strike – and present an attractive follow-up target to any Iranian reprisals or a preventive strike. Similarly, Iran's internal gas distribution system has no major impact on world oil exports and the global economy, but has many critical points that could cut off gas to key cities and areas in Iran. Such strikes could be combined with attacks on electric facilities that will have a major impact on Iran's electricity supply.

Iran's power grid is another attractive set of targets and one where attacks could be combined with attacks on Iran's domestic gas distribution system. Even though Iran exports electricity to some of its neighbors – including Iraq – its power grid is extremely vulnerable, as are many of its generating facilities.¹²¹ The EIA reports that Iran generated 312.715 billion kilowatt hours

¹¹⁸ Mark O'Byrne, "Iran Imports From Turkey Surge To \$8 Billion YTD - \$3.2 Billion Worth Of Bullion In Q2 2012," Fx Street, September 11, 2012. <http://www.fxstreet.com/fundamental/analysis-reports/gold-investments-market-update/2012/09/11/>

¹¹⁹ This target analysis uses the data in EIA, DOE, Country Analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

¹²⁰ EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

¹²¹ The EIA reports that Iran is a net exporter of electric power and currently exports electricity to neighboring states including Armenia, Pakistan, Turkey, Iraq, and Afghanistan. Azerbaijan and Armenia supply electricity to Iran. Armenia and Iran will increase the volume of electricity that they deliver to each other on a seasonal basis, according to a November 2011 agreement. Total volume of power swapped between the two countries will rise from 350MW at present to 1,200MW following the completion of construction of a third, 400-kV transmission line

(Bkwh) of electricity in 2010, and consumed 173.094 Bkwh in 2009. This was generated from a network capacity of 56.171 gigawatts (GW) in 2009, which is strained during times of peak demand. Approximately 97% of total electricity supply was generated by conventional thermal electric power that inevitably creates highly vulnerable targets and distribution systems.

Moreover, the EIA reports that:¹²²

Some power plants are running as low as 10 percent of their nameplate capacity as Iran's electricity infrastructure is largely in a state of dilapidation and rolling blackouts become endemic in summer months. The amount of generation lost in distribution is a central indicator of the disrepair of the electricity network, with upwards of 19 percent of total generation lost during transmission...Iran has focused on meeting higher demand by expanding gas-fired combined-cycle and hydroelectric power capacity. Expansion of electric power generation capacity will require significant investment, made much tougher by international sanctions. The government has announced that it has opened the sector to foreign investment, but sales of existing state-owned facilities as well as new independent power projects have been almost non-existent.

It should be stressed that while Iran has many targets, and its lack of modern aircraft and surface-to-air missiles make it highly vulnerable, this vulnerability is scarcely an incentive to carry out such strikes – particularly if they do lasting damage to key facilities. Moreover, it is far easier to talk about precision that avoids civilian casualties as well as unnecessary collateral damage and lasting damage than it is to execute such strikes.

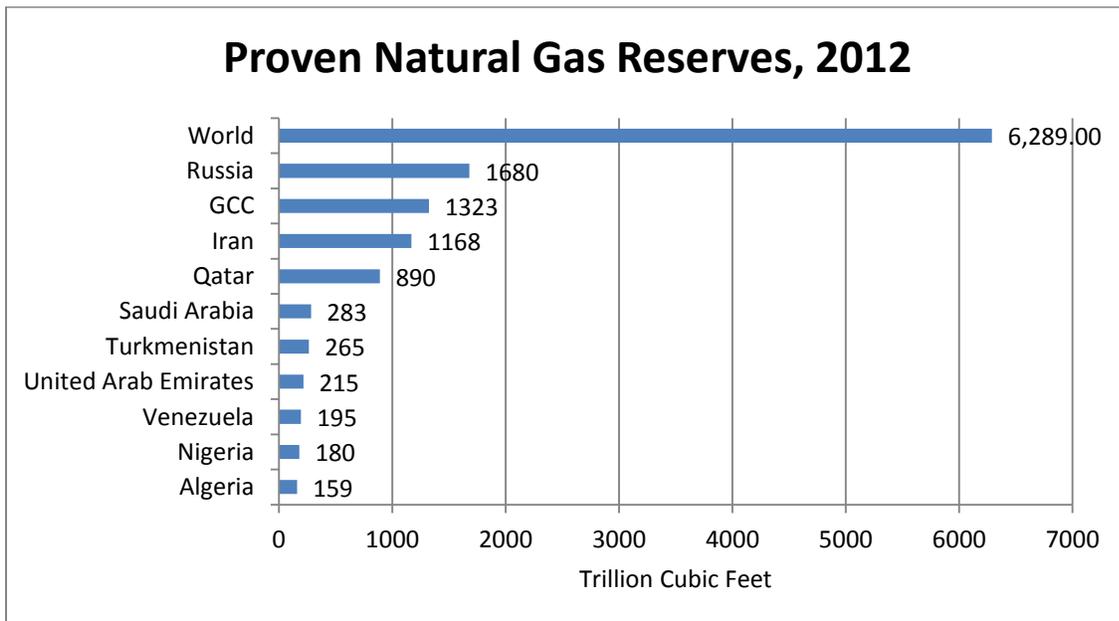
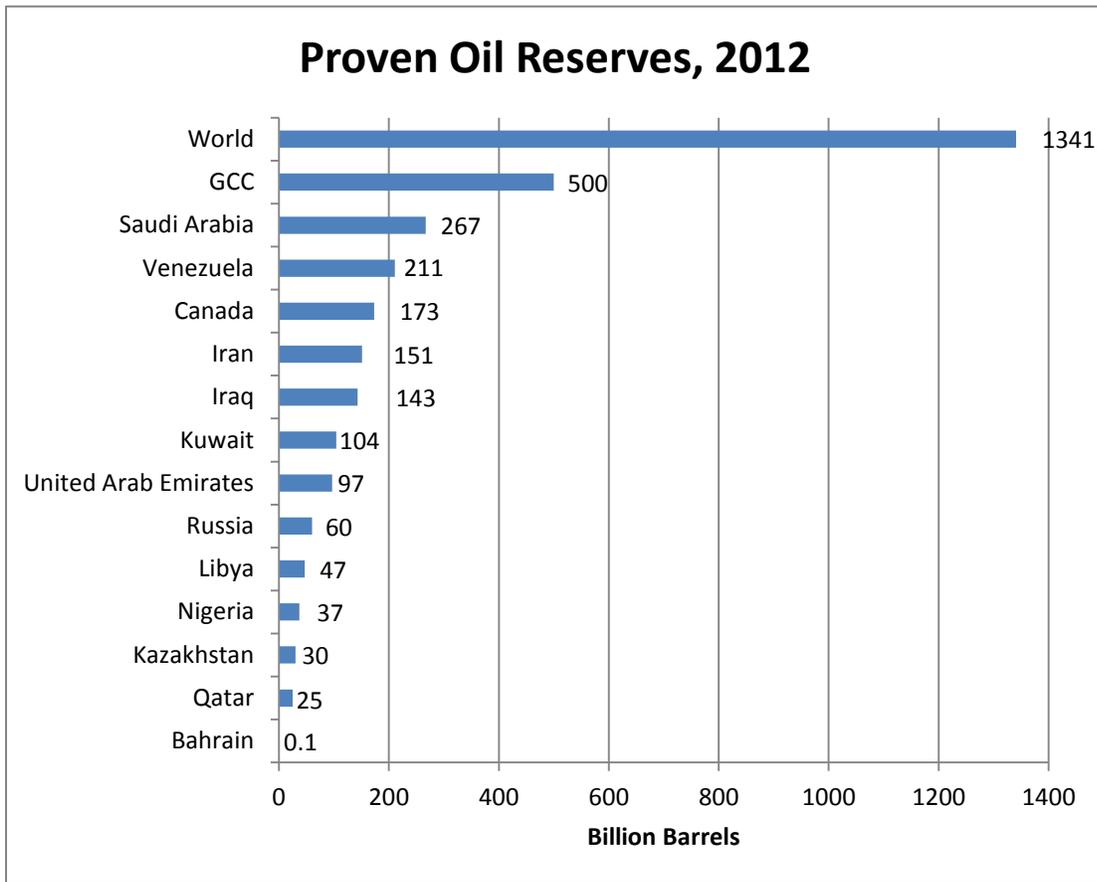
Cutting Iran's export capability affects not just Iran but the global economy as well due to the sudden drop in oil supply. Moreover, it will be the urban residents of Iran that suffer most from attacks on gas or electric facilities and distribution, and not the government. Like sanctions, the people will suffer before the ruling elite.

The fact remains, however, that no discussion of the vulnerability of the Gulf, or closing the Strait of Hormuz, should ignore the fact that anything Iran initiates can not only be dealt through counter targeting, but unless Iran can radically improve its military capabilities or deter outside attacks, it will lose virtually any conflict that involves serious escalation both in terms of terms of military and economic losses. This is the reason why Iran is building its nuclear program, to hedge against preemptive military action and reduce the risk and loss associated with a military confrontation.

connecting Iran and Armenia, expected for mid-2012.

¹²² EIA, DOE, Country analysis Briefs, "Iran," February 17, 2012, <http://205.254.135.7/countries/cab.cfm?fips=IR>

Figure V.1: Iran’s Comparative Oil and Gas Reserves



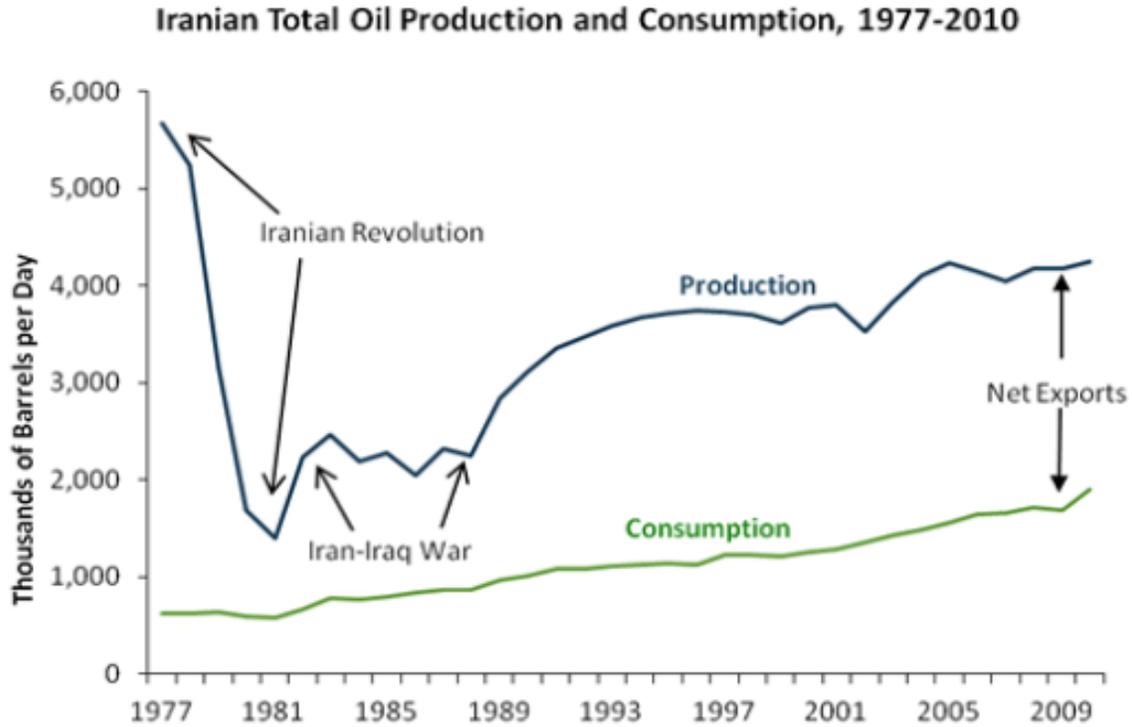
Source: Adapted from EIA, “International Energy Statistics”, 2012

Figure V.2: Iran's Oil and Gas Reserves, Pipelines, and Export Facilities

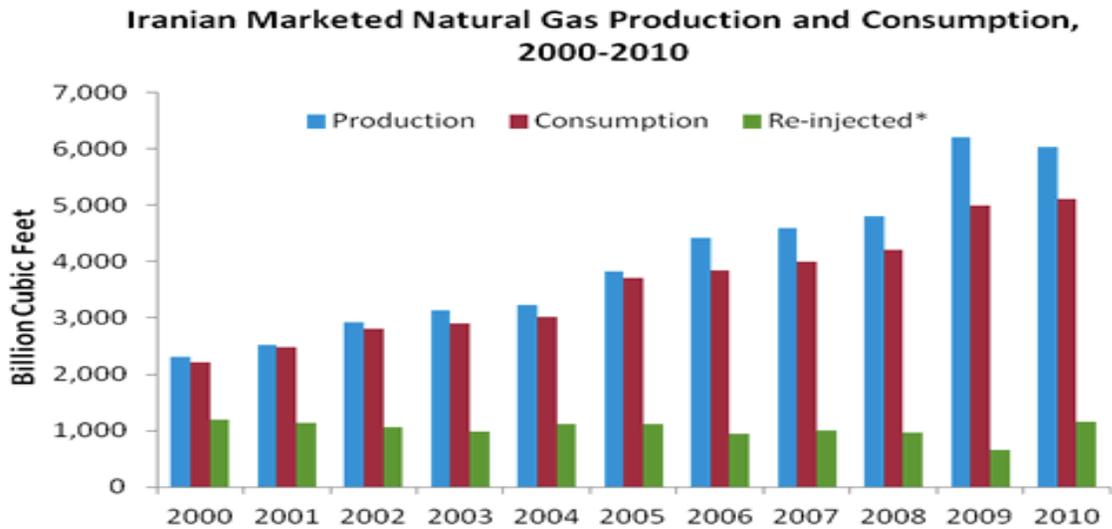


Source: Adapted from DOE/EIA, "Iran, Country Analysis," February 17, 2012, pp. 1

Figure V.3: Iran's Oil and Gas Exports - Part One



Source: U.S. Energy Information Administration



Source: U.S. Energy Information Administration

*not included in consumption data

Source: Adapted from DOE/EIA, "Iran, Country Analysis," February 17, 2012, pp. 1, 3, 4, 5

Figure V.3: Iran's Oil and Gas Exports - Part Two

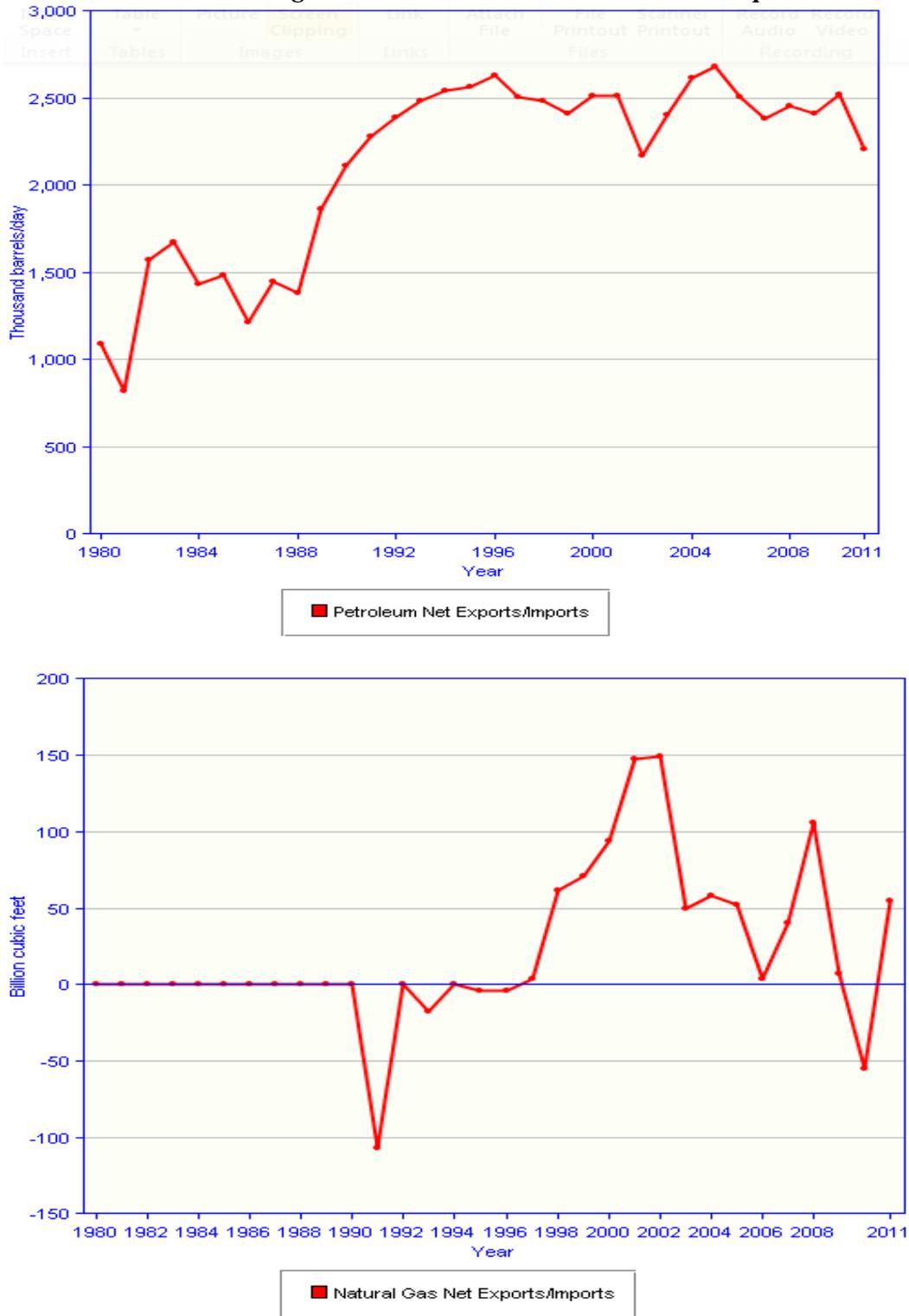
Iran's Top Export Destinations, 2010		
Country	000 bbl/d	Share of total (percent)
China	426	20
Japan	362	17
India	345	16
Italy	208	10
South Korea	203	9
Other	610	28
Total Exports	2,154	100

IRAN CRUDE OIL AND CONDENSATE EXPORTS FOR KEY COUNTRIES
January - June 2011

	Percent of Iran's Exports	Total Volume of Iran's Crude Imported from Iran ('000 b/d)	Iran as a Percentage of Total Crude Imported
European Union	18	452	
Italy	7	183	13
Spain	6	137	13
France	2	49	4
Germany	1	17	1
UK	<1	11	1
Netherlands	1	33	2
Others	1	22	1
Japan	14	341	10
India	13	328	11
South Korea	10	244	10
Turkey	7	182	51
South Africa	4	98	25
Sri Lanka	2	39	100
Taiwan	1	33	4
China	22	543	11

Source: Adapted from DOE/EIA, "Iran, Country Analysis," February 17, 2012, pp. 1, 3, 4, 5

Figure V.4: Iran's Oil and Natural Gas Exports



Source: Iran: Country Analysis Brief, U.S. Energy Information Administration, <http://www.eia.gov/countries/cab.cfm?fips=IR>

Figure V.5: Iran’s Gas Pipeline “Dreams”: The Iran-Pakistan-India Pipeline



Source: Adapted from DOE/EIA, “Iran, Country Analysis,” February 17, 2012, pp. 3, 4, 5

Figure V.6: Iran’s Refinery Targets

Iran's Refining Capacity, 2011	
Refinery	000 bbl/d
Abadan	350
Isfahan	284
Bandar Abbas	232
Tehran	220
Arak	170
Tabriz	100
Shiraz	40
Lavan Island	30
Kermanshah	25
Total Output	1,451

Source: Adapted from DOE/EIA, “Iran, Country Analysis,” February 17, 2012, pp. 6; *Oil and Gas Journal*

The Sanctions Game

This complex mix of vulnerabilities in Iran's economic make-up helps explain why sanctions and related diplomatic efforts have become a key instrument for the US and its allies in competing with Iranian ambitions. It must be stressed that the history of sanctions is complex, their exact impact is often impossible to measure or is controversial, and their ultimate success remains uncertain. However, even a brief survey of this aspect of US and Iranian competition shows that sanctions have already put serious pressures on Iran - pressures compounded by the economic policies and mistakes of the Iranian regime, despite Iranian claims to the contrary.

Moreover, the history of sanctions shows they have forced Iran to shift its strategy. Iran has responded by trying to leverage its international economic position through its energy exports, by talking about its right to peaceful nuclear programs, and by trying to exploit Arab-Israel tensions in order to shift the focus to Israel and away from the threat Iran's actions pose to Arab states.

US Unilateral Sanctions - A Brief Background

As **Figure V.7** shows, sanctions have been the main diplomatic weapon utilized by the US in competing with Iran across a broad spectrum of issues ever since the overthrow of the Shah. Washington has imposed a growing range of sanctions on Tehran, focusing on Iranian activities ranging from petroleum exports and investments to arms control and non-proliferation measures.

Sanctions now block US companies from operating in Iran and give foreign firms a strong incentive not to operate there as well. And while their aim has been broad, the sanctions have all sought to push the current Iranian regime into changing its behavior by isolating it politically and economically from the international community.

Sanctions: 1980-2009

The first major period of US sanctions began in 1979, as US and Iranian relations deteriorated sharply following the Islamic Revolution and the hostage crisis. In response, President Carter laid out a series of economic sanctions that were intended to both punish Tehran and change its behavior.¹²³

The Reagan Administration continued this trend and declared Iran "a sponsor of international terrorism," making Iran ineligible for various forms of US foreign assistance.¹²⁴ Reagan also prohibited Iran from receiving US arms under the US Arms Export Control Act¹²⁵ and through Executive Order 12613, in which a ban was imposed on US imports of Iranian crude oil and all other Iranian imports in 1987.¹²⁶

¹²³ Richard Sabatini, "Economic Sanctions: Pressuring Iran's Nuclear Program," Monterey Institute for International Studies, Nuclear Threat Initiative, June 24, 2010. <http://www.nti.org>.

¹²⁴ Richard Sabatini, "Economic Sanctions: Pressuring Iran's Nuclear Program," Monterey Institute for International Studies, Nuclear Threat Initiative, June 24, 2010. http://www.nti.org/e_research/e3_economic_sanctions_pressuring_iran_nuclear_program.html#fn1.

¹²⁵ US Department of State. *The Arms Export Control Act*. http://www.pmddtc.state.gov/regulations_laws/aeca.html.

¹²⁶ Executive Order 12613--Prohibiting imports from Iran, The National Archives, October 29, 1987. <http://www.archives.gov/federal-register/codification/executive-order/12613.html>.

The George H.W. Bush Administration continued to institute sanctions, signing the Iran-Iraq Arms Non-Proliferation Act into law in 1992. It included provisions regarding dual-use items with potential military purposes and called for the sanctioning of any person or entity that assisted Tehran in weapons development or acquisition of chemical, biological, nuclear, or destabilizing numbers and types of advanced conventional weapons.¹²⁷

Unilateral sanctions against Iran were expanded further under the Clinton administration. Executive Order 12957 banned all U.S. participation in the Iranian petroleum industry.¹²⁸ Executive Order 12959 broadened the sanctions to encompass a total trade and investment embargo,¹²⁹ and in 1996 Congress overwhelmingly passed the Iran and Libya Sanctions Act (ILSA), expanding US sanctions legislation to cover foreign companies.¹³⁰

The ILSA received an extension during the George W. Bush Administration in 2001 and again in 2006 when it was renamed the Iran Sanctions Act.¹³¹ Executive Order 13382 froze the assets of proliferators of WMD, their supporters, and isolated them financially - eight Iranian entities and external organizations that were believed to be supporting Iranian WMD programs were sanctioned.¹³²

In 2006, Congress passed the Iran, North Korea, and Syria Nonproliferation Act (INKSNA), which provided penalties for the transfer to or acquisition from Iran of equipment and technology controlled under multilateral control lists (the Missile Technology Control Regime, Australia Group, Chemical Weapons Convention, Nuclear Suppliers Group, and Wassenaar Arrangement).¹³³

Sanctions Since 2010

The Obama Administration and Congress have drastically increased the size and scope of US sanctions as Iran's nuclear program has grown increasingly closer to nuclear weapons production capability. In 2010, Congress passed the Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA).

CISADA imposed sanctions on any person that makes an investment of \$20 million or more in Iran's petroleum industry; any person that provides Iran with goods, services, technology or information with a fair market value of \$1 million or more for the maintenance or expansion of Iran's production of refined petroleum products; and/or any person that exports more than \$1

¹²⁷ Herman Frannssen and Elaine Morton, "A Review of US Unilateral Sanctions Against Iran," August 26, 2002. <http://www.mafhoum.com/press3/108E16.htm>.

¹²⁸ *Executive Order 12957*, March 15, 1995. <http://www.iraniantrade.org/12957.htm>.

¹²⁹ *Executive Order 12959*, March 15, 1995. <http://www.iraniantrade.org/12959.htm>.

¹³⁰ *Iran and Libya Sanctions Act of 1996, from the congressional record*. http://www.fas.org/irp/congress/1996_cr/h960618b.htm.

¹³¹ Herman Frannssen and Elaine Morton, "A Review of US Unilateral Sanctions Against Iran," August 26, 2002. <http://www.mafhoum.com/press3/108E16.htm>.

¹³² *Executive Order 13382*, June 29, 2005. <http://www.fas.org/irp/offdocs/eo/eo-13382.htm>.

¹³³ U.S. Department of State, *Iran, North Korea, and Syria Nonproliferation Act Sanctions (INKSNA)*, October 13, 2006. www.state.gov.

million worth of gasoline to Iran or provides \$1 million worth of goods or services that could contribute to Iran's ability to import gasoline.¹³⁴

Since 2010, the United States has focused on isolating Iran economically by targeting Iran's financial and commercial systems. In doing so, the US has hoped to obstruct Iran's connections to international markets and dismantle the means by which it conducts economic transactions. This makes sense given the composition of Iran's GDP:

- Industry, including Iranian petroleum and petrochemical products, comprises 40.2% of Iran's GDP.¹³⁵
- Services, including banking and trade-related services, account for 49.5% of its GDP.¹³⁶

As a result, US sanctions have affected a number of key sectors in Iran's economy, as has the steady increase in the number and scope of other national and international sanctions.

On December 31, 2011, President Obama signed into law the FY2012 National Defense Authorization Act that implemented new sanctions through Section 1245. These new sanctions froze the assets of the Iranian government and prevented all Iranian financial assets in the US from being "transferred, paid, exported, withdrawn, or otherwise dealt with."¹³⁷ The order also implemented new sanctions that required US banks to seize the funds of those on the Specially Designated Nationals (SDN) list, even if the funds are not destined for a US entity or firm. Previously, US banks were required to block the transaction and return the funds to the sender. This order effectively blocks the Iranians from using the US banking system.

On August 10, 2012, President Obama signed into law H.R. 1905, the "Iran Threat Reduction and Syria Human Rights Act of 2012" which strengthened US sanctions against Iran. Most importantly, the Act makes US firms liable for their foreign subsidiaries' involvement in sanctionable activities with Iran.¹³⁸ It further required the President to sanction US companies who violate this act and increases the minimum number of sanctions the President is required to impose from three to five. The Act further widened sanctionable actions under CISADA to include the development of petroleum resources, transporting oil from Iran, the production or manufacture of Uranium, the issuance of underwriting services or insurance to ships transporting Iranian oil, or the purchase, facilitation, or issuance of sovereign debt to the Government of Iran.¹³⁹

On November 30, 2012, Senators Robert Menendez (D-NJ) and Mark Kirk (R-IL) introduced an amendment into the FY2013 National Defense Authorization Act that would implement stricter

¹³⁴Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_reports&docid=f:hr512.111.pdf.

¹³⁵ Central Intelligence Agency, *The World Factbook [Iran]*, updated January 2, 2013. <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>.

¹³⁶ Central Intelligence Agency, *The World Factbook [Iran]*, updated January 2, 2013. <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>; 2011 estimate.

¹³⁷ The White House, Office of the Press Secretary, "Executive Order—Blocking Property of the Government of Iran and Iranian Financial Institutions," February 6, 2012.

¹³⁸ Ronald I. Meltzer, David J. Ross, and David M. Horn, "Iran Threat Reduction and Syria Human Rights Act of 2012," August 13, 2012. <http://www.wilmerhale.com/publications/whPubsDetail.aspx?publication=10209>.

¹³⁹ "H.R. 1905 (112th): Iran Threat Reduction and Syria Human Rights Act of 2012," August 10, 2012. <http://www.govtrack.us/congress/bills/112/hr1905>.

sanctions on Iran in the form of blacklisting Iran's energy, port, shipping, and shipbuilding sectors while restricting Iran from obtaining insurance on those industries.¹⁴⁰ This amendment was inserted and passed as part of the FY2013 NDAA under Subtitle E and is called "The Iran Freedom and Counter-Proliferation Act of 2012." The new provisions would use the same sanction implementation methods currently used under the CISADA sanctions act. However, the Administration has opposed the new round of sanctions saying that they are not needed, will complicate current actions, and will impose a new burden on the Intelligence Community; specifically Section 1272 mandates that the President submit a list of vessels docked at Iranian ports and airports that have been used by Iranian air carriers.¹⁴¹ These new sanctions will continue to squeeze the Iranian economy but also perpetuate the cat and mouse game between the implementations of sanctions and Iran's attempts to bypass them.

A little known part of the "The Iran Freedom and Counter-Proliferation Act of 2012" states that funds used to pay for oil must remain in a bank account in the purchasing country and can only be used for non-sanctioned trade, mostly related to food or medical imports. The result of this provision is that it will prevent more hard currency from going to Iran to pay for other sanctioned imports. Iranian oil dues are piling up in both China and South Korea, the latter of which reportedly has \$5 billion due to Iran for oil purchases.¹⁴²

¹⁴⁰ Josh Rogan, "Congress set to consider new Iran sanctions package," *Foreign Policy*, November 29, 2012. http://thecable.foreignpolicy.com/posts/2012/11/29/congress_set_to_consider_new_iran_sanctions_package.

¹⁴¹ National Defense Authorization Act for Fiscal Year 2013, H.R. 4310, 112th Congress, Second Session. <http://www.govtrack.us/congress/bills/112/hr4310/text>.

¹⁴² Osamu Tsukimori and Nidhi Verma, "Fresh U.S. sanctions to trap more Iran oil revenue," *Reuters*, December 19, 2012. <http://in.reuters.com/article/2012/12/19/iran-sanctions-payments-idINDEE8BI0C620121219>.

Figure V.7: US Sanctions Against Iran

Year	Sanction	Content
1979	Executive Order 12170	Blocked all property owned by the Central Bank and the government of Iran within U.S. jurisdiction.
1980	Executive Order 12205	Created an embargo on US exports to Iran.
	Executive Order 12211	Imposed a ban on all imports from Iran and prohibited US citizens from traveling to Iran or conducting financial transactions there.
1986	US Arms Export Control Act	Prohibited the sale of U.S. arms to Iran.
1987	Executive Order 12613	Banned all Iranian imports to the US.
1992	Iran-Iraq Arms Non-Proliferation Act	Imposed sanctions on any entity that helped Iran develop or acquire weapons of mass destruction or “destabilizing numbers” of advanced conventional weapons.
1995	Executive Order 12957	Banned any American firm or individual from investing in or developing Iranian petroleum products, not including natural gas.
	Executive Order 12959	Banned all American trade and investment in Iran.
1996	Iran and Libya Sanctions Act	Sanctioned foreign firms that conducted business with Iran.
2005	Executive Order 13382	Froze the assets of proliferators of WMD and their supporters and isolated them financially. Eight Iranian entities and external organizations believed to be supporting Iranian WMD programs were designated under the executive order and sanctioned.
2006	Iran, North Korea, and Syria Nonproliferation Act	Penalized entities and individuals for the transfer to or acquisition from Iran since January 1, 1999, of equipment and technology controlled under multilateral control lists (the Missile Technology Control Regime, Australia Group, Chemical Weapons Convention, Nuclear Suppliers Group, Wassenaar Arrangement).
2010	Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010	Imposes sanctions on any person that makes an investment of \$20 million or more in Iran's petroleum industry, any person that provides Iran with goods, services, technology or information with a fair market value of \$1 million or more for the maintenance or expansion of Iran's production of refined petroleum products, and/or any person that exports more than \$1 million worth of gasoline to Iran or provides \$1 million worth of goods or services that could

		contribute to Iran's ability to import gasoline.
2011	FY 2012 National Defense Authorization Act	Includes language that sanctions any international bank or financial institution that does business with the Iranian Central Bank (ICB), including purchases of crude oil.
2012	Iran Threat Reduction and Syria Human Rights Act	Makes US firms liable for their foreign subsidiaries' involvement in sanctionable activities and increases the minimum number of sanctions required to impose from three to five; widens sanctionable actions under CISADA to include, among others, the development of petroleum resources, the issuance of underwriting services or insurance to ships transporting Iranian oil, or the purchase or facilitation of the issue of sovereign debt to the Government of Iran.
2013	FY 2013 National Defense Authorization Act	Blocks property and imposes at least five sanctions on entities that provides goods or services to the energy, shipbuilding, shipping, port operations, or provides insurance for those operations and blacklists foreign banks who do provide such services from using the US banking system. Prevents Iran from repatriating money from oil sales and allows Iran to purchase non-sanctioned goods only. These sanctions do not apply for countries with exemptions or apply to purchases of natural gas from Iran. Imposes at least five sanctions on any entity that provides precious metals to Iran (such as gold) or semi-finished metals or software for integrating industrial processes. Imposes human rights abuser sanctions on the Islamic Republic of Iran Broadcasting.

Sources:

Kenneth Katzman, "Iran Sanctions," Congressional Research Service, December 7, 2012. p. 69.

Richard Sabatini, "Economic Sanctions: Pressuring Iran's Nuclear Program," Monterey Institute for International Studies, Nuclear Threat Initiative, June 24, 2010.

http://www.nti.org/e_research/e3_economic_sanctions_pressuring_iran_nuclear_program.html#fn.

US Department of State. *The Arms Export Control Act*. http://www.pmddtc.state.gov/regulations_laws/aeca.html;

Executive Order 12613--Prohibiting imports from Iran, The National Archives, October 29, 1987.

<http://www.archives.gov/federal-register/codification/executive-order/12613.html>.

Herman Franzen and Elaine Morton, "A Review of US Unilateral Sanctions Against Iran," August 26, 2002. <http://www.mafhoum.com/press3/108E16.htm>.

Executive Order 12957, March 15, 1995. <http://www.iraniantrade.org/12957.htm>.

Executive Order 12959, March 15, 1995. <http://www.iraniantrade.org/12959.htm>.

Iran and Libya Sanctions Act of 1996, from the congressional record.

http://www.fas.org/irp/congress/1996_cr/h960618b.htm.

Executive Order 13382, June 29, 2005. <http://www.fas.org/irp/offdocs/eo/eo-13382.htm>.

U.S. Department of State, *Iran, North Korea, and Syria Nonproliferation Act Sanctions (INKSNA)*, www.state.gov.

Ronald I. Meltzer, David J. Ross, and David M. Horn, “Iran Threat Reduction and Syria Human Rights Act of 2012,” August 13, 2012. <http://www.wilmerhale.com/publications/whPubsDetail.aspx?publication=10209>.

Figure V.8: UN Sanctions Against Iran

Year	Sanction	Content
2006	Resolution 1737	Halted nuclear cooperation with Iran, demanded Tehran’s compliance with the IAEA, and froze the assets of persons and organizations linked the Iran’s nuclear and missile programs. It also established a committee to ensure that sanctions were implemented correctly.
2007	Resolution 1747	Banned Iranian arms exports.
2008	Resolution 1803	Strengthened travel and financial restrictions on designated Iranian individuals and companies.
2010	Resolution 1929	Imposed a complete arms embargo on Iran, banned Iran from any activities related to ballistic missiles, authorized the inspection and seizure of shipments violating these restrictions, and specifically targeted the assets of the Iranian Revolutionary Guard Corps (IRGC) and the Islamic Republic of Iran Shipping Lines (IRISL).

Source: United Nations, “Security Council Resolutions.” <http://www.un.org>.

International Sanctions - A Competition for Influence

International sanctions have grown in importance since 2006 when the UN Security Council passed Resolution 1737 banning nuclear cooperation with Iran. The UN has now passed seven resolutions on Iran, four of which have imposed sanctions (see **Figure V.8**). The US and Iran have competed for Russian and Chinese support throughout this process, while America’s key European allies (Britain, France, and Germany) have played a growing role in shaping sanctions and the diplomatic process that has followed.

Not only has the UN implemented new multilateral sanctions, but both the EU and the US have crafted additional sanctions and consistently pushed for broader international adoption of these optional constraints.¹⁴³ This US-led coalition has rolled out strong new limitations on Iranian financial institutions, energy exports, and weapons acquisition. Kenneth Katzman explains that the expanded sanctions regime has been widely implemented by US allies, though compliance from Iran’s neighbors remains a challenge.¹⁴⁴

U.S. and European/allied approaches have converged since 2002, when the nuclear issue came to the fore. Previously, European and other countries had appeared less concerned than is the United States about Iran’s support for militant movements in the Middle East or Iran’s strategic power in the Persian Gulf—and had been reluctant to sanction Iran to address those issues. Since 2010, this convergence of views has produced an unprecedented degree of global cooperation in pressuring Iran. Many U.S. allies—including several neighbors of Iran, such as UAE and Saudi Arabia—have joined a U.S.-led informal coalition called the “like minded countries” to pressure Iran. And, increasingly, even Iran’s neighbors are joining the

¹⁴³ Matthew Levitt, “Financial Sanctions, The Iran Primer,” USIP, December 2010. <http://iranprimer.usip.org/resource/financial-sanctions>.

¹⁴⁴ Kenneth Katzman, *Iran Sanctions*, Congressional Research Service, September 13, 2012. p. 36.

effort—a result caused by the growing concerns about Iran’s nuclear intentions. Some countries have joined the burgeoning sanctions regime not necessarily out of conviction of the efficacy of sanctions but rather as a means of perhaps heading off unwanted military action by the United States or Israel against Iran’s nuclear facilities.

Iran has tried to counter additional UN sanctions by leveraging its economic resources and relationships with non-Western powers such as Russia and China. Iran has also increasingly sought ties to powers, such as Brazil and Nigeria, and to non-democratic governments, including the regimes of Hugo Chavez in Venezuela and Robert Mugabe in Zimbabwe. However, it is debatable how deep and significant the ties are to Venezuela and Zimbabwe, two countries that are, at most, marginal regional powers. And the cooling of relations with Brazil in the wake of Dilma Rousseff’s election due to her focus on human rights issues has the potential to hurt Iran more than Venezuela and Zimbabwe could help, as trade between Iran and Brazil totaled \$2.33 billion in 2011.¹⁴⁵ Furthermore, with the election of Ms. Rousseff, Iran lost the support of her predecessor, Luis da Silva, who had attempted to insert Brazil into international politics by championing the Iranian nuclear issue.

Iranian strategy is anchored in the conviction that non-Western states share an interest in balancing US and Western power in the international system. As President Ahmadinejad has said, “We [non-Western nations] have to develop a proper coordination [...] to wriggle ourselves from the domination of Western powers.”¹⁴⁶

The European Union and Other Western Nations

Inflammatory remarks by Ahmadinejad have become a symbol of how Iran’s behavior has damaged Iran’s relations with Europe. His controversial comments on Israel and denial of the Holocaust, which are particularly sensitive issues, have poisoned the diplomatic climate and destroyed any inroads achieved during the Khatami presidency.¹⁴⁷

On July 27, 2010, the EU countries imposed sanctions on Iran that exceeded those mandated in Security Council resolutions. Norway, Canada, and Australia all announced similar, though less sweeping, sanctions at the same time.¹⁴⁸ The EU did make it clear in late October 2010 that these sanctions did not then prohibit importation of Iranian oil and gas, nor did they ban exports of gasoline to Iran.¹⁴⁹ This was consistent with the EU’s efforts to diversify its gas supply options and reduce its reliance on Russian gas imports, which amounted to around 32% of total EU demand in 2008.¹⁵⁰

¹⁴⁵ “Brazil Trade Statistics,” European Commission, March 27, 2012.
http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113359.pdf

¹⁴⁶ Steven Heydemann, “Iran’s Alternative Allies,” The Iran Primer, USIP, December 2010.
<http://iranprimer.usip.org/resource/irans-alternative-allies>.

¹⁴⁷ Walter Posch, “Iran and the European Union,” The Iran Primer, USIP, December 2010.
<http://iranprimer.usip.org/resource/iran-and-european-union>.

¹⁴⁸ Kenneth Katzman, *Iran Sanctions*, Congressional Research Service, June 22, 2011.

¹⁴⁹ Kenneth Katzman, *Iran Sanctions*, Congressional Research Service, June 22, 2011.

¹⁵⁰ Mark Rowely, “The Nubucco Pipeline Project: Gas Bridge to Europe?” *Pipeline and Gas Journal*, 236:9 (2009).
<http://www.pipelineandgasjournal.com/nabucco-pipeline-project-gas-bridge-europe>.

This policy changed, however, as Iran's nuclear program became more threatening. A movement led by France and Britain in late 2011 culminated in an agreement by the EU at the end of January 2012 to implement a full import embargo on Iranian crude oil and petrochemicals. This move potentially affected some 450,000 barrels a day of Iranian exports, nearly 20% of Iran's average crude exports in 2011 and the source of some 25% of its oil export income. It also affected international insurance coverage of Iran, and all transactions with Iran's state-owned oil company and its main tanker fleet.¹⁵¹

There was hesitation by some European governments that centered on ensuring that there would be sufficient excess supply - mainly from Saudi Arabia - to prevent a major supply shock. Saudi Arabia, however, stated it would seek to make up the difference, which triggered decisive European action.¹⁵²

The EU decision also tracked closely with the language of Section 1245 of the FY2012 NDAA that required the President to phase in sanctions on foreign purchases of Iranian oil and the banks that facilitated those payments by barring transactions with the Central Bank of Iran or any Iran-affiliated or owned bank.

The Europeans acted in spite of threats by Iran's Vice President Mohammed Reza Rahimi and Iranian officers to shut off the flow of oil from the Gulf. They also acted after Mohammad Ali Khatibi, Iran's OPEC governor said, on January 17, 2012, that "Applying the scenario of sanctions on Iran's oil exports to EU members would be economic suicide for the member countries...Regarding the economic crisis in the Eurozone, imposing any sanction on Iran's oil will push European countries into a deeper crisis."¹⁵³

These threats were so exaggerated that they would have rung hollow under any circumstances, but they were particularly hollow at this time because Saudi Arabia's oil minister, Ali Al-Naimi, had stated on January 16th that "We are prepared to meet the increase in global demand as a result of any circumstances."¹⁵⁴ While Iran then responded by indirectly threatening Saudi Arabia, it had no more impact on the Saudis than it did on Europe.

Moreover, the EU took another critical step, directing the Society for Worldwide Interbank Financial Telecommunication (SWIFT) to "discontinue its communications services to Iranian

¹⁵¹ Indira A.R. Lakshmanan, "Iran Sanctions Bid Targets Oil, Tanker Companies to Cut Exports," *Bloomberg*, February 6, 2012; Indira A.R. Lakshmanan, "Global Insurers Targeted in Latest U.S. Bid to Expand Sanctions on Iran," *Bloomberg*, March 8, 2012; "U.S. lawmakers take next step on new Iran sanctions on heels of European embargoes," *Al Arabiya*, January 31, 2012 <http://english.alarabiya.net/articles/2012/01/31/191608.html>; Associated Press, "Congress to seek new sanctions targeting all Iranian banks," *Washington Post*, March 6, 2012.

¹⁵² Indira A.R. Lakshmanan, "Iran Sanctions Bid Targets Oil, Tanker Companies to Cut Exports," *Bloomberg*, February 6, 2012; Indira A.R. Lakshmanan, "Global Insurers Targeted in Latest U.S. Bid to Expand Sanctions on Iran," *Bloomberg*, March 8, 2012; "U.S. lawmakers take next step on new Iran sanctions on heels of European embargoes," *Al Arabiya*, January 31, 2012 <http://english.alarabiya.net/articles/2012/01/31/191608.html>; Associated Press, "Congress to seek new sanctions targeting all Iranian banks," *Washington Post*, March 6, 2012.

¹⁵³ Associated Press, "Iran: Oil embargo means 'economic suicide' for EU," *Fox News*, January 17, 2012. <http://www.foxnews.com/world/2012/01/17/iran-oil-embargo-means-economic-suicide-for-eu/>.

¹⁵⁴ Associated Press, "Iran: Oil embargo means 'economic suicide' for EU," *Fox News*, January 17, 2012. <http://www.foxnews.com/world/2012/01/17/iran-oil-embargo-means-economic-suicide-for-eu/>.

financial institutions that are subject to European sanctions.”¹⁵⁵ SWIFT is essential to Iran’s international banking because it provides secure communications for more than 10,000 financial institutions and corporations in 210 countries.

SWIFT reported in 2010 that 19 Iranian member banks and 25 financial institutions used the network over two million times during the course of the year.¹⁵⁶ These institutions included the Central Bank of Iran and other major Iranian banks, including Bank Melli, Bank Mellat, Tejarat Bank, Bank Refah, Future Bank, Persia International Bank, Post Bank, and Europäisch-Iranische Handelsbank; unlike with import sanctions, Iran had no alternative to the use of SWIFT.

On October 15, 2012, the EU instituted new sanctions that affected the Iranian financial industry and central bank; shipping industry; oil and gas sector; and restricted Iranian importation of graphite, steel, and other raw materials. The sanctions also prohibit the provision of flagging and classification services to Iranian tankers and cargo vessels in the EU or by EU nationals, bans vessels owned by EU citizens or companies from transporting or storing Iranian oil, and forbids EU companies from providing shipbuilding technology and naval equipment to Iran.

The Council of the European Union adopted the following conclusions:¹⁵⁷

1. The Council reiterates its serious and deepening concerns over Iran's nuclear programme and the urgent need for Iran to comply with all its international obligations, including full implementation by Iran of UNSC and IAEA Board of Governors' Resolutions.
2. The Council condemns the continuing production of enriched uranium and expansion of Iran's enrichment capacity, including at the Fordow site, and continued heavy-water activities in breach of UNSC and IAEA Board of Governors' Resolutions, as reflected in the most recent IAEA report. The Council notes with particular concern Iran's obstruction of the IAEA work towards the clarification of all outstanding issues, including with respect to the possible military dimension to Iran's nuclear programme. Therefore, the Council welcomes the adoption with overwhelming majority by the IAEA Board of Governors of its Resolution on 13 September 2012 deciding that Iran's cooperation was essential and urgent in order to restore international confidence in the exclusively peaceful nature of Iran's nuclear programme.
3. Iran is acting in flagrant violation of its international obligations and continues to refuse to fully cooperate with the IAEA to address the concerns on its nuclear programme. In this context, and in coherence with previous European Council and Council conclusions, the Council has agreed additional restrictive measures in the financial, trade, energy and transport sectors, as well as additional designations, notably of entities active in the oil and gas industry. In particular, the Council has agreed to prohibit all transactions between European and Iranian banks, unless authorized in advance under strict conditions with exemptions for humanitarian needs. In addition, the Council has decided to strengthen the restrictive measures against the Central Bank of Iran. Further export restrictions have

¹⁵⁵ Rick Gladstone and Stephen Castle, “Global Network Expels as Many as 30 of Iran’s Banks in Move to Isolate Its Economy,” *New York Times*, March 16, 2012, http://www.nytimes.com/2012/03/16/world/middleeast/crucial-communication-network-expelling-iranian-banks.html?_r=1; Thomas Endbrink and Joby Warrick, “Grim Outlook on Nuclear Talks,” *Washington Post*, March 16, 2012, p. A7.

¹⁵⁶ Rick Gladstone and Stephen Castle, “Global Network Expels as Many as 30 of Iran’s Banks in Move to Isolate Its Economy,” *New York Times*, March 16, 2012, http://www.nytimes.com/2012/03/16/world/middleeast/crucial-communication-network-expelling-iranian-banks.html?_r=1; Thomas Endbrink and Joby Warrick, “Grim Outlook on Nuclear Talks,” *Washington Post*, March 16, 2012, p. A7.

¹⁵⁷ The Council of the European Union, “Council conclusions on Iran: 3191st FOREIGN AFFAIRS Council meeting, Luxembourg,” October 15, 2012. http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/foraff/132833.pdf.

- been imposed, notably for graphite, metals, software for industrial processes, as well as measures relating to the ship building industry.
4. The restrictive measures agreed today are aimed at affecting Iran's nuclear programme and revenues of the Iranian regime used to fund the programme and are not aimed at the Iranian people. The Iranian regime itself can act responsibly and bring these sanctions to an end. As long as it does not do so, the Council remains determined to increase, in close coordination with international partners, pressure on Iran in the context of the dual track approach.
 5. The Council reaffirms the longstanding commitment of the European Union to work for a diplomatic solution to the Iranian nuclear issue in accordance with the dual track approach.
 6. The Council reaffirms that the objective of the EU remains to achieve a comprehensive, negotiated, long-term settlement, which would build international confidence in the exclusively peaceful nature of the Iranian nuclear programme, while respecting Iran's legitimate rights to the peaceful uses of nuclear energy in conformity with the NPT, and fully taking into account UN Security Council and IAEA Board of Governors' Resolutions. The Council welcomes the determination for a diplomatic solution expressed by E3+3 Foreign Ministers on 27 September in New York and fully endorses the efforts led by the High Representative on behalf of the E3+3 in this regard. E3+3 have made a credible and substantial confidence building proposal for negotiations guided by the agreed principles of reciprocity and a step by step approach. The Council urges Iran to engage constructively, by focusing on reaching an agreement on concrete confidence building steps, negotiating seriously and addressing the concerns of the international community.

Figure V.9: EU Sanctions Against Iran

Year	Sanction	Content
July, 2010	Council Decision 2010/413/CFSP ¹⁵⁸	Establishes an embargo on nearly all dual-use goods, military arms, and nuclear-related items. Bans EU export of key equipment and technology for oil and natural gas production, exploitation, and refining. Bans technical assistance, training, and financing of Iran's energy sector. Bans access to EU airports for Iranian cargo flights and the provision of bunkering or ship services to Iranian or Iranian contracted vessels and aircraft if they have been involved in sanctions violations. Requires all cargo to and from Iran to be inspected. Money transfers of more than €40,000 require authorization; transfers of more than €10,000 require notification. Bans Iranian banks from establishing a presence in the EU and any relationships with EU banks. Prohibits the sale, purchase of, or facilitation of public or public-guaranteed bonds to and from the Government of Iran or any Iranian bank. Bans the provision of insurance and reinsurance to the Government of Iran or any entities connected. ¹⁵⁹
April, 2011	Council Decision 2011/235/CFSP ¹⁶⁰	Freezes the funds and prevents entry into Europe of people responsible for human rights violations.
January, 2012	Council Decision 2012/35/CFSP	Amends Council Decision 2010/413/CFSP. Bans the import, purchase, or transport of all Iranian oil products and financing, facilitation of financing, or participation in the Iranian petrochemical industry. Freezes the assets of additional Iranian entities. Bans the direct or indirect sale, transportation of, or facilitation of gold, precious metals, and diamonds to or from the Government of Iran or its associate entities. Expands the list of prohibited dual-use items or technology. Prohibits the delivery of newly minted or unissued Iranian banknotes and coinage. ¹⁶¹
March, 2012	Council Decision	Establishes an embargo on telecommunications monitoring, interception

¹⁵⁸ "Council Decision of 26 July 2010 concerning restrictive measures against Iran and repealing Common Position 2007/140/CFSP," *Official Journal of the European Union*, July 27, 2010. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:195:0039:0073:EN:PDF>.

¹⁵⁹ "Economic Sanctions Update" *Economic Sanctions & International Law Practice*, October 19, 2010. <http://www.erenlaw.com/pdfs/Eren%20Lawyers%20-%20EU%20Sanctions%20-%20Iran%2010%2019%202010.pdf>.

¹⁶⁰ "Council Decision 2011/235/CFSP of 12 April 2011 concerning restrictive measures directed against certain persons and entities in view of the situation in Iran," *Official Journal of the European Union*, April 14, 2011. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:100:0051:0057:EN:PDF>.

¹⁶¹ "EU tightens Iran Sanctions with embargo on Iranian oil and petrochemicals plus new sanctions on precious metals, diamonds and key equipment & technology for the petrochemical sector," White & Case, January 26, 2012. <http://www.whitecase.com/files/Publication/5367d699-2dd9-42ad-8c64-daab919f74dd/Presentation/PublicationAttachment/8ec8b77d-6c96-45de-b426-e20ad9ca050d/alert-Tightened-Iran-Sanctions-01262012.pdf>.

	2012/168/CFSP	equipment, and other equipment used for internal repression.
	Council Decision 2012/152/CFSP	Prohibits the provision of specialized financial messaging services to any financial institution subject to EU Iranian sanctions. ¹⁶²
October, 2012	Council Decision 2012/365/CFSP ¹⁶³	Prohibits any transactions between European and Iranian banks except for those authorized in advance and under strict conditions. Bans the export of graphite, aluminum, steel, industrial facility control software, and their related technical or financial assistance. Prohibits the importation of Natural Gas from Iran. Bans short-term credits, guarantees, and insurance. Prohibits the provision of flagging and classification services to Iranian tankers and cargo vessels in the EU or by EU nationals. Bans vessels owned by EU citizens or companies from transporting or storing Iranian oil. Forbids EU companies from providing shipbuilding technology and naval equipment to Iran. Broadens the export ban on equipment for Iran's oil, gas, and petrochemical industries. Targets 34 Iranian entities with asset freezes and travel bans including the Ministries of Petroleum and Energy, the Iranian Central Bank, and various Iranian oil and petrochemical companies. ¹⁶⁴

¹⁶² "EU Implements Strengthened Iran Sanctions," Cleary Gottlieb Alert Memo, April 2, 2012. <http://www.cgsh.com/files/News/afee39c0-8e14-49ea-8896-6df1ca39d946/Presentation/NewsAttachment/c4513dca-d005-4c28-ae96-6f77c3424ee9/CGSH%20Alert%20-%20EU%20Implements%20Strengthened%20Iran%20Sanctions.pdf>.

¹⁶³ "Council Decision 2012/635/CFSP of 15 October 2012 amending Decision 2010/413/CFSP concerning restrictive measures against Iran," *Official Journal of the European Union*, October 16, 2012. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:282:0058:0069:EN:PDF>.

¹⁶⁴ "COUNCIL IMPLEMENTING REGULATION (EU) No 945/2012 of 15 October 2012 implementing Regulation (EU) No 267/2012 concerning restrictive measures against Iran," *Official Journal of the European Union*, October 16, 2012. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:282:0016:0022:EN:PDF>.

The Role of Other Importers

As has been pointed out earlier, much depends on the policies of other importing states. For sanctions to fully succeed, however, other key importers and trading partners - the nations shown in **Figure V.10** and **Figure V.11** - must agree to major reductions in imports and actually make these reductions over time.

It is far too early to determine how well such efforts to broaden reductions in imports from Iran will succeed, but key exporters like Saudi Arabia have increased production to help make up for the loss of Iranian exports, and key nations like China, India, and Japan have already reached out to Saudi Arabia and other Arab exporters to help reduce their dependence on Iran. China, Iran's largest export partner by volume, has reduced its purchases recently, importing 454,000 barrels per day in July 2012, compared to 522,000 barrels per day in May 2012.¹⁶⁵ However these first quarter cuts was mostly due to contract negotiations and not, it seems, because of pressure from the West.¹⁶⁶ It still remains to be seen if China will reduce its purchases of Iranian oil in light of the fact that they recently received an exemption from US sanctions.

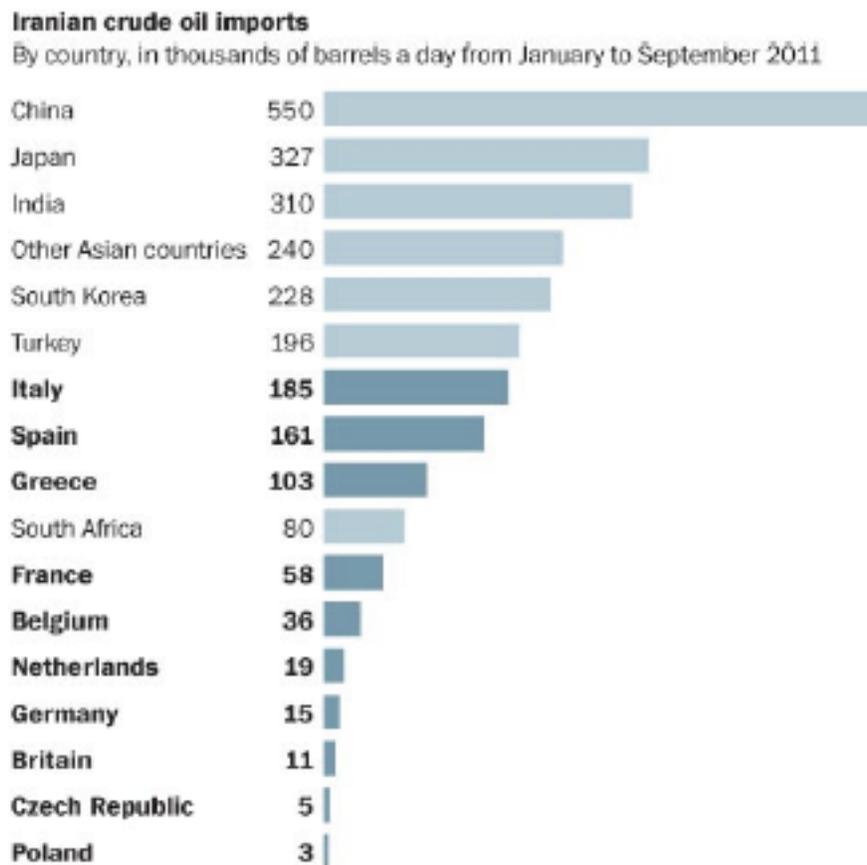
Nevertheless, the general trend has been downward as these countries reduce their Iranian oil imports, despite the month-to-month spikes or drops in Chinese, Japanese, and Indian importations of Iranian crude oil. Some countries have said that they will not, either because of the difficulty of finding additional suppliers or due to other pressures, be able to completely remove Iran as an oil source.

¹⁶⁵ Judy Hua and Chen Aizhu, "China's July oil imports from Iran fall 28 percent on month," *Reuters*, August 21, 2012. <http://www.reuters.com/article/2012/08/21/us-china-oil-iran-idUSBRE87K0LK20120821>.

¹⁶⁶ "UPDATE 3-China, India slash oil imports from Iran in July," *Reuters*, August 21, 2012. <http://www.reuters.com/article/2012/08/21/china-oil-iran-idUSL4E8JL2DI20120821>.

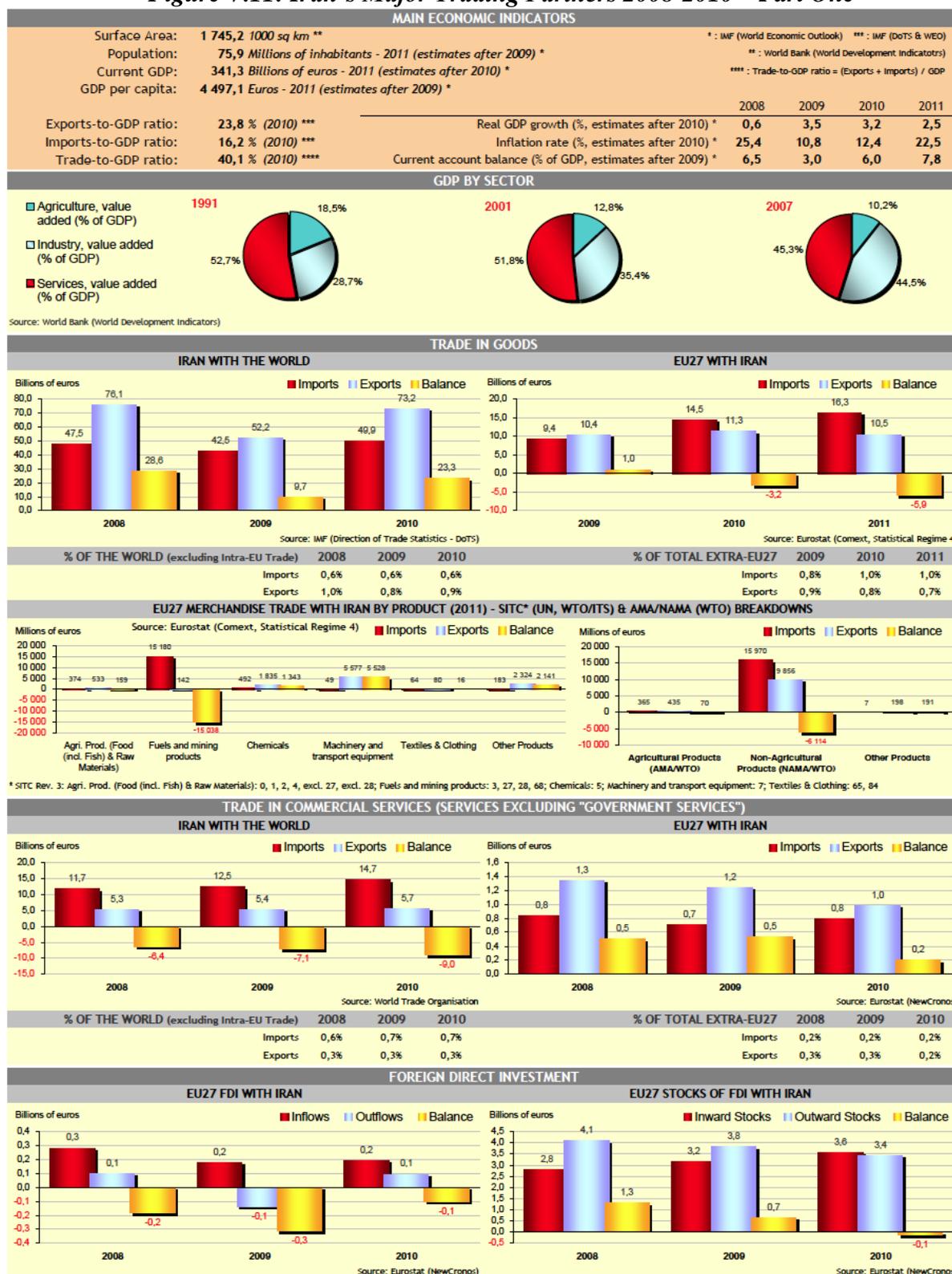
Figure V.10: Major Importers of Iranian Crude Oil in January – September 2011

(Iran exported some 2.2 million barrels a day in 2011)



Source: International Energy Agency. The Washington Post. Published on January 13, 2012, 7:51 p.m.

Figure V.11: Iran's Major Trading Partners 2008-2010 – Part One



Source: "Iran-EU Bilateral Trade and Trade with the World," DG Trade Statistics, March 21, 2012.
http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113392.pdf.

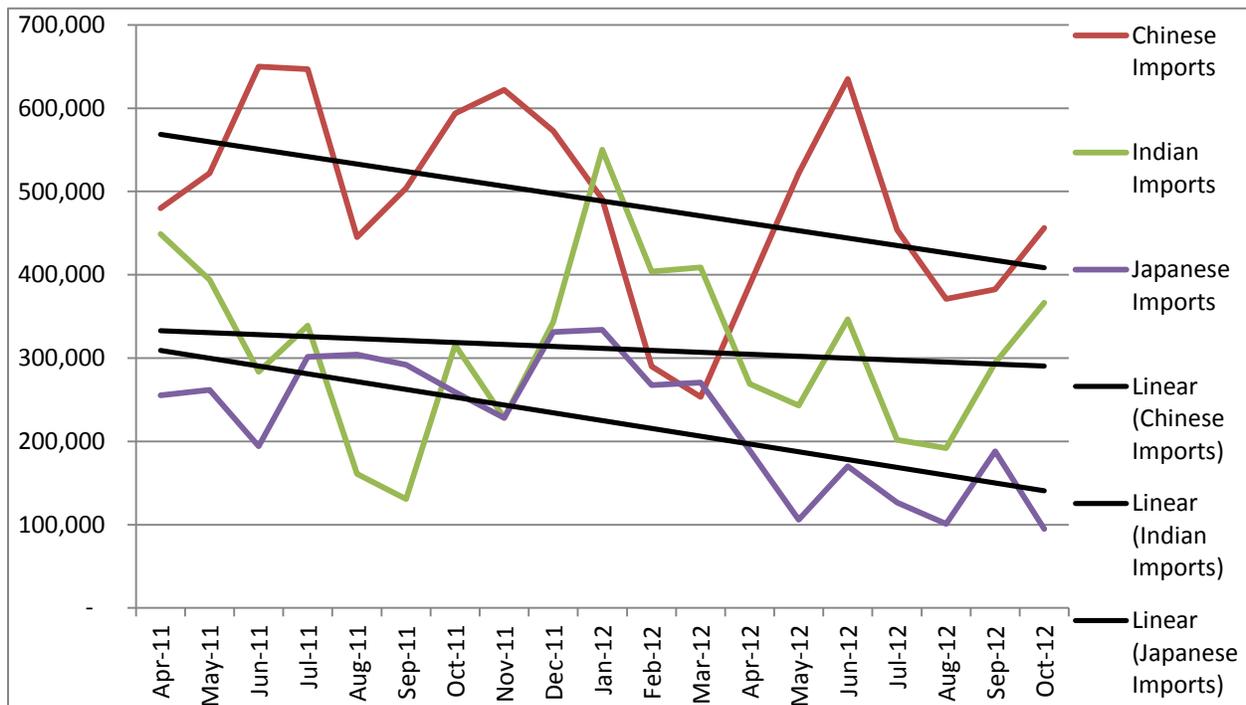
Figure V.11: Iran's Major Trading Partners 2010 – Part Two

The Major Imports Partners				The Major Export Partners				The Major Trade Partners			
Rk	Partners	Mio euro	%	Rk	Partners	Mio euro	%	Rk	Partners	Mio euro	%
	World (all countries)	49 902,3	100,0%		World (all countries)	73 185,7	100,0%		World (all countries)	123 087,9	100,0%
1	United Arab Emirates	16 949,1	34,0%	1	EU27	13 028,8	17,8%	1	EU27	23 767,5	19,3%
2	EU27	10 738,6	21,5%	2	China	12 527,1	17,1%	2	United Arab Emirates	17 606,8	14,3%
3	China	4 336,9	8,7%	3	Japan	7 640,7	10,4%	3	China	16 864,0	13,7%
4	Turkey	2 875,8	5,8%	4	India	7 612,2	10,4%	4	India	8 946,6	7,3%
5	South Korea	2 788,7	5,6%	5	Turkey	5 264,7	7,2%	5	Japan	8 810,9	7,2%
6	Switzerland	2 698,0	5,4%	6	South Korea	4 770,0	6,5%	6	Turkey	8 140,5	6,6%
7	India	1 334,4	2,7%	7	South Africa	2 618,6	3,6%	7	South Korea	7 558,7	6,1%
8	Japan	1 170,2	2,3%	8	Singapore	1 534,4	2,1%	8	Switzerland	2 727,4	2,2%
9	Singapore	1 070,8	2,1%	9	Pakistan	859,5	1,2%	9	South Africa	2 679,0	2,2%
10	Russia	868,4	1,7%	10	Syria	742,1	1,0%	10	Singapore	2 605,2	2,1%
11	Brazil	456,2	0,9%	11	Sri Lanka	695,4	1,0%	11	Pakistan	1 163,7	0,9%
12	Malaysia	421,0	0,8%	12	United Arab Emirates	657,7	0,9%	12	Russia	1 053,7	0,9%
13	Ukraine	355,0	0,7%	13	Saudi Arabia	551,1	0,8%	13	Syria	764,4	0,6%
14	Pakistan	304,2	0,6%	14	Indonesia	408,3	0,6%	14	Sri Lanka	732,7	0,6%
15	Oman	238,4	0,5%	15	Malaysia	274,1	0,4%	15	Saudi Arabia	729,4	0,6%
16	Thailand	187,5	0,4%	16	Hong Kong	263,0	0,4%	16	Malaysia	695,0	0,6%
17	Saudi Arabia	178,3	0,4%	17	Thailand	196,4	0,3%	17	Indonesia	581,9	0,5%
18	Indonesia	173,6	0,3%	18	Russia	185,3	0,3%	18	Brazil	550,0	0,4%
19	Turkmenistan	132,4	0,3%	19	Turkmenistan	161,1	0,2%	19	Ukraine	389,5	0,3%
20	United States	131,9	0,3%	20	Armenia	137,3	0,2%	20	Thailand	383,9	0,3%
21	Philippines	115,0	0,2%	21	Australia	129,2	0,2%	21	Hong Kong	357,0	0,3%
22	Canada	110,8	0,2%	22	Oman	104,5	0,1%	22	Oman	342,9	0,3%
23	Kazakhstan	107,1	0,2%	23	Morocco	101,4	0,1%	23	Turkmenistan	293,5	0,2%
24	Azerbaijan	96,5	0,2%	24	Tajikistan	97,2	0,1%	24	Australia	204,6	0,2%
25	Hong Kong	94,0	0,2%	25	Brazil	93,7	0,1%	25	United States	198,7	0,2%
26	Argentina	86,6	0,2%	26	Lebanon	86,7	0,1%	26	Philippines	192,0	0,2%
27	Kuwait	85,6	0,2%	27	Azerbaijan	80,9	0,1%	27	Azerbaijan	177,4	0,1%
28	Uzbekistan	78,9	0,2%	28	Philippines	77,1	0,1%	28	Armenia	169,9	0,1%
29	Australia	75,3	0,2%	29	Vietnam	69,0	0,1%	29	Lebanon	142,8	0,1%
30	South Africa	60,3	0,1%	30	United States	66,8	0,1%	30	Canada	138,6	0,1%
31	Lebanon	56,1	0,1%	31	Qatar	64,2	0,1%	31	Tajikistan	131,0	0,1%
32	New Zealand	55,4	0,1%	32	Kenya	44,5	0,1%	32	Morocco	128,1	0,1%
33	Tunisia	54,6	0,1%	33	Sudan	39,8	0,1%	33	Kazakhstan	126,6	0,1%
34	Bangladesh	54,1	0,1%	34	Georgia	38,0	0,1%	34	Argentina	102,9	0,1%
35	Bahrain	45,1	0,1%	35	Ukraine	34,5	0,0%	35	Qatar	99,4	0,1%
36	Egypt	44,5	0,1%	36	Bangladesh	33,7	0,0%	36	Bangladesh	87,8	0,1%
37	Belarus	37,8	0,1%	37	Egypt	29,8	0,0%	37	Kuwait	85,6	0,1%
38	Sri Lanka	37,2	0,1%	38	Switzerland	29,4	0,0%	38	Uzbekistan	78,9	0,1%
39	Qatar	35,3	0,1%	39	Canada	27,8	0,0%	39	Vietnam	78,1	0,1%
40	Tajikistan	33,8	0,1%	40	Algeria	27,2	0,0%	40	Egypt	74,3	0,1%
41	Armenia	32,6	0,1%	41	Kazakhstan	19,5	0,0%	41	Tunisia	65,5	0,1%
42	Iraq	31,6	0,1%	42	Norway	17,3	0,0%	42	New Zealand	60,7	0,0%
43	Paraguay	29,9	0,1%	43	Argentina	16,3	0,0%	43	Georgia	48,6	0,0%
44	Morocco	26,7	0,1%	44	Tunisia	10,9	0,0%	44	Kenya	47,4	0,0%
45	Syria	22,4	0,0%	45	Venezuela	10,8	0,0%	45	Bahrain	45,1	0,0%
46	Norway	15,8	0,0%	46	Tanzania	10,5	0,0%	46	Belarus	43,1	0,0%
47	Guatemala	15,4	0,0%	47	Ivory Coast	7,7	0,0%	47	Sudan	39,8	0,0%
48	Georgia	10,6	0,0%	48	Jordan	6,5	0,0%	48	Norway	33,0	0,0%
49	Afghanistan	9,7	0,0%	49	Kyrgyz Republic	6,1	0,0%	49	Iraq	31,6	0,0%
50	Ecuador	9,7	0,0%	50	New Zealand	5,4	0,0%	50	Paraguay	29,9	0,0%

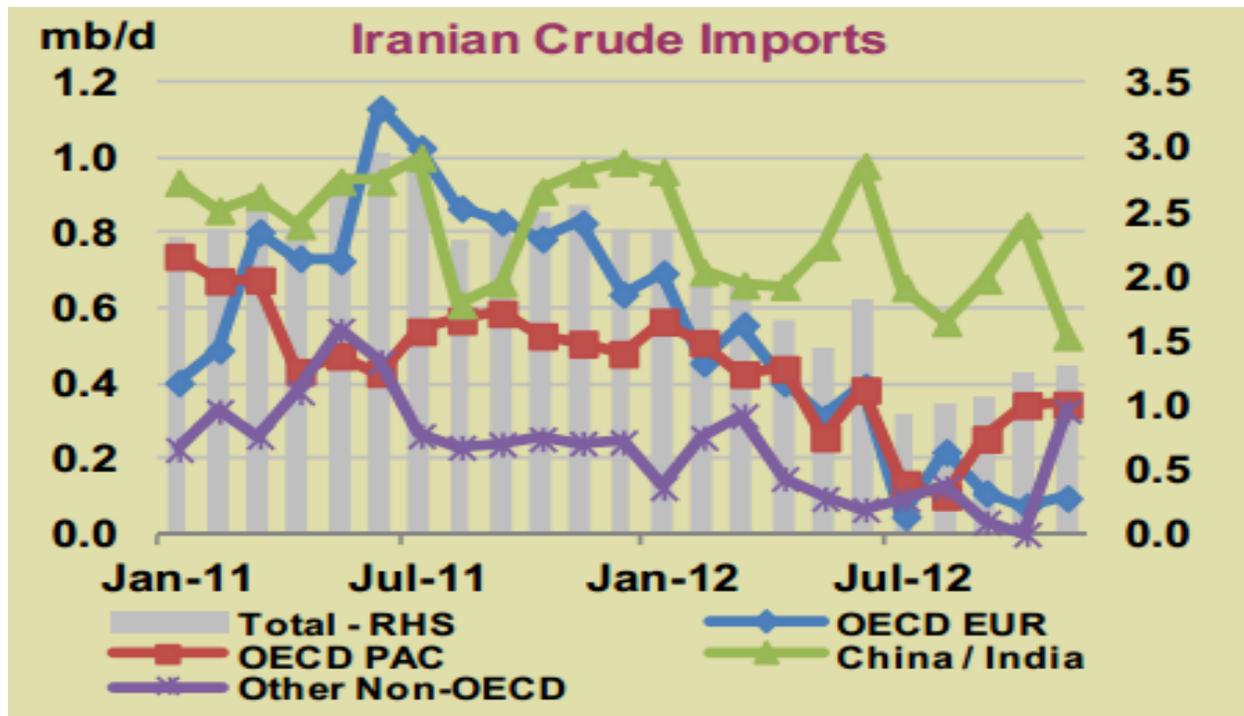
Source: "Iran-EU Bilateral Trade and Trade with the World," DG Trade Statistics, March 21, 2012.

http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113392.pdf.

Figure V.12: Chinese, Japanese, and Indian Iranian Oil Imports

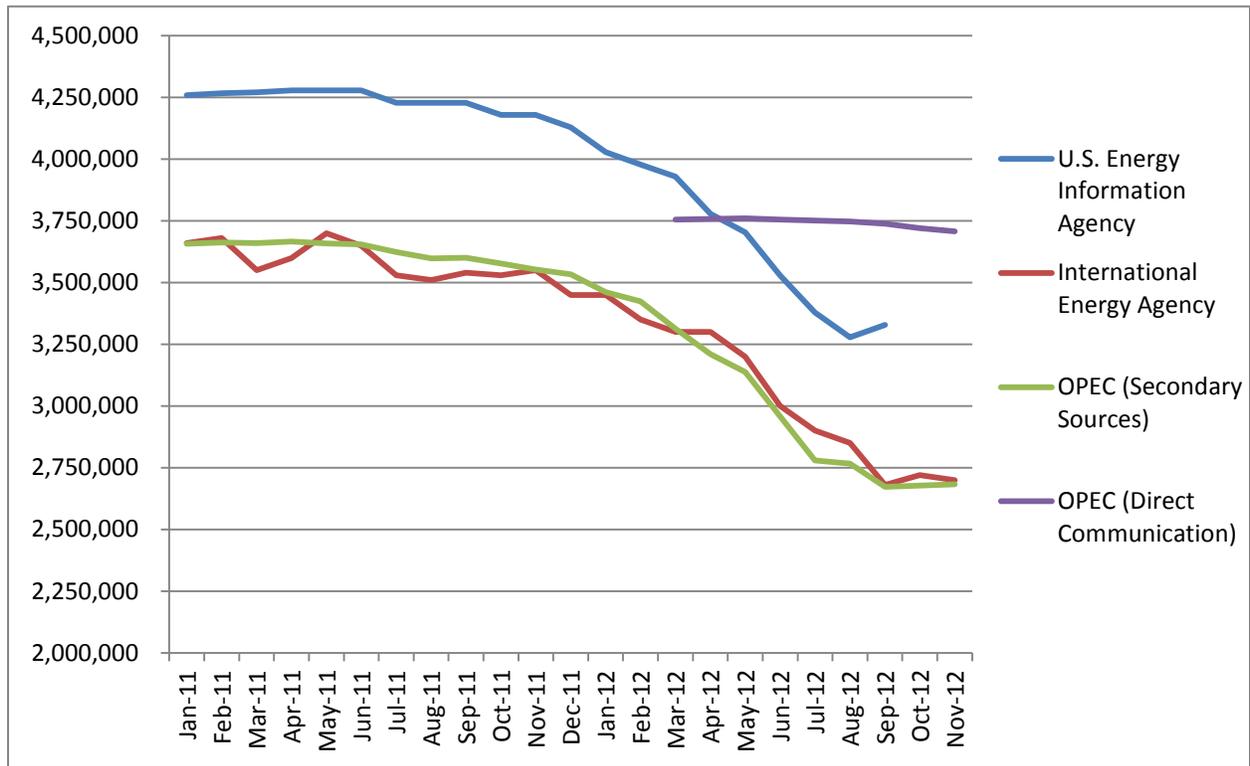


Source: Reuters, Bloomberg, Japanese Ministry of Economy, Trade and Industry

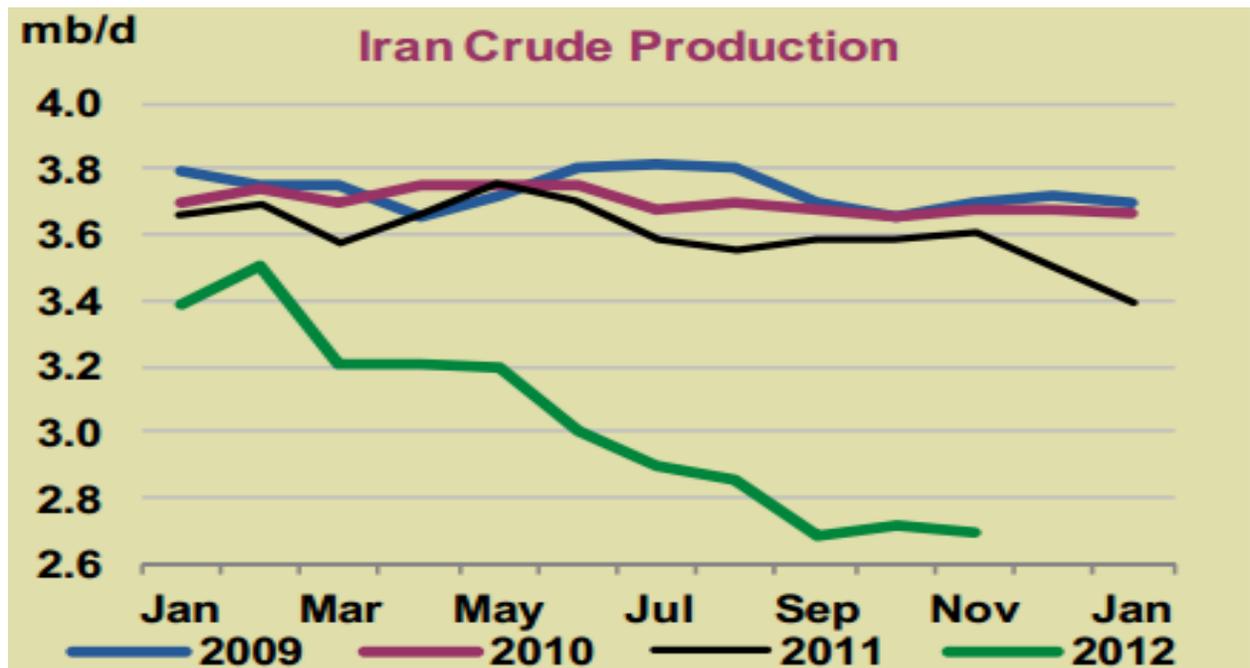


Source: International Energy Agency, Oil Market Report, December 12, 2012.
<http://omrpublic.iaea.org/currentissues/full.pdf>

Figure V.13: Iranian Oil Production



Source: OPEC Monthly Oil Report, International Energy Agency Oil Monthly Report, US Energy Information Agency Monthly Oil Report



Source: International Energy Agency, Oil Market Report, December 12, 2012.
<http://omrpublic.iea.org/currentissues/full.pdf>

Japan and South Korea

Japan and South Korea are two countries for which sanctions may present problems due to their past dependence on Iranian oil imports. Both Japan and South Korea have acceded to US-led unilateral sanctions, these decisions only came after strong encouragement from the United States. Both countries have issued statements supporting sanctions and upholding the US policy of preventing Iran from obtaining a nuclear weapon.

Unexpectedly strong moves by Tokyo and Seoul reinforced the growing international consensus against the Iranian position. Secretary of State Clinton stated that, “The United States welcomes the announcement by Japan of new sanctions on Iran [...] [They] mark a significant step forward in the international community's efforts to combat proliferation and prevent Iran's development of nuclear weapons.”¹⁶⁷

Both nations had substantial commercial and energy ties to Tehran and were hesitant to endanger their economic and energy interests as Japan and South Korea both imported roughly 10 percent of their crude oil from Iran. Tehran warned in October 2012, that full sanctions implementation by Iran's few remaining energy partners may force the country to stop exporting oil altogether, “If you continue to add to the sanctions we (will) cut our oil exports to the world... We are hopeful that this doesn't happen, because citizens will suffer. We don't want to see European and U.S. citizens suffer.”¹⁶⁸

However, there is no indication that Iran is prepared to cease exporting oil as energy exports make up 70% of Iranian government revenue.¹⁶⁹ The head of the Iranian National Security and Foreign Policy Commission warned that, “Joining the sanctions that are beyond the (UN Security Council) resolutions and are imposed under the US pressure will no doubt be a negative point for those states which comply with these illegal decisions [...] Certain countries' compliance with the illegal decisions of the arrogant powers will affect the way the Islamic Republic of Iran interacts with them.”¹⁷⁰

For Japan, imposing the new sanctions meant that Inpex Corp, a partially state-owned oil developer, abandoned a project to develop the Azadegan field in which they'd already invested \$150 million.¹⁷¹ The Koreans endangered billions of dollars' worth of shipbuilding and construction contracts with Iran.¹⁷² US officials recognized the large economic sacrifices they were asking of their Asian allies and expected a less robust commitment.

¹⁶⁷ UPI, “Japan imposes additional Iran sanctions,” September 3, 2010.

http://www.upi.com/Top_News/US/2010/09/03/Japan-imposes-additional-Iran-sanctions/UPI-87741283534034/

¹⁶⁸ Daniel Fineren and Amena Bakr, “Iran says may stop oil sales if sanctions tighten,” Reuters, October 23, 2012.

<http://www.reuters.com/article/2012/10/23/us-iran-oil-idUSBRE89M0EP20121023>

¹⁶⁹ Kenneth Katzman, “Iranian Sanctions,” Congressional Research Service, December 7, 2012, pg 2.

¹⁷⁰ Fars News Agency, “MP cautions S. Korea, Japan against implementing anti-Iran sanctions, September 8, 2011.

<http://english.farsnews.com/newstext.php?nn=8906161619>

¹⁷¹ UPI, “Iran's drive to halt oil decline falters,” August 24, 2011. http://www.upi.com/Business_News/Energy-Resources/2011/08/24/Irans-drive-to-halt-oil-decline-falters/UPI-27401314208450/

¹⁷² Reuters, “South Korea Imposes New Wave of Iran Sanctions”, Jack Kim, September 8, 2010.

<http://uk.reuters.com/article/2010/09/08/korea-iran-idUKSGE68707X20100908>

Despite the potential economic loss of Iran as an energy and industrial partner, South Korea and Japan have both instituted sanctions similar to those imposed by the EU that restrict trade, financing, banking, and participation in Iran's nuclear program. Both countries have also reduced their oil purchases from Iran and have announced their intentions to reduce their 2013 Iranian oil purchases by 15% in Japan and 20% in South Korea.

But Japan and South Korea will not stop importing Iranian oil at any point in the near future and will instead continue their gradual drawdown of purchases from Iran as to allow them time to find other sources. In the meantime, Japan has passed a bill that establishes a state-backed insurance mechanism that provides \$7.6 billion of sovereign insurance guarantees for tankers delivering Iranian oil, sidestepping EU and US sanctions.¹⁷³ South Korea has not established a similar mechanism but has instead allowed Iran to ship oil on Iranian tankers under Iranian state insurance.¹⁷⁴

Senior US counter-proliferation officials successfully lobbied Seoul at the end of 2011 to implement new restrictions on the Iranian nuclear industry that resulted in blacklisting over 100 new firms and individuals.¹⁷⁵ Seoul, however, made clear their intent to continue importing crude oil and petrochemicals from Iran. The Iranian Central Bank maintains accounts in Seoul that it uses to process oil payments but sanctions in FY 2013 NDAA that will take effect in February 2013, will limit Iran's ability to repatriate its oil revenues. The statute states that funds used to pay for Iranian oil can only remain in a bank in the payee country and can only be used for non-sanctioned, bilateral trade between that country and Iran.¹⁷⁶

South Korea has taken steps to reduce its economic relationship with Iran. In June 2012, the Korea International Trade Association (KITA) imposed limits on Korean exports on steel, consumer goods, and electronics to Iran. The actual limit on goods was not specified, but KITA stated that new export deals with Iran would only be approved if their repayment date was less than 180 days.¹⁷⁷

As of September 2012, Japan and South Korea remained cautious and have not yet committed themselves to anything approaching a total end to Iranian oil imports. While South Korea's purchases of Iranian oil ceased in July and August 2012, it was due to the loss of insurance coverage for oil tankers rather than governmental policy and previously-purchased oil that was in transit continued to its destinations, meaning that some oil did reach the country in July. The loss of insurance prevented South Korea from importing Iranian oil for two months, but the use of Iranian oil tankers that are insured in Iran have continued to allow the country to resume imports. In September 2012 South Korea imported some 6 million barrels in, roughly a drop of 940,000

¹⁷³ Reuters, "FACTBOX-Iran's crude oil buyers in Asia, Europe," December 6, 2012. <http://in.reuters.com/article/2012/12/06/iran-oil-customers-idINL4N09G1R620121206>

¹⁷⁴ Reuters, "S.Korea to resume Iran oil imports from Sept -econ min sources," August 20, 2012. <http://www.reuters.com/article/2012/08/20/oil-korea-iran-idUSL4E8JH29J20120820>

¹⁷⁵ CNN, "South Korea expands Iran sanctions," December 16, 2011. <http://www.cnn.com/2011/12/16/world/asia/south-korea-iran-sanctions/index.html>

¹⁷⁶ Osamu Tsukimori and Nidhi Verma, "Fresh U.S. sanctions to trap more Iran oil revenue," Reuters, December 19, 2012. <http://www.reuters.com/article/2012/12/19/iran-sanctions-payments-idUSL4N09T3CV20121219>

¹⁷⁷ http://articles.chicagotribune.com/2012-06-14/news/sns-rt-iran-koreaexports-urgent13e8he3h0-20120613_1_iranian-oil-exports-iranian-crude

barrels from a year before.¹⁷⁸ However, some estimates are skewed by the loss of insurance coverage for tankers and the subsequent elimination of South Korean and Japanese oil purchases and the arrival of previously purchased oil in transit.

Despite the inability of Seoul to completely end its oil relationship with Iran, the country has greatly reduced its import of Iranian oil in the first ten months of 2012 to 45.55 million barrels, down from 74.23 million barrels in the same time period in 2011, good for a 28.6% decrease.¹⁷⁹ This drop has allowed the US to grant South Korea a second 180 day waiver on sanctions related to Iran's oil sector on December 7, 2012.

On December 10, 2012, Seoul announced that it would reduce purchases of Iranian oil by 20% in the first six months of next year. Using 2012 numbers as a baseline, this means South Korea will reduce their import to 147,000 bpd, however the government has not yet released official import numbers.¹⁸⁰ South Korea imported roughly 146,000 bpd of Iranian crude in the first 10 months of 2012, but this includes lower than normal deliveries in July and September and a halt in August due to the loss of insurance coverage. This reduction is aimed at winning a third US sanctions waiver in 2013.

Japan, like South Korea, has reduced its import of Iranian oil since the imposition of sanctions in the summer of 2012 and was granted two sanctions waivers in March and September 2012. Japan achieved these reductions despite the shuttering of 48 of 50 nuclear power plants in the aftermath of the earthquake and tsunami of March 11, 2011, and greatly increasing its reliance on fossil fuels for power generation. Secretary Clinton commended Japan saying,

“Japan’s significant reductions in crude oil purchases is also especially noteworthy considering the extraordinary energy and other challenges it has faced over the past year. We commend these countries for their actions and urge other nations that import oil from Iran to follow their example.”¹⁸¹

Japan has historically imported roughly 10% of its oil from Iran, but has since largely switched to importing greater amounts of Saudi crude to make up the reduction in Iranian imports. Japan has reduced its imports of Iranian oil by more than 25% each quarter, except for a 6.8% increase in June 2012 and completely halted shipments in July 2012, although some oil purchased in the previous month arrived in Japan.¹⁸²

On December 19, 2012, the Chairman of JX Nippon Oil & Energy Corp and Japan’s oil industry group the Petroleum Association of Japan, Yasushi Kimura, stated that Japan’s imports of Iranian oil in 2013 will be capped at 160,000 bpd in 2013 and may be cut further.¹⁸³ Tokyo imported an average of 190,000 bpd of Iranian oil in the first ten months of 2012, down 41.3%

¹⁷⁸ <http://blogs.platts.com/2012/09/14/korea-margins/>

¹⁷⁹ Margaret McQuaile, “Iran’s oil exports suffer as US sanctions bite,” Platts, December 6, 2012. <http://www.platts.com/newsfeature/2012/iran/index>

¹⁸⁰ Meeyoung Cho, “Exclusive - South Korea to cut Iran oil imports 20 percent year-on-year for 6 months: sources,” Reuters, December 10, 2012. <http://uk.reuters.com/article/2012/12/10/uk-oil-korea-iran-idUKBRE8B908E20121210>

¹⁸¹ Hillary Clinton, “Statement on Significant Reductions of Iranian Crude Oil Purchases,” Department of State, March 20, 2012. <http://www.state.gov/secretary/rm/2012/03/186086.htm>

¹⁸² Risa Maeda and Timothy Gardner, “U.S. renews waivers of Iran sanctions for Japan, EU nations,” Reuters, September 14, 2012. <http://www.reuters.com/article/2012/09/14/us-usa-iran-sanctions-idUSBRE88D1KH20120914>

¹⁸³ Osamu Tsukimori, “UPDATE 2-Japan's imports of Iranian oil may fall 15 pct in 2013,” Reuters, December 19, 2012. <http://www.reuters.com/article/2012/12/19/japan-jx-iran-idUSL4N09T2RE20121219>

year-on-year.¹⁸⁴

India

India has traditionally had close ties to Iran and been unwilling to impose stringent sanctions. Historically, India has imported roughly 12 million barrels of Iranian crude oil every month that accounted for 10% of all Indian oil imports, making Iran their largest supplier after Saudi Arabia.¹⁸⁵ As Iran's image throughout the Arab world has foundered, however, and international pressure on the regime has increased, India has practiced a more assertive foreign policy with Tehran. Leaked diplomatic cables have revealed India's growing interest in the Iranian sanctions regime and increasing cooperation with the US and EU. Former foreign secretary Nirupama Rao had asked then US ambassador Tim Roemer in February 2010, "in the future the GOI be accorded the opportunity to take part in pre-sanction consultations."¹⁸⁶

India has cut its imports enough to garner two sanctions waivers by the US. In May 2012, junior oil Minister R.P.N. Singh said that India would reduce its purchase of Iranian oil by 11% following pressure from the US.¹⁸⁷ However, India imported some 344,000 barrels per day from January-July 2012, down from roughly 352,000 barrels per day in the same period a year before.¹⁸⁸ Like Japan, the Indian government has offered state-backed insurance to shipping companies transporting Iranian oil to India and has allowed.¹⁸⁹

But India has shown less enthusiasm for reducing its Iranian oil imports than other countries. In October, Indian Oil Minister S Jaipal Reddy stated at the Indian Petroctech 2012 Conference that, "We are neither trying to reduce nor increase imports from Iran... For India, energy security is a truly central issue. India is likely to emerge as one of the top 3rd or 4th importers in the world, of all energy forms - oil, coal, gas and uranium."¹⁹⁰

Some experts believe, however, that the fact New Delhi stepped away from Tehran had more to do with managing important Indian relationships with the Arab world. P.R. Kumaraswamy, head of West Asian studies at New Delhi's Jawaharlal Nehru University, observed: "When it comes to Iran, India can ignore pressure from the U.S. and noises from Israel, but it cannot ignore

¹⁸⁴ Jacob Adelman and Yuji Okada, "Japan to Extend Cuts in Iran Oil Imports in 2013, JX Chief Says," Bloomberg, December 19, 2012. <http://www.bloomberg.com/news/2012-12-19/japan-to-extend-cuts-in-iran-oil-imports-in-2013-jx-chief-says.html>

¹⁸⁵ The Associated Press, "Report: Iran threatens to cut oil supply to India by August if \$5 billion payment not made," July 18, 2011. <http://www.canadianbusiness.com/article/34462--report-iran-threatens-to-cut-oil-supply-to-india-by-august-if-5-billion-payments-not-made>

¹⁸⁶ The Times of India, "India asked US for inclusion in pre-sanction talks on Iran," September 6, 2011. http://articles.timesofindia.indiatimes.com/2011-09-06/india/30118608_1_nuclear-issue-iranian-foreign-minister-iran-shares

¹⁸⁷ AFP, "India says it will cut Iran oil purchases by 11%," May 15, 2012. <http://www.google.com/hostednews/afp/article/ALeqM5g1j8NNYnz6QgGITSgftAP90HGtpg?docId=CNG.0502e982bb2ca8c0f66d68e11699c8e4.161>

¹⁸⁸ <http://in.reuters.com/article/2012/09/13/iran-oil-customers-idINL6E8I57AD20120913>

¹⁸⁹ <http://www.bloomberg.com/news/2012-08-01/iran-oil-shipping-to-resume-as-insurers-step-in-corporate-india.html>

¹⁹⁰ <http://economictimes.indiatimes.com/news/news-by-industry/energy/oil-gas/india-to-keep-iran-oil-shipments-at-current-levels/articleshow/16823977.cms>

concerns from the Arab countries [...] In a very subtle way, India is sending a message that its closeness with Iran will not affect relations with other Middle Eastern countries.”¹⁹¹ India’s ties to Iran have made the country hesitant to fully back US, EU, and UN sanctions. But India has been reducing its reliance on Iranian oil since 2008 and is becoming increasingly concerned over Iran’s nuclear program. However, this has not stopped India from continuing their economic relationship with Iran as well as finding financial avenues to facilitate trade.

However, India seems to be increasingly concerned about the danger of the Iranian nuclear program to Indian interests and has increasingly taken steps to implement further sanctions. In December 2010, the Reserve Bank of India made an unexpected decision to prohibit Indian companies from using the Asian Clearing Union (ACU) to pay Iran for oil imports. The ACU is a Tehran-based regional body that was established by the UN in the 1970s in order to more easily facilitate commerce among Asian nations. However, the ACU effectively allowed companies to facilitate payments to Iran that may have been illegal according to international sanctions.¹⁹² A key US Treasury official heralded the move as “a significant action” to support US sanctions and further isolate Iran from international financial institutions.¹⁹³

But after India declared it would no longer use the ACU to process payments to Iran, the two countries agreed on an Iranian bank, Europaisch-Iranische Handelsbank (EIH) to process the payments. When EU sanctions listed EIH, India and Iran agreed to use Turkey’s Halkbank as an alternative, which then withdrew from the agreement after sanctions under Section 1245 of the FY2012 NDAA were instituted. India then pressured Iran into accepting 45% of the oil payment in non-convertible rupees.¹⁹⁴ These difficulties and forced Iranian concessions have increased tensions between the two countries. This shows that despite US pressure, it will be difficult for India to completely end commerce with Iran owing to India’s need for energy and markets.

India’s current system of paying Iran may come under threat after February 6th, when a provision in the FY 2013 NDAA enters into force and prevents funds used for paying for Iranian oil from being transferred to Iran unless they are used to purchase non-sanctioned items like food or medicine.

Like South Korea and Japan, India has both offered state-backed insurance to Indian oil tankers transporting Iranian oil and has allowed Iran to ship oil on Iranian tankers covered by Iranian insurance. Sabyasachi Hajara, chairman of Shipping Corp. of India said that this decision was based off Indian needs, “As far as India is concerned, we are bothered about our sovereign requirements...We took a pragmatic view.”¹⁹⁵ Shipping Corp. has also ended its joint shipping venture with the Islamic Republic of Iran Shipping Lines. Insurers such as United India

¹⁹¹ Reuters, “India, Iran aim to resolve oil payments impasse,” Nidhi Verma, December 31, 2010. <http://in.reuters.com/article/2010/12/31/idINIndia-53860420101231>

¹⁹² Indian Express, “US welcomes India bid to restrict trade with Iran,” December 30, 2010. <http://www.indianexpress.com/news/us-welcomes-india-bid-to-restrict-trade-with/730980/>

¹⁹³ Indian Express, “US welcomes India bid to restrict trade with Iran,” December 30, 2010. <http://www.indianexpress.com/news/us-welcomes-india-bid-to-restrict-trade-with/730980/>

¹⁹⁴ Kenneth Katzman, *Iran Sanctions*, Congressional Research Service, December 7, 2012. Page 41.

¹⁹⁵ Pratish Narayanan and Karthikeyan Sundaram, “Iran Oil Shipping to Resume as Insurers Step In: Corporate India,” Bloomberg News, August 2, 2012. <http://www.bloomberg.com/news/2012-08-01/iran-oil-shipping-to-resume-as-insurers-step-in-corporate-india.html>

Insurance Co. and General Insurance Corp. of India are offering lower cover for shipping due to sanctions blocking reinsurance.¹⁹⁶

On January 16, 2013, a report in the Wall Street Journal stated India bought 12% less Iranian crude between April and September 2012 compared to 2011.¹⁹⁷ The same report indicated that India plans to cut its imports of Iranian oil by as much as 17% in the financial year that ends on March 31, 2013 and that India would aim to cut Iranian imports by 15% every year.¹⁹⁸

China and Russia

Russia and China's positions regarding Iranian sanctions have been an ongoing concern to both the United States and Iran. China is Iran's largest economic and energy partner, and their participation in a truly demanding sanctions regime would put severe pressure on Iran - a situation the Iranians have long sought to avoid. Russia has earned money from low-level trade, arms sales, and large industrial projects, including completing the Bushehr nuclear reactor. So far, Russia and China have acquiesced to numerous UN sanctions, but have not gone so far as to implement any unilateral sanctions of their own. The formal position of both Russia and China is that they will impose only those sanctions required by applicable UN Security Council resolutions but not impose any sanctions beyond those specifically mandated.¹⁹⁹ However, China has largely abided by US and EU sanctions, lowering its imports of Iranian oil in 2012 enough to be granted two sanctions waivers.

The unique relationship between China, Russia, Iran, and the United States is explored in more detail in Chapter 10 in this series of reports, but it is important to understand that this is a primary field of strategic competition. Both China and Russia are large, ambitious actors whose ties to both Iran and the US are practical rather than ideological. Beijing and Moscow serve their own interests first and view the Iranian-US contest as more of an opportunity than anything else. Their actions and motivations, therefore, need to be viewed through that prism.

China

China plays a key role in determining the success of any sanctions regime on Iran. Whether the US is seeking compliance with existing sanctions or support for extending and deepening the constraints placed on Tehran, Chinese assistance will be vital to their success. Beijing's enormous demand for energy resources has led to long-standing commercial ties to the Islamic Republic. This has resulted in a Chinese attempt to find a balance that best serves their interests; shielding Iranian commerce to the maximum extent possible while avoiding inflaming their Western partners.

Scott Harold of RAND summarizes China's relationship with Iran as follows,

¹⁹⁶ Pratish Narayanan and Karthikeyan Sundaram, "Iran Oil Shipping to Resume as Insurers Step In: Corporate India," Bloomberg News, August 2, 2012. <http://www.bloomberg.com/news/2012-08-01/iran-oil-shipping-to-resume-as-insurers-step-in-corporate-india.html>

¹⁹⁷ Saurabh Chaturvehi, "India Plans to Cut Iran Oil Imports," The Wall Street Journal, January 16, 2013. <http://online.wsj.com/article/SB10001424127887323468604578245141511228574.html>

¹⁹⁸ Saurabh Chaturvehi, "India Plans to Cut Iran Oil Imports," The Wall Street Journal, January 16, 2013. <http://online.wsj.com/article/SB10001424127887323468604578245141511228574.html>

¹⁹⁹ Kenneth Katzman, "Iran Sanctions," CRS, June 22, 2011.

“Many countries are wary of Iran’s nuclear activities and assertive foreign policies but at the same time attracted to its abundant energy resources and economic potential. Yet few have been as bold as China in seizing these latter opportunities. As a result, China is in the paradoxical position of having more leverage than almost any other country vis-à-vis Iran, but also having the most to lose should more broadly punitive sanctions be imposed or war break out, a fact not lost on Chinese analysts and policymakers.

...China’s relations with Iran are primarily shaped by its economic interests, particularly its expanding energy needs. Additionally, China’s policy toward Iran is deeply influenced by the PRC’s perceived rivalry with the United States, based on the suspicions of many Chinese decision makers that the United States seeks to block China’s rise to great-power status, balanced against China’s dependence on maintaining a stable economic relationship with the United States.”²⁰⁰

Beijing is keenly aware of its role in the regional competition for influence and views Iran as “a useful hedge against a hostile United States.”²⁰¹ This has created a situation where the Chinese have supported limited UN sanctions, but denounced the additional measures pushed by the US, and EU. The US, in turn, has exempted Chinese imports of Iranian oil from sanctions twice in 2012. China’s Foreign Ministry spokesman, Qin Gang, observed in 2011 that, “China has noticed the unilateral sanctions announced by the US and others over Iran. The Security Council not long ago adopted the 1929 Resolution on the Iranian issue. China believes that the resolution should be earnestly, accurately and fully implemented, instead of being arbitrarily interpreted and expanded.”²⁰²

China’s primary concern is avoiding the possibility of expanded UN sanctions on Iran’s energy sector that would affect China’s imports. Iran supplies China with around 9% of its oil, down from nearly 15% in 2009.²⁰³ Beijing only agreed to support UNSC Resolution 1929 after the provision was altered to include key exemptions for continued foreign investment in Iran’s energy sector.²⁰⁴ In June 2012, Hong Lei a Chinese Foreign Ministry spokesman called Chinese imports of Iranian oil “reasonable and legitimate,” saying “China, to meet the needs of its economic development, imports crude oil from Iran through normal channels. Being open and transparent, this does not violate any UN Security Council resolution or undermine the interests of a third party or the international community. Thus it is completely legitimate and justified.”²⁰⁵

Despite statements in early 2012 that China would not reduce its purchases of Iranian oil below their 2011 level of 550,000 bpd, Beijing, like South Korea, Japan, and India, has reduced the amount of oil it purchases from Iran. In the first four months of 2012, China’s imports from Iran dropped 24% and in late November 2012 it was reported that China’s imports from Iran had

²⁰⁰ Scott Harold, “China and Iran: Economic, Political, and Military Relations.” 2012 RAND Corporation.

²⁰¹ John W. Garver, *China and Iran: Ancient Partners in a Post-Imperial World* (Seattle: University of Washington Press, 2007), 96.

²⁰² “Foreign Ministry Spokesperson Qin Gang’s Regular Press Conference on July 6, 2010,” Ministry of Foreign Affairs of the People’s Republic of China. <http://www.nyconsulate.prchina.org/eng/fyrth/t714568.htm>

²⁰³ The Jerusalem Post, “US and China looking to Middle East for more oil,” David Rosenberg, September 9, 2011. <http://www.jpost.com/MiddleEast/Article.aspx?id=237314>

²⁰⁴ Paul Richter, “West worries China may undermine Iran sanctions efforts,” Los Angeles Times, June 28, 2010. <http://articles.latimes.com/2010/jun/28/world/la-fg-iran-sanctions-20100628>

²⁰⁵ “Foreign Ministry Spokesperson Hong Lei’s Regular Press Conference” Ministry of Foreign Affairs of the People’s Republic of China, June 21, 2012. <http://www.fmprc.gov.cn/eng/xwfw/s2510/2511/t945296.htm>

dropped roughly 23% to 458,000 bpd.²⁰⁶ However, these sharp decreases can be attributed to a payment and tanker dispute with Iran during the first half of 2012 and not due to a new Chinese policy. While imports spiked back to roughly their levels before the dispute, imports dropped again in July 2012 after EU sanctions went into effect; this can be seen in more detail in **Figure V.12**.

Due to the loss of Iranian crude due to pressure and sanctions, China is currently looking towards Saudi Arabia and Iraq and potential sources to fill the reduction of Iranian imports. It is expected that China's imports from Saudi Arabia will increase roughly 11% in 2013, which would equal 120,000 more bpd.²⁰⁷ Beijing sees Saudi Arabia as a stable strategic partner that is able to provide steady supplies of oil to China's expanding economy.²⁰⁸ China is also increasing its purchases from Iraq - now OPEC's second largest producer behind Saudi Arabia - by 8.2%, 568,000 bpd, in 2013.²⁰⁹ Sinopec, China's state-run oil company is doubling its purchases of Iraqi oil to 270,000 bpd.²¹⁰

While other Chinese oil companies are reducing their purchases of Iranian oil, China's state-run Zhuhai Zhenrong Corp, will maintain its current level of imports of roughly 230,000 bpd in 2013, a volume that has barely changed over the past ten years.²¹¹ Zhuhai Zhenrong has already been sanctioned by the US since January 2012, when it was found to have brokered the delivery of \$500 million in gasoline to Iran and is barred from "receiving U.S. export licenses, U.S. Export Import Bank financing, and loans over \$10 million from U.S. financial institutions."²¹²

Despite China's hesitance to speak out against Iran's nascent nuclear program, it is not eager to confront Washington. Chinese investment in Iran totaled \$1 billion in 2011; in comparison Chinese firms have invested \$4.6 billion in energy assets in the United States, plus some \$460 billion in other investments. The total volume of Chinese trade with the US in 2011 was \$503.3 billion, while Chinese trade with Iran was worth an estimated \$45 Billion, according to Iranian sources.²¹³ China seems unlikely to put such investments and trade with the US at serious risk because of a relatively minor partner as Iran.

²⁰⁶ Wayne Ma and Colum Murphy, "China's Iran Oil Imports Drop Further," The Wall Street Journal, November 21, 2012. <http://online.wsj.com/article/SB10001424127887324712504578132491406940584.html>

²⁰⁷ Chen Aizhu and Judy Hua, "China seen raising Saudi oil imports 11 pct in 2013 –trade," Reuters, December 7, 2012. <http://www.reuters.com/article/2012/12/07/china-oil-saudi-idUSL4N09F1NL20121207>

²⁰⁸ Chen Aizhu and Judy Hua, "China seen raising Saudi oil imports 11 pct in 2013 –trade," Reuters, December 7, 2012. <http://www.reuters.com/article/2012/12/07/china-oil-saudi-idUSL4N09F1NL20121207>

²⁰⁹ Judy Hua and Florence Tan, "China's Sinopec to nearly double Iraq term crude volume in 2013," Reuters, December 3, 2012. http://www.cnbc.com/id/100269287/China039s_Sinopec_to_nearly_double_Iraq_term_crude_volume_in_2013

²¹⁰ Alex Lawler, "Iraq ups its selling game on path to oil's top tier," Reuters, December 21, 2012. <http://uk.reuters.com/article/2012/12/21/iraq-oil-idUKL5E8NKD2B20121221>

²¹¹ Chen Aizhu, "China's Zhenrong to maintain Iran oil imports for 2013," Reuters, December 21, 2012. <http://www.reuters.com/article/2012/12/21/zhenrong-iran-oil-idUSL4N09U33Z20121221>

²¹² Bureau of Economic and Business Affairs, "Three Companies Sanctioned Under the Amended Iran Sanctions Act," US Department of State, January 12, 2012. <http://www.state.gov/e/eb/rls/fs/2012/180645.htm>

²¹³ Payvand Iran News, "Iran and China to expand trade relations," April 1, 2012. <http://www.payvand.com/news/12/apr/1001.html>; US Census Bureau, "Trade in Goods with China," <http://www.census.gov/foreign-trade/balance/c5700.html>

Concern for China's relations with the United States has persuaded Beijing to turn down Iranian offers for cut-rate oil. An anonymous source in one Reuters report stated that, "The Iranians have made some offers, but we have turned them down...The economic benefits of filling some discounted Iranian oil into the national oil reserves would be too small a consideration for the state. The key concern for the Chinese government would be China-U.S. relations."²¹⁴

At the same time, China will probably seek to maintain some ties to Iran and may calculate that it can avoid conflict and flex its muscle without directly challenging broader American leadership in the Asia-Pacific.²¹⁵

Beijing has also found that it benefits from the fact that China is becoming steadily more important to Iran. As the Iranians have become more isolated from the international community, their financial relationship with China has accelerated and has become increasingly important. China went from trading roughly \$14 billion a year with Iran in 2006 to becoming their most significant trading partner in 2009, with bilateral transactions totaling \$21.2 billion.²¹⁶ Trade between the two countries has since increased to \$30-\$40 billion in 2012 and is estimated to increase to \$100 billion by 2016.²¹⁷

The two countries have been increasing their economic cooperation, and Iran has become a lucrative market for Chinese goods and services. A report in the *Wall Street Journal* in January 2013, detailed China's state-owned China Nonferrous Metal Mining Group signed a \$712 million contract with Tehran to help build a steel mill in Iran.²¹⁸ And according to a report by *The Economist*, China is investing in Iran's infrastructure; and attempting to further integrate the country into the regional market, China has even go so far as to invest \$1 billion for transportation improvements in Tehran.²¹⁹

During a goodwill tour in September 2012, the two countries signed further agreements to increase their bilateral trade and representatives of both countries talked of their desire for increased cooperation in energy, agriculture, and infrastructure projects.²²⁰ Wu Bangguo, China's chief legislator, said during this tour, "Under joint efforts, China and Iran have witnessed smooth development of bilateral friendly cooperation since the two countries established diplomatic ties over 40 years ago...China will continue to work with Iran to keep increasing mutual

²¹⁴ Chen Aizhu, "UPDATE 3-Sinopec turns down cut-price Iran crude – source," Reuters, June 12, 2012. <http://www.reuters.com/article/2012/06/12/iran-oil-sinopec-idUSL3E8HC39L20120612>

²¹⁵ "China-Iran Ties: Assessment and Implications for US Policy", Michael Mazza, AEI Iran Tracker, April 22, 2011. http://www.irantracker.org/analysis/michael-mazza-china-iran-ties-assessment-and-implications-us-policy-april-21-2011#_edn1.

²¹⁶ "China-Iran foreign relations", Ariel Farrar-Wellman, AEI Iran Tracker, July 20, 2010. <http://www.irantracker.org/foreign-relations/china-iran-foreign-relations>

²¹⁷ Scott Harold, "China and Iran: Economic, Political, and Military Relations, RAND, July 27, 2012. Pg. 10

²¹⁸ Chuin-Wei Yap, "China Signs Steel Deal in Iran," January 16, 2013. <http://online.wsj.com/article/SB10001424127887323468604578245062626996592.html>

²¹⁹ The Economist, "China and Iran, the latest invasion," August 18, 2012. <http://www.economist.com/node/21560614>

²²⁰ "China, Iran eye closer trade ties," Xinhua, September 11, 2012. http://news.xinhuanet.com/english/china/2012-09/11/c_131843152.htm

understanding and trust and expanding friendly exchanges and operation in a bid to lift bilateral ties to a higher level.”²²¹

At the same time, Iran is much more dependent on China than China is on Iran, creating an unbalanced relationship and forcing Iran to refrain from actions that will draw the ire of the Chinese government. Iran has strong incentives to continue to build its relationship with China, since China’s international reputation may be damaged by maintaining close relations with Tehran, Iran’s reputation cannot be seriously harmed by maintaining close relations to China. While the ethos of self-reliance has been central to Iranian strategy and rhetoric, there is very little downside to accepting Chinese largesse.²²²

While Chinese investment in the Iran continues, Chinese investment in Iran’s oil sector has slowly declined and has been a sore subject between Tehran and Beijing. China National Offshore Oil Corporation (CNOOC) recently pulled out of a \$16 billion deal to develop Iran’s North Pars natural gas field, Iran has frozen a \$4.7 billion contract with China National Petroleum Corporation to develop the Phase 11 of the South Pars field because of the failure to start work, and Sinopec is behind schedule in developing the Yadavaran oil field.²²³ According to sources, China backed out of the South Pars development plan due to onerous contract clauses and a tight schedule.²²⁴ Despite the reductions in Chinese investment into Iran’s oil sector, Chinese energy firms are still operating within the country, according to a recently released GAO report.²²⁵

China imported some 11% of its oil from Iran in 2011, but by early 2012 China had both serious concerns about the cost of continuing such imports in terms of US sanctions, and new incentives for turning to other suppliers in the Gulf.²²⁶ China has realized that it represented the “trader of last resort” for Iran and would have to turn to China for arms, investment, and imports. However, as China has gained the upper hand in the economic relationship, Iran’s behavior has begun to harden Chinese views towards its nuclear program. As further UN sanctions have been enacted, Beijing has reduced its arms exports to Iran drastically, and those arms that it does export are low-technology export versions of its current weapons systems. As arms flows to Iran have slowed to a trickle due to sanctions, this has increasing allowed China to take a harder stance in oil negotiations, resulting in lower imports and lower prices.

China has been reaching out to Saudi Arabia and other Southern Gulf states to secure new trade, arms, and energy deals to compensate it for any losses in dealing with Iran. China has

²²¹ “China’s top legislator starts visit to Iran for closer ties,” Xinhua, September 9, 2012. http://news.xinhuanet.com/english/china/2012-09/09/c_131838742.htm

²²² Michael Eisenstadt, “The Strategic Culture of the Islamic Republic of Iran,” MES Monographs No.1, August 2011.

²²³ Erica Downs, “China, Iran, and the Nexen Deal,” Policy Options, October 2012. <http://www.irpp.org/po/archive/oct12/downs.pdf>

²²⁴ Wang Xiacong, “China’s CNPC performs balancing act in Iran,” Market Watch, September 26, 2012. http://articles.marketwatch.com/2012-09-26/industries/34084845_1_cnpc-south-pars-project-south-azadegan

²²⁵ “Firms Reported to Have Sold Iran Refined Petroleum Products or Engaged in Commercial Activities in Iran’s Energy Sector,” Government Accountability Office, December 7, 2012. <http://www.gao.gov/assets/660/650645.pdf>

²²⁶ Bob Davis, Wayne Ma, and Jeremy Page, “China Is Expected to Resist Oil Shift,” The Wall Street Journal, January 10, 2012. <http://online.wsj.com/article/SB10001424052970203436904577150331368154616.html>

increasingly come to view Saudi Arabia as a more reliable energy partner than Iran, who can offer Beijing a less opaque bidding system and less contract conflicts. In January 2012, Chinese Premier Wen Jiabao visited Saudi Arabia, Qatar and the United Arab Emirates, on a six-day tour of key Sothern Gulf states. This was the first visit to Saudi Arabia by a Chinese Premier in two decades, and the first to Qatar and the United Arab Emirates.

China took this opportunity to strengthen its energy relationship with those countries by inking a number of business contracts and joint-venture proposals. Sinopec will work with Saudi Aramco on the construction of a new joint oil facility and signed an \$8.5 billion deal to build a new refinery in Yanbu, Saudi Arabia.²²⁷ Sinopec also signed a deal with Royal Dutch Shell and Qatar Petroleum International to build a new refinery in Taizhou.²²⁸

Over time, China's increasing access to non-Iranian crude is likely to coincide with a shrinking export market for Tehran, as sanctions grow tighter and China becomes less reliant on Iranian oil. This will put China in a much more commanding position and may result in Iran losing oil revenue by being forced to offer discounts similar to its current oil contracts with India. This is a situation that the US and its allies would like to encourage, and has some support among Chinese financial institutions who want to preserve access to their US counterparts.²²⁹

Nevertheless, China has left its position flexible. Chinese foreign ministry spokesperson Liu Weimin stated at a press conference on January 19, 2012, that China firmly opposed any Iranian or other effort to acquire nuclear weapons, but that, "Using sanctions, imposing pressure and threatening one another with force not only do not help solve the problem, but they would lead to further deterioration of the situation."²³⁰

Russia

Unlike China, South Korea, India, or Japan, Russia is a major energy exporter, and is far less dependent on US trade and economic relations. It also is more willing to openly confront or challenge the US both for foreign policy purposes and for domestic political reasons. As a result, the US and Iran still compete for Russian support on an issue by issue basis and much depends on the broader state of US and Russian relations.

Russia's relationship with Iran offers it the opportunity to consolidate and expand its energy network, export goods to a sizable market, as well as be able to support a counter-weight to US regional influence in the Middle East and Caspian Sea. However, policy planners in Moscow also value their growing trade relationship with Israel, the benefits of economic integration with the West, and their relations with the Arab states, and are apprehensive about the prospect of a nuclear-armed Iran. Iran's relationship with Russia allows Tehran to support Russia's goal of

²²⁷Wael Mahdi, "Sinopec, Aramco Sign Saudi Refinery Deal, Plan Plant in China," Bloomberg Businessweek, January 16, 2012. <http://www.businessweek.com/news/2012-01-16/sinopec-aramco-sign-saudi-refinery-deal-plant-in-china.html>

²²⁸ Afshin Molavi, "Tehran is Feeling the Squeeze as Beijing Warms up to Riyadh," The National, January 23, 2012. <http://www.thenational.ae/thenationalconversation/comment/tehran-is-feeling-the-squeeze-as-beijing-warms-up-to-riyadh>

²²⁹ Michael Wines, "Middle East Trip Suggests Change in Policy by China," New York Times, January 13, 2012

²³⁰ Voice of America, January 19, 2012, <http://blogs.voanews.com/breaking-news/2012/01/19/china-says-us-sanctions-on-iran-ineffective/>.

creating a counterbalance to US dominance and, until recently, as a source of arms and munitions. These realities have led to their unpredictable and inconsistent support of the Iranian sanction regime.²³¹

While Russia has cast its Security Council vote in favor of each of UN sanction resolutions, it has done so hesitantly and after extracting concessions.²³² Moscow's interest in diluting the sanction resolutions, however, should not be misunderstood as a strong power attempting to protect a client state. Instead, Russia has used these opportunities strategically in order to advance its own national interests. Crucial exemptions were secured in 2006 that allowed Russia to maintain key contracts with Iran and continue to develop the Bushehr nuclear reactor. After securing his concessions from the Security Council, Russian Foreign Minister Sergey Lavrov said that, "The resolution fully reflects economic interests of Russia and other partners of Iran."²³³

Similarly, Russian officials took a hard line against expanding sanctions in 2007 until disagreements over the Bushehr contract brought the two countries into conflict. In the face of soaring construction costs, the Iranians fell behind in their scheduled payments to Moscow.²³⁴ Russian technicians and engineers were called back home, fuel shipments were canceled, and the Russians began to make back-channel ultimatums involving sanctions.²³⁵

A senior White House official then commented that "we're not sure what mix of commercial and political motives are at play here, but clearly the Russians and Iranians are getting on each other's nerves."²³⁶ When the Russians cast their vote for expanded sanctions in March of 2007 they were predictably criticized by the Iranians as having given in to Western pressure. It appears clear, though, that their decision was instead meant to provide leverage in their commercial dispute with Iran. This type of strategic positioning has come to define the Russian approach to Iranian sanctions.

The Russian and Iranian commercial relationship have grown steadily during the last decade despite international sanctions. Iran has become a substantial market for Russian arms, technology, and agriculture - with annual exports exceeding \$3 billion by 2008 (See **Figure V.14**).²³⁷ A separate estimate (**Figure V.11**) indicates that Russian exports to Iran totaled \$3.2 billion in 2010 and imports were \$265.8 million.²³⁸ The two governments maintain an interest to expand economic ties to \$10 billion annually, but neither side has taken concrete steps to

²³¹ Mark N. Katz, "Russia and Iran," The Iran Primer, USIP, December, 2010.
<http://iranprimer.usip.org/resource/iran-and-russia>

²³² "The U.N. Resolutions", Jason Starr, The Iran Primer, USIP, December 2010.
<http://iranprimer.usip.org/resource/un-resolutions>

²³³ "Russian Official Hails Iran Sanctions," The Associated Press, December 26, 2006.

²³⁴ RIA Novosti, "Iran Hopes Russia Begins to Supply Fuel for Bushehr NPP in March," June 3, 2007.
http://article.wn.com/view/2007/03/06/Iran_hopes_Russia_begins_supplying_fuel_for_Bushehr_NPP_in_M/

²³⁵ The Toledo Blade, "Putin Pulls Plug and Deepens Rift with Iran," March 23, 2007.

²³⁶ The Toledo Blade, "Putin Pulls Plug and Deepens Rift with Iran," March 23, 2007

²³⁷ Mark N. Katz, "Russia and Iran," The Iran Primer, USIP, December, 2010.
<http://iranprimer.usip.org/resource/iran-and-russia>

²³⁸ http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113392.pdf

promote further trade. Further, there is no quantifiable energy trade between the two states and previous Russian contracts in Iran were cancelled due to sanctions and their desire to protect other Russian energy investments in the US.²³⁹ While Russia's future policies are unclear, Moscow's past acceptance of sanctions serves as a warning to Tehran that Russian support is far from assured and instead highly contingent upon their immediate priorities.

For Tehran, "relations with Russia reflect expediency - when Iran couldn't get technology or weaponry elsewhere, Russia became an option."²⁴⁰ Historically however, Russia and Iran have been competitors, marked with rivalry and occasional cooperation. There are no true economic interests between neither state, nor do either state want the other to increase their influence in their regions; the Levant for Iran and the Caucasus for Russia. It seems that both states tolerate each other and use each other when it is appropriate.

Iranian leaders recognize that fostering more reliable ties to Russia would effectively limit America's regional hegemony in the Middle East in addition to reducing the likelihood of a military attack by the US or Israel. The opportunism of their alliance, however, continues to make the Iranians uneasy.

Figure V.14: Russian Trade with Iran 1995-2008

Year	Exports	Imports
1995	\$249 Million	\$27 Million
2000	\$633 Million	\$57.6 Million
2005	\$1.9 Billion	\$125 Million
2008	\$3.3 Billion	\$401 Million

(Source: <http://iranprimer.usip.org/resource/iran-and-russia>)

A further cooling of Russian-Iranian relations took place in 2009, when President Obama sought a diplomatic "reset" and Moscow was confronted with opportunities to achieve major national security goals vis-à-vis the US. The Russians were intent on securing a "grand bargain" that would limit NATO expansion, end the development of the Phased Adaptive Approach Ballistic

²³⁹ "The Turkey, Russia, Iran Nexus: Economic and Energy Dimensions," CSIS, March 29, 2012.

²⁴⁰ "The Turkey, Russia, Iran Nexus: Economic and Energy Dimensions," CSIS, March 29, 2012.

Missile Defense in Eastern Europe, secure commitments of non-interference, and work toward nuclear parity via a new arms treaty.²⁴¹

The United States intentionally linked its approaches to Iran and Russia, seeking Russian support for sanctions and non-proliferation as a key part of its efforts to “reset” US and Russian relations.²⁴² Revelations about Iran’s secret uranium enrichment facility at Qom helped solidified the rift between Tehran and Moscow. In 2010, Russia voted in favor of the most recent round of UN sanctions and in order to fully comply, President Medvedev issued a decree canceling all sophisticated arms sales to Iran, including the S-300 air defense system.²⁴³

However, Russia’s support of sanctions remained sporadic and determined by Russia’s economic and political interests. By early 2011, top Russian officials began to openly question the need for ongoing sanctions and started to challenge western intelligence assessments of Iranian nuclear capacity.²⁴⁴ This has continued as the US and its allies attempt to further isolate Iran from the international community and international financial system. It is not clear how much this reflects pragmatic policy concerns, a search to gain advantage by supporting Iran, and/or a deterioration in US and Russian relations. In practice, it probably reflected a combination of all three - although US and Russian relations continued to deteriorate on a broad level in 2012.

In August 2011, Moscow led a seemingly successful effort to lure Iran back into the P5+1 negotiations, offering to broker a deal that would gradually ease sanctions in exchange for the Islamic Republic meeting transparency targets.²⁴⁵ Iran’s chief nuclear negotiator, Saeed Jalili, declared that the Russian proposal would be the “basis to start negotiations for regional and international co-operation, specifically in the field of peaceful nuclear activities.”²⁴⁶ However, the negotiations have not borne fruit and may have collapsed.

Russia did not support the US and EU expansion of sanctions in late 2011. It not only stated that such sanctions would be counterproductive, but warned that they were increasing the prospect of conflict. Russian Foreign Minister Sergey Lavrov stated on January 18, 2012, that the new sanctions had, “...nothing to do with a desire to strengthen the nuclear non-proliferation...It’s aimed at stifling the Iranian economy and the population in an apparent hope to provoke discontent.”²⁴⁷ He also warned that the situation risked leading to attacks on Iran that, “The

²⁴¹ “Obama’s Diplomatic Offensive and the Reality of Geopolitics,” Reva Bhalla, STRATFOR, March 10, 2009

²⁴² STRATFOR, “Iran, Russia, US: The BMD Link,” February 11, 2009

²⁴³ “Why Russia is Cutting Off Major Arms Sales to Iran,” Fred Weir, Christian Science Monitor, September 23, 2010

²⁴⁴ Mark N. Katz, “Russia Balks at New Pressure on Iran,” The Iran Primer Blog, USIP, March 16, 2011

<http://iranprimer.usip.org/blog/2011/mar/16/russia-balks-new-pressure-iran>

²⁴⁵ Lauren Gelfand, “Russia proposes incentives for Iran to comply with UN nuclear programme” Jane’s Defense Weekly, August 17, 2011

²⁴⁶ Lauren Gelfand, “Russia proposes incentives for Iran to comply with UN nuclear programme” Jane’s Defense Weekly, August 17, 2011

²⁴⁷ Marc Bennetts, “Russia Warns of Iran Attack ‘Catastrophe,’” RIA Novosti, January 18, 2012.

<http://en.rian.ru/russia/20120118/170823665.html>

consequences will be extremely grave. It's not going to be an easy walk. It will trigger a chain reaction and I don't know where it will stop."²⁴⁸

Russia is likely to continue to use its relationship with Iran in ways designed both to seek its own advantage and to influence US policy toward Russia and shape US power in the region. Russia, like the US, does not want Iran to acquire nuclear weapons. Russia would rather use Iran as a counterweight against US interests in the region, a market for goods, and a gateway to the region than see Iran improve its power in the region by acquiring a nuclear weapon.

Planners in Moscow have become adept at modulating the extent of their Iranian involvement. Accordingly, the US should not be surprised by tension in one area of their relationship is offset by rapprochement in another. While Iran will continue to compete with the United States for a more dependable alliance, the Russians seem content to keep one foot in each camp - playing the two countries off of each other. They will extract concessions in exchange for their support of future UN sanctions resolutions, but will continue to avoid imposing unilateral sanctions or actions. Their policies will reflect a desire to maintain maximum flexibility in expanding their commercial relationship with Iran while avoiding endangering their increasingly valuable ties to the West.

Turkey

Turkey's relationship with Iran is complex and marked by periods of both collaboration and conflict. Turkey was one of the first countries to recognize the Islamic Republic's revolutionary government, and has attempted to cultivate relations between the states through economic and energy ties as well as billions of dollars in FDI (\$3.6 billion as of 2010), primarily in oil and natural gas.²⁴⁹ Turkey continued to invest in Iran's energy sector throughout the 1980s and 1990s even though Turkey frequently accused Iran of supporting the PKK and Iranian leaders disapproved of Turkey's warming relations with Israel.²⁵⁰

The victory of Turkey's Justice and Development Party (AKP), in 2002 ushered in a new era of more constructive engagement between the two countries. Turkish commercial ties to Iran have strengthened under Turkish Prime Minister Erdogan. Tehran now supplies a significant amount of Turkey's oil imports and total bilateral trade has grown to over \$16 billion dollars in 2011, and is expected to reach \$35 billion before 2015.²⁵¹ In addition, the two countries have previously cooperated over efforts to dismantle the Kurdish terrorist groups based along the Iraqi/Iranian border.

As Turkish Prime Minister Erdogan increasingly sought to establish Turkey as a regional power through its "zero problems" with neighbor's policy, relations continued to improve. While the

²⁴⁸ Associated Press, "Russia warns attack on Iran could unleash 'chain reaction,' criticizes further sanctions," Updated: Wednesday, January 18, 7:58 AM; CBS News, January 18, 2012, http://www.cbsnews.com/8301-202_162-57360784/russia-warns-against-more-iran-sanctions/.

²⁴⁹ Iran country profile, Turkish Ministry of Economy, <http://www.economy.gov.tr/index.cfm?sayfa=countriesandregions&country=IR®ion=4>.

²⁵⁰ Amada Paul, "Turkey and Iran: an unraveling relationship," *Al-Arabiya News*, August 12, 2012. <http://english.alarabiya.net/views/2012/08/12/231743.html>

²⁵¹ <http://www.hurriyetdailynews.com/iran-turkey-to-boost-trade-volume-further.aspx?pageID=238&nID=24352&NewsCatID=344>

AKP felt more affinity towards Iran's Islamist government than the previous governments of the Kemalist, secular, and western elite, this relationship has been more economically-driven than ideologically-based. From 2002 to 2011, Turkey and Iran forged closer ties, worked together to combat the PKK, and joined in mutual energy deals. The most visible aspect of this relationship has been the sharp increase in high-level diplomatic visits between the two states. From 1979 to June 2002, there were only three heads of state visits between the two countries, while from July 2002 and August 2012 the combined leadership had 11 cross-border visits.

Like Russia and China, Turkey seeks to preserve policy autonomy on Iran. Mehmet Simsek, the finance minister, told the Financial Times that while Turkey supported UN sanctions, they would not shy away from promoting closer trade links with Iran, saying, "We will fully implement UN resolutions but when it comes to individual countries' demands for extra sanctions we do not have to [obey]."²⁵²

This duel game has allowed Turkey to sometimes play the role of mediator. When Iran announced their willingness to return to nuclear talks in January 2012, Turkey volunteered to host - an offer that was quickly accepted by the Iranians. Prime Minister Erdogan also articulated the limits of Turkish support for the US, the EU, France, Germany, and Britain when he accused the West of treating Iran unfairly over its nuclear program.²⁵³ Erdogan had tried to downplay the significance of Iran's nuclear program, dismissing international allegations as merely "gossip."²⁵⁴

While Turkey's relations with Iran have improved since the election of the AKP party, the Arab Spring, the Civil War in Syria, and subsequent Iranian support for the Assad regime have reversed the warming trend in their relations. With the outbreak in violence that has engulfed Syria since 2011, Turkey and Iran's bilateral relations have significantly cooled. The conflict in Syria, says one Turkish interlocutor, brought the implicit divide between Iran and Turkey to the forefront and forced Turkey to take "a more realistic view of the region."²⁵⁵ Turkey views the unrest as not only a matter of international affairs, but also as a domestic security issue as the lack of central state control in Syria may give the PKK a staging ground from which to attack interests in Turkey and achieve limited regional autonomy. A messy transition or extended civil war may allow the PKK to gain a renewed foothold in northeast Syria and promote their effort towards building a Kurdish state.

The conflict in Syria has taken on the trappings of a low level proxy conflict, where Turkey views Iran as meddling in their neighborhood and where the outcome of the current conflict will impact Turkey more than Iran. The Syrian conflict has also empowered the PKK to make a bloody comeback in Eastern Turkey, for which Turkey has blamed Iran and Syria, pushing the two countries into a new "Cold War."

Turkey's position on Iran's nuclear program has also hardened and while Turkey's offer to play

²⁵² "Turkey throws an economic lifeline to Iran", Roula Khalaf and Delphine Strauss, Financial Times UK, July 26, 2010. <http://www.ft.com/intl/cms/s/0/611b301e-97d5-11df-b218-00144feab49a.html?ftcamp=rss#axzz1T53j9m88>

²⁵³ The Guardian UK, "Turkish PM Exposes Nuclear Rift in NATO", Robert Tait, October 26, 2009. <http://www.guardian.co.uk/world/2009/oct/26/turkey-iran>

²⁵⁴ Henri Barkey, "What's Turkey's role in the second round of Iran talks?", The Iran Primer, USIP, January 10, 2011. <http://iranprimer.usip.org/blog/2011/jan/10/whats-turkeys-role-second-round-iran-talks>

²⁵⁵ Madeleine Albright, Stephen Hadley, Steven Cook, et. al. *U.S.-Turkey Relations: A New Partnership*, The Council on Foreign Relations, May 2012. Pg. 40

mediator between the West and Iran may have originated from sincere hope of solving the problem, it was also a calculated political move intended to consolidate Turkey's position as strong, independent power in the region. Turkey is concerned that if Iran's nuclear program achieves its end goals, there will be widespread proliferation in the Middle East, greatly destabilizing the region.²⁵⁶ Furthermore, Turkey is split between their acceptance of an Iranian nuclear power generating capability and the demand that Iran be more forthcoming about its program.

So far, Turkey has indicated that it is considering the new round of US and European sanctions, but may not adopt them. Turkey has reason to be cautious: Ankara has obtained a third of its crude oil from Iran during recent years - Iran supplied 51% of Turkey's oil imports during the first half of 2011. This helps explain why the Turkish Foreign Ministry spokesman, Selcuk Unal, told a news conference on January 12, 2012 that Turkey would not abide by any unilateral or multilateral sanctions against Iran in spite of efforts by Vice President Biden and US Deputy Secretary of State William Burns.²⁵⁷ It also helps explain why Turkey's energy minister, Taner Yildiz, gave a press conference that same day in which he said that, Turkey was not bound by the new US or EU efforts to reduce Iranian oil exports: "UN sanctions are binding for us...Other decisions are not...At the moment our imports continue and as of today there is no change in our road map."²⁵⁸

However, it is not clear that such statements truly reflect Turkey's intentions or future policy. Turkish banks have already distanced themselves from Iranian banks as a result of past US sanctions. Tupras, Turkey's main oil refiner, and a company owned by the Koch Holding conglomerate, had renewed its annual contract to buy Iranian crude in December 2012, but Tupras had already stopped selling refined oil to Tehran after the passage of new US sanctions in 2010. And, Halkbank, a state-controlled bank, has facilitated Tupras' transactions with Iran using a Turkish Lira-denominated account for the transactions. But Halkbank had already declined to do business with Iran on behalf of a refiner in India, despite previously supporting Iranian trade with India.²⁵⁹

More broadly, Ankara has been careful not to let its foreign policy stray too far from Western norms. Turkish Foreign Minister Ahmet Davutoglu explicitly stated that it would condemn Iran should they renege on their commitment to the Nuclear Non-Proliferation Treaty.²⁶⁰ Turkey also made sure to comply, in March of 2011, with the UN by twice forcing the landing of Iranian cargo aircraft. In both cases the aircraft were searched and in one instance weapons were removed that were allegedly bound for Syria.²⁶¹

²⁵⁶ <http://www.mepc.org/journal/middle-east-policy-archives/turkey-and-irans-nuclear-program>

²⁵⁷ Today's Zaman, "Turkey says not bound by US sanctions against Iran," January 12, 2012. <http://www.todayszaman.com/news-268357-turkey-says-not-bound-by-us-sanctions-against-iran.html>

²⁵⁸ Daniel Dombey, "Turkey defiant on Iran sanctions," Financial Times, January 12, 2012.; Turkey defies US over Iran sanctions, PressTV, <http://www.presstv.ir/detail/220788.html>, January 13, 2012.

²⁵⁹ Daniel Dombey, "Turkey defiant on Iran sanctions," Financial Times, January 12, 2012.

²⁶⁰ Today's Zaman, "Davutoğlu Blames Israel for Failure to Mend Ties," December 27, 2010. http://www.todayszaman.com/newsDetail_getNewsById.action?load=detay&newsId=230778&link=230778

²⁶¹ Kenneth Katzman, "Iran Sanctions," CRS, June 22, 2011.

Turkey has also agreed to US requests that it host a radar system integral to Phase 1 of the European Phased Adaptive Approach aimed at protecting Europe from Iranian missiles. This decision elicited predictable recriminations for Iran, and spurred a top Western official to assert that “Turkey is back in the club.”²⁶² The Obama Administration has overtly described the missile shield as being designed to deter Tehran, and a top White House official highlighted the import of Ankara’s move by announcing that “This is probably the biggest strategic decision between the United States and Turkey in the past 15 or 20 years.”²⁶³

In short, Turkey maintains an independent foreign policy despite the desires of Washington and Tehran, and sometimes seeks to make both countries compete for its allegiance on an issue-by-issue basis. Ankara will continue to position itself as a growing regional power and seek to extend its commercial and diplomatic ties as well as its broader appeal throughout the Arab world.

However, this does not mean that Turkey will not support efforts to end Iran’s nuclear programs and limit its political and military influence in the region. Turkey and Iran have become noticeably more antagonistic over the crisis in Syria, and relations continue to deteriorate as the Syria civil war and PKK operations continue. Both countries recognize that they are long-term rivals, and that near-term cooperation is driven by expediency and immediate self-interest. Therefore, the US should expect Turkish compliance with UN sanctions, but anticipate some pushback on other, less important, aspects of its regional agenda.

The BRICS

The BRICS states - comprised of Brazil, Russia, India, China and South Africa - have individually and collectively responded to the tightening of sanctions by the US and EU in 2011 and 2012. As stated above, China and India have responded to the US and EU sanctions by reducing their oil purchases from Iran and has curtailed some forms of trade, but has not completely instituted the various sanctions regimes. As a bloc, the group remains divided over the effectiveness of sanctions to curtail Iranian actions and refuse to endorse either the Western or Iranian position.

In a previous meeting in March 2012, the BRICS stated that they will not impose unilateral sanctions but will abide by UN-authorized sanctions,

“...we all broadly agree with the proposal, the terminology that was made, that if there are U.N. Security Council sanctions then we are all bound by that, but if there are sanctions that are imposed by other countries unilaterally, they shouldn't have to apply to us...But I think the problem is that we've also got the power relations to contend with, and that whether we like it or not the decision will impact on us in the form of higher oil prices and possibly even shortages of supply. So those are all going to be big challenges that we're going to face.”²⁶⁴

²⁶² Today’s Zaman. “Turkey reaffirms strong bonds with NATO,” Lale Kemal, September 7, 2011. <http://www.todayszaman.com/columnist-256054-turkey-reaffirms-strong-bonds-with-nato.html> ; Tehran Times, “Iran warns over NATO’s radar system in Turkey: Minister.” September 7, 2011. <http://www.tehrantimes.com/index.php/politics/2267-iran-warns-over-natos-radar-system-in-turkey-minister->

²⁶³ The New York Times, “U.S. Hails Deal with Turkey on Missile Shield,” Thom Shanker, September 15, 2011. http://www.nytimes.com/2011/09/16/world/europe/turkey-accepts-missile-radar-for-nato-defense-against-iran.html?_r=1

²⁶⁴ Matthias Williams, “BRICS agree not bound by "unilateral" sanctions on Iran: South Africa,” Reuters, March 28, 2012. <http://www.reuters.com/article/2012/03/28/us-south-africa-iran-oil-idUSBRE82ROOV20120328>

At the same meeting, leaders of the five developing nations announced their commitment to Iran's right to "peaceful uses of nuclear energy", but they also stressed that the situation "cannot be allowed to escalate into conflict."²⁶⁵

The Effect of Sanctions

Despite past Iranian rhetoric to the contrary, sanctions are severely impacting the Iranian economy that will increase steadily over time as they are widened and applied with consistency. However, there is no way to be certain of how the economic effects will affect the political climate in Iran. Nor is there no way to be certain about how they will contribute to what is an escalating process of confrontation between Iran and the US, Europe, Arab Gulf states and other countries and if this confrontation will lead Iran to new forms of political and asymmetric warfare or serious clashes or conflict.

Furthermore, the actions of China, Japan, India, and South Korea may have a double effect Iran's oil revenue. As customers are pressured out of the Iranian oil market, the remaining customers and the amount they buy will become increasingly important to Iran, leaving Tehran open to strong-arm tactics, lowering the price offered to Tehran or offering payments in non-convertible currency, similar to those that were employed by China or India after sanctions were imposed in the summer.

Iran's Problem Economy: Outside Causes versus Self-Inflicted Wound

Evaluating the effect of sanctions on a macroeconomic level is difficult because of the previously-existing structural deficiencies of Iran's underlying economy, one that is based almost totally on oil exports and domestic subsidies. Many of Iran's economic problems remain a self-inflicted wound and inflate the impact of sanctions than might otherwise be the case in a more structurally stable economy. After President's Ahmadinejad's election in 2005 he began an effort to reform Iran's economy, but these policies may have made the situation worse before additional sanctions began to reduce the proceeds of oil sales.

Many economists and analysts agree that even the threat posed by the possibility of new sanctions began to cause Iranian costs to rise and made it increasingly difficult for Iranian companies to work internationally.²⁶⁶ By late December 2010, Iran's currency was already becoming far more unstable - dropping in value to record lows - and was already leading to increased government intervention.

After his election, President Ahmadinejad eliminated economic planning organizations, disempowered government technocrats, expanded credit and spending, and reduced subsidies and injected cash into the economy that fueled inflation.²⁶⁷ He also privatized many state companies, to the benefit of those associated with the Revolutionary Guard. Increased sanctions and the beginning of the exodus of foreign firms from Iran also opened up opportunities for the

²⁶⁵ Council on Foreign Relations, "BRICS Summit: Delhi Declaration," March 29, 2012.
<http://www.cfr.org/brazil/brics-summit-delhi-declaration/p27805>

²⁶⁶The Washington Post, "Sanctions begin to compound Iran's severe economic problems", Thomas Erdbrink, October 5, 2010. <http://www.washingtonpost.com/wp-dyn/content/article/2010/10/05/AR2010100505972.html>

²⁶⁷ Suzanne Maloney, "The Revolutionary Economy," The Iran Primer.
<http://iranprimer.usip.org/resource/revolutionary-economy>

IRGC, former members, and affiliated companies that have become the largest economic force in Iran.

While some experts tend to exaggerate this aspect of Iran's problems, the World Bank provided what seems to be an objective view of the strengths and weakness in Iran's economy from 2010 through the spring of 2012 - estimates made months before the full impact of sanctions began to appear:²⁶⁸

Iran is the second largest economy in the Middle East and North Africa in terms of GDP - US\$400 billion in 2011 (after Saudi Arabia) and in terms of population - 78 million people (after Egypt). It is characterized by a large hydrocarbon sector, small scale private agriculture and services, and a noticeable state presence in manufacturing and finance. In 2007 the service sector (including Government) contributed 56% to GDP, followed by the hydrocarbon sector with 25 %, and agriculture with 10%. Iran ranks second in the world in natural gas reserves and third in oil reserves. It is the second largest OPEC oil producer; output averaged about 4 million barrels per day in recent years. Iran's chief source of foreign exchange comes from oil and gas. Thus, aggregate GDP and Government revenues are intrinsically volatile, fluctuating with international prices of these commodities. Despite the Oil Stabilization Fund and the newly established development fund in 2011/12, macroeconomic policies so far have typically not counteracted these boom and bust cycles in economic performance that increase the uncertainty faced by the private sector, impeding investment and job creation.

Iran's economy is transforming towards a market-based economy. However, the Iranian state still plays a key role in the economy, owning large public and quasi-public enterprises which partly dominate the manufacturing and commercial sectors. Over 60 percent of the manufacturing sector's output has been produced by state-owned enterprises. The Government envisioned a large privatization program in its 2010-15 five-year plan aiming to privatize some 20% of state-owned firms (SOEs) each year. However, assets of SOEs appear to have been often bought by the Iranian Revolutionary Guards Corps or other semi-governmental enterprises. The financial sector is also dominated by public banks. Moreover, Iran's 2012 Doing Business ranking is in the bottom tiers of the MENA region ranking 144th overall. Only Algeria, Iraq, and Djibouti rank lower among MENA countries. However, the authorities have adopted a comprehensive strategy as reflected in their 20-year Vision document and the 5th Five-Year Development Plan to ensure the implementation of market-based reforms.

Economic growth increased by 3.5 percent in 2009/10 while prudent macroeconomic policies reduced inflation to about 10 percent and ensured a fiscal surplus. The initial impact of the removal of the substantial energy and food subsidies in December 2010 did not suppress Iran's economic performance despite stricter economic sanctions. Nevertheless, growth is projected to decline to 2 percent in 2011 and to decrease further thereafter, and inflation is expected to increase to around 20 percent in 2011 and 2012 due to the impact of the substantial increase in energy prices. The authority to release inflation statistics has been transferred from the Central Bank to a new agency, the Supreme Council of Statistics, which weakens the credibility of official inflation statistics. The medium term outlook for economic growth is lower due to tougher sanctions and overall declining oil production. Exports of crude oil are expected to decline due to embargoes by the EU and lower demand from China and India after recent payment difficulties due to the US sanctions on the Iranian central bank. Moreover, higher than expected inflation after subsidy removals are projected to depress private consumption. The industry is also likely to struggle to adjust to higher energy prices also due to the sluggish provision of Government assistance that had been earmarked for the sector.

The country's social indicators are relatively high by regional standards. Most human development indicators have improved noticeably based on Government's efforts to increase access to education and health. Virtually all children of the relevant age group were enrolled in primary schools in 2009 and enrollment in secondary schools increased from 66% in 1995 to 84% in 2009. As a result, youth literacy rates increased from 77% to 99% over the same period, rising significantly for girls. Consequently, Iran is well placed to achieve the MDG target with regard to eliminating gender disparities. Over the years, Iranian

²⁶⁸ World Bank, "Iran Overview," accessed October 5, 2012, <http://www.worldbank.org/en/country/iran/overview>.

women have been playing an increasingly important role in the economy, though their market participation and employment rates remain limited. Iran's health outcomes have also improved considerably over the past twenty years. The mortality rate for children under five steadily declined from 65 (per 1,000) in 1990 to 27 in 2009. Similarly, the maternal mortality ratio per 100,000 live births declined from 150 to 30 during the same period. Consequently, health indicators are usually above regional averages. This success is based on the effective delivery of primary health care that almost balanced health care outcomes in rural and urban areas. Iran's new 5th five-year development plan from 2011 to 2015 continues to focus on social policies.

The Government has launched a major reform of its indirect subsidy system, which, if successful would markedly improve the efficiency of expenditures and economic activities. The overall subsidies were estimated to cost 27 percent of GDP in 2007/2008 (approximately US\$77.2 billion). The Government has opted for a direct cash transfer program while substantially increasing the prices of petroleum products, water, electricity, bread and a number of other products. Preliminary estimates suggest that the Government's comprehensive cash transfer program accompanying the ongoing subsidy reform has reduced extreme poverty and income inequality significantly. However, the Government assistance program to the industry, which was supposed to account for 30% of the savings from the subsidy removals, has been slow-moving partly because the cash transfers to consumers appear to have been more costly than planned. It was not until September 2011, that the Government started to fulfill its commitment to producers.

The recently imposed international sanctions between December 2011 and February 2012 have increased the cost of doing business, limited access to foreign direct investments and foreign technologies, and exacerbated international trade and financial transactions. The United Nations Security Council (UNSC) sanctions include a ban on financing and exports related to Iran's nuclear and military programs. In January 2012, the US imposed new sanctions including a ban on any financial institution doing business with Iran's central bank from conducting business in the US. In addition, the EU agreed to impose an embargo on imports of Iranian oil; no new contracts or delivery can be agreed starting July 1st.

The CIA provided what seems to have been a similarly objective critique of some of the key issues in Iran's economy,²⁶⁹

Iran's economy is marked by statist policies and an inefficient state sector, which create major distortions throughout the system, and reliance on oil, which provides the majority of government revenues. Price controls, subsidies, and other rigidities weigh down the economy, undermining the potential for private-sector-led growth. Private sector activity is typically limited to small-scale workshops, farming, and services. Significant informal market activity flourishes and corruption is widespread.

Tehran since the early 1990s has recognized the need to reduce these inefficiencies, and in December 2010 the legislature passed President Mahmud AHMADI-NEJAD's Targeted Subsidies Law (TSL) to reduce state subsidies on food and energy. This was the most extensive economic reform since the government implemented gasoline rationing in 2007. Over a five-year period the bill will phase out subsidies that previously cost Tehran \$60-\$100 billion annually and mostly benefited Iran's upper and middle classes.

Cash payouts of \$45 per person to more than 90% of Iranian households mitigated initial widespread resistance to the TSL program, though popular acceptance remains vulnerable to rising inflation. A rise in world oil prices in 2011 increased Iran's oil export revenue by roughly \$28 billion over 2010, easing some of the financial impact of international sanctions. However, expansionary fiscal and monetary policies, government mismanagement, the sanctions, and a depreciating currency are fueling inflation, and GDP growth remains stagnant. Iran also continues to suffer from double-digit unemployment and underemployment. Underemployment among Iran's educated youth has convinced many to seek jobs overseas, resulting in a significant "brain drain."

²⁶⁹ CIA, "Iran," *World Factbook*, accessed October 5, 2012, <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>.

The Growing Impact of Sanctions

The basic economic data on Iran are notoriously uncertain:

- Economic indicators and information are notoriously difficult to come by and are at a high risk of being politicized by Iran or too inaccurate to reliably make assumptions and produce analysis.
- There is no reliable way to measure the GDP in purchasing power parity terms, income distribution, per capita income in real terms, inflation, poverty levels, real and disguised unemployment, and the impact of corruption.
- There is no reliable way to measure the impact of a corrupt state sector whose spending is distorted by unreported shifts in spending to the military and Islamic Revolutionary Guards Corps, a corrupt religious establishment and its “charitable” Bunyods, spending on “civil” nuclear programs, and the real world allocation of the money the state has spent of subsidies and income supplements.

Yet, uncertain as most such data are, it is possible to make broad estimates of the long-term trends based on the patterns in year-to-year and quarter-to-quarter data. The trends since 2011 indicate that sanctions have had a serious effect on the Iranian economy.

Looking at a Range of Indicators

Unemployment inflation and Iranian Rial-USD exchange rate figures are significantly higher than they were even a year ago before sanctions were instituted and before Iran was cut off from the international banking system, SWIFT. All signs point to an economy under siege, production is down, industry is at a standstill, and there is a massive brain drain, an estimated 200,000 Iranians try to leave the country annually.²⁷⁰ There have also been sporadic reports of workers striking due to unpaid wages, 40-50% inflation on consumer goods, and the Iranian government unable to pay employee wages.²⁷¹

Other reports detail Iran’s plans to ration diesel sales, mix gasoline with methanol, and only accept cash from domestic airlines for jet fuel.²⁷² A report by the Associated Press in the Washington Post detailed that Seyyed Abdolreza Mousavi, head of the Iranian Airlines Association, stated that most flights from Tehran, Mashhad, and other airports were canceled due

²⁷⁰ Payvand Iran News, “Iran’s Brain Drain: 200,000 graduates trying to go abroad,” April 26, 2006. <http://www.payvand.com/news/06/apr/1188.html>

²⁷¹ Iran Daily Brief, “Government not able to pay wages of maritime workers,” December 26, 2012. <http://www.irandailybrief.com/2012/12/26/government-not-able-to-pay-wages-of-maritime-workers/>; Iran Daily Brief, “Sharp decline in number employed in agricultural sector under Ahmadinejad,” December 25, 2012. <http://www.irandailybrief.com/2012/12/25/sharp-decline-in-number-employed-in-agricultural-sector-under-ahmadinejad/>; Iran Daily Brief, “More workers strike due to unpaid wages,” November 30, 2012. <http://www.irandailybrief.com/2012/11/29/more-workers-strike-due-to-unpaid-wages/>; Iran Daily Brief, “Workers strike in South Fars,” December 11, 2012. <http://www.irandailybrief.com/2012/12/11/workers-strike-in-south-fars/>; Iran Daily Brief, “In contrast with the President’s statements, inflation on consumer products is 40-50%,” December 26, 2012. http://www.irandailybrief.com/2012/12/26/in-contrast-with-the-presidents-statements-inflation-on-consumer-products-is-40-50/?utm_source=rss&utm_medium=rss&utm_campaign=in-contrast-with-the-presidents-statements-inflation-on-consumer-products-is-40-50

²⁷² Daniel Fineren and Yeganeh Torbati, “Iran takes steps to manage diesel, other fuel supplies,” Reuters, November 14, 2012. <http://www.reuters.com/article/2012/11/14/us-iran-diesel-rationing-idUSBRE8AD0X420121114>

to the failure of domestic airlines to pay their debts to the government. He also said that fuel would only be given to airlines on a cash only basis.²⁷³

Figure V.15 shows other aspects of the interaction between sanctions and Iran's self-inflicted economic problems. Furthermore, anecdotal and press reports suggest that many Iranians, particularly in the middle class were blaming the regime for economic difficulties brought about by the sanctions as well as the economic missteps the regime had taken in early 2011.

According to CRS's February 2012 report on Iran Sanctions, "The payments process has become so difficult that Iran has begun to use gold and oil to pay for wheat and other imports."²⁷⁴ The updated September 2012 version includes this as well, "Compounding the loss of sales by volume is that many of its oil transactions reportedly are now conducted on a barter basis—or in exchange for gold, which is hard currency but harder to use than cash."²⁷⁵

Since February 2012, the accumulated effects of strengthened international sanctions have damaged Iran's economy in numerous ways. As broader sanctions increase in size and scope, Iran is losing business from both countries imposing sanctions, as well as companies afraid of doing business with Iran. The loss of oil purchases from the EU, China, Japan, and South Korea accounts for 1.1-1.3 million of the 2.5 million barrels sold by Iran each day.²⁷⁶ The sales losses account for roughly \$50 billion in lost revenue in one year at current oil prices.²⁷⁷ Additionally, decreasing trade and increasing inflation is leading to increased frustration among the Iranian public. Recent economic troubles have led business to downsize or close all together and there have been reports of numerous strikes, layoffs, and the non-payment of wages.

There have been similar reports of unrest among small and large merchants who were having trouble obtaining trade financing, insurance, and shipping availability, which was driving up their costs by an estimated 40%, if the merchants could complete transactions at all.²⁷⁸ Iranian merchants are increasingly using the *hawala* system to complete transactions due the difficulty of using banking systems.

In another sign of the worsening situation in Iran the country is reportedly planning to increase its oil storage facilities by adding nearly 8.1 million barrels of capacity, and has raised the ticket prices of national flag carrier Iran Air, double for some international destinations, and between 70-90% for domestic destinations because of fuel prices.²⁷⁹ Ali Larijani, Majlis Speaker said,

²⁷³ Iran Daily Brief, "Oil Ministry stops selling fuel to airlines due to unpaid debts; most flights on January 7 were cancelled," December 8, 2012. <http://www.irandailybrief.com/2013/01/08/oil-ministry-stops-selling-fuel-to-airlines-due-to-unpaid-debts-most-flights-on-january-7-were-cancelled/>

²⁷⁴ "Iran Sanctions", Kenneth Katzman, CRS, February 10, 2012.

²⁷⁵ "Iran Sanctions", Kenneth Katzman, CRS, September 13, 2012. Pg. 51

²⁷⁶ "Iran Sanctions", Kenneth Katz, Congressional Research Service, February 10, 2012.

²⁷⁷ "Iran Sanctions", Kenneth Katz, Congressional Research Service, December 6, 2012, p. 53

²⁷⁸ The Associated Press, "Iran's Gateway in Dubai Highlights Sanctions Bite," Brian Murphy, February 1, 2011. <http://abcnews.go.com/Business/wireStory?id=12808709>

²⁷⁹ "Iran plans new oil storage, airline hikes fares," Associated Press, November 26, 2012. <http://www.usnews.com/news/world/articles/2012/11/26/iran-carrier-hikes-fares-on-international-flights>

“We are facing financial drought this year (starting March 21, 2012) and next year...It is unlikely that a miracle will take place in this respect”²⁸⁰

The US Energy Information Agency (EIA) estimated in December 2012 that the growing impact of sanctions was impacting on Iran’s ability to produce oil and that Iran has no chance for the foreseeable future of meeting its stated goal of some 5.3 m/bpd of production capacity. The EIA estimated that,

“Iran’s crude oil production is estimated at 2.6 million bbl/d in November 2012, indicating at least a temporary bottoming out of Iranian production declines. Iranian production had been falling since at least the last quarter of 2011. The latest round of U.S. and EU sanctions contributed to declines in Iranian production during the second and third quarters of 2012. However, preliminary trade numbers show that exports rose to 1.3 million bbl/d in October, at least temporarily slowing down the production declines. The export numbers are based on commercial data on tanker liftings from Iran, press reports, and other relevant information. However, this tentative interpretation of a very fluid situation could change as EIA revises data, industry sources issue independent estimates of Iranian production, and more details about Iranian storage levels, refinery utilization, and domestic consumption emerge.”²⁸¹

In July 2012, the EIA released a report that found that “US financial sanctions and EU insurance provisions have also impeded other countries’ ability to finance and pay for transactions in Iranian oil, leading to reports that Iran’s ability to produce oil has outstripped its ability to sell it.”²⁸² Furthermore, Reuters reported in October 2012 that only 980 vessels docked in Iranian ports in the first nine months of 2012, this was down from 2,740 in 2011, and 3,407 in 2010.²⁸³ Exports were down as well according to Iranian sources; in the first nine months of 2012, exports were \$31.7 billion and imports were \$40 billion, a 10.5% decline compared to the year before.²⁸⁴

The US Treasury announced in September 2012 that it estimated that Iranian oil exports had dropped by 1 million barrels of oil from levels of 2.4 million barrels a day in 2011 – signifying a drop of \$80 billion in revenue compared to 2011.²⁸⁵ The Undersecretary of the Treasury, David Cohen, stated that, “This decrease in exports is costing Iran about \$5 billion a month, forcing the Iranian government to cut its budget because of a lack of revenue...Sanctions have effectively terminated international access for most Iranian banks...Today, the Iranian government is relegated to the backwaters of the international financial system, and they know it.”²⁸⁶

²⁸⁰ Iran Daily Brief, “Majlis Speaker: Iran facing “financial drought” this year and next year,” January 8, 2013. <http://www.irandailybrief.com/2013/01/08/majlis-speaker-iran-facing-financial-drought-this-year-and-next-year/>

²⁸¹ U.S. Energy Information Administration, “Short-Term Energy Outlook,” December 11, 2012. http://www.eia.gov/forecasts/steo/report/global_oil.cfm

²⁸² UPI, “Iran’s oil production slumps, EIA says,” July 11, 2012. http://www.upi.com/Business_News/Energy-Resources/2012/07/11/Irans-oil-production-slumps-EIA-says/UPI-75241342016878/#ixzz28Kdmh66R

²⁸³ Rick Gladstone, “Data on Iran Dims Outlook for Economy,” The New York Times, October 12, 2012. <http://www.nytimes.com/2012/10/13/world/middleeast/data-on-iran-dims-outlook-for-economy.html>

²⁸⁴ Iran Daily Brief, “Volume of Iranian imports declines,” Fars News Agency, January 7, 2013. <http://www.irandailybrief.com/2013/01/07/volume-of-iranian-imports-declines/>

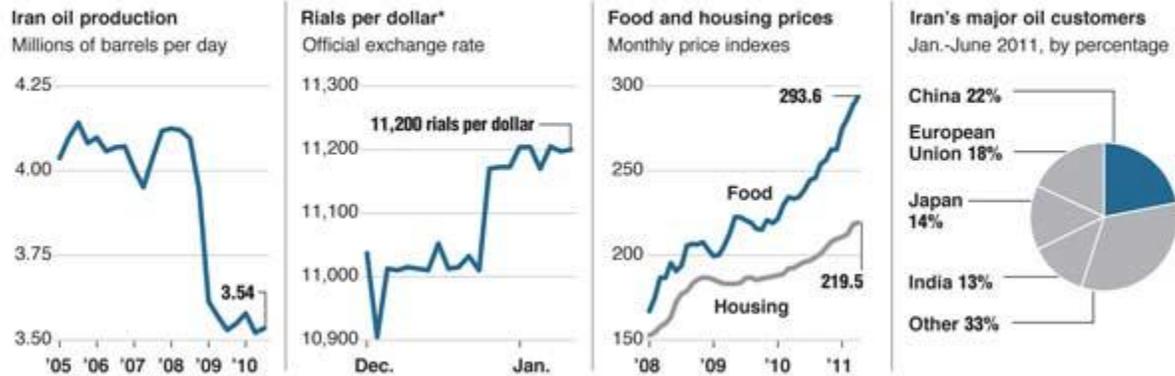
²⁸⁵ Jonathan Spicer, “U.S. says Iran oil exports down dramatically,” <http://in.reuters.com/article/2012/09/12/usa-sanctions-idINL1E8KCKRX20120912>.

²⁸⁶ Jonathan Spicer, “U.S. says Iran oil exports down dramatically,” <http://in.reuters.com/article/2012/09/12/usa-sanctions-idINL1E8KCKRX20120912>.

Figure V.15: The Growing Pressure on Iran

Sanctions hurting Iran

Iran's oil production is falling, its currency weakening and inflation rising. The U.S. would like to see Iran's oil exports continue but hopes to limit the number of customers, so they can demand discounts and further cut revenue to Tehran.



*On the open market, the exchange rate for Iran's rial was 17,800 rials per dollar on Jan. 2.

Source: Bloomberg News, Iran Central Bank, U.S. Energy Information Administration

Graphic: Scott J. Wilson, Wil Ramirez, Robert Burns, Los Angeles Times

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Source: Chicago Tribune, "Graphic: Sanctions Hurting Iran",

<http://www.chicagotribune.com/news/nationworld/sns-graphics-sanctions-hurting-iran-gx.0,3011693.graphic>.

Currency and Food Price Impacts

It is far too soon to make accurate estimate for a nation with notoriously politicized and inaccurate macroeconomic data but some of the costs are clear. Iran's currency, long held artificially high by a regime that could afford to subsidize it, has suffered sharply from the implementation of more stringent sanctions. It lost more than 50% of its value between September 2011 and September 2012 and was trading at around 28,000 Rials to one dollar, down from 13,000 in September 2011.²⁸⁷ According to some reports, this raised the real rate of annual inflation from the government publicized claim of 29% to almost 70%.²⁸⁸ Moreover, the Rial lost nearly 40% more of its value during the first week of October 2012.²⁸⁹

The devaluation of the Rial and reduction in oil income have affected access to food in a country that previously some 70% of its finances from oil exports, and that the World Trade Organization estimated imported \$8.2 billion worth of food and \$9.4 billion worth of agricultural products in 2010.²⁹⁰ These problems have reduced meat consumption, led to the buying and hoarding of gold and dollars, sharply reduced foreign and domestic investment, strained government revenues, and forced Iran into massive new efforts to use third parties and other nations to disguise its economic activities.

By October 2012, food prices were rising so quickly that major changes were taking place by the day, and key foods like chicken had become unaffordable for many Iranians. Reporting later in 2012 indicated sanctions were continuing to take a very heavy toll on food prices and imports of essential commodities such as wheat and sugar.²⁹¹ The Iranian food distribution network has been affected by the current banking sanctions, even though they contain exemptions for food and medical sales to Iran, by pushing international banks out of the Iranian market, making it increasingly difficult to complete or finance transactions for food.²⁹²

This resulted in a 5-10% increase in prices for traders looking to buy commodities on the international market, further squeezing Iran's economy. Iran is estimated to consume 15.5 million tons of wheat and 2.6 million tons of sugar and Iran's state run Government Trading Company that is responsible for imports of essential food items is reportedly paying in cash to import 60,000 tons of food a month.²⁹³

²⁸⁷ Thomas Erdbrink, "Iranian currency slides under latest U.S. sanctions," *Washington Post*, January 2, 2012.

²⁸⁸ Steve Hanke, "Iran's Lying Inflation Statistics," The CATO Institute, January 9, 2012.
<http://www.cato.org/blog/irans-lying-inflation-statistics>

²⁸⁹ Joby Warwick and James Ball, "Iran's economy may offer opening," *Washington Post*, October 5, 2012, p. A1 and A8; Jay Newton-Small, "The Iranian currency Crisis: Three Possible scenarios," *Time*, October 4, 2012,

<http://swampland.time.com/2012/10/04/the-iranian-currency-crisis-three-possible-scenarios/>; Thomas Erdbrink, "As Iran Currency Keeps Tumbling, anxiety is Rising," *New York Times*, October 5, 2012, p. A1.

²⁹⁰ Thomas Erdbrink, "Iranian currency slides under latest U.S. sanctions," *Washington Post*, January 2, 2012; EIU, "Iran," September 2012, p. 6.

²⁹¹ Jonathan Saul and Marcus George, "Sanctions side effect hits Iran's food system," Reuters, November 28, 2012.
<http://www.reuters.com/article/2012/11/28/us-iran-food-idUSBRE8AR0DG20121128>

²⁹² Jonathan Saul and Marcus George, "Sanctions side effect hits Iran's food system," Reuters, November 28, 2012.
<http://www.reuters.com/article/2012/11/28/us-iran-food-idUSBRE8AR0DG20121128>

²⁹³ Jonathan Saul and Marcus George, "Sanctions side effect hits Iran's food system," Reuters, November 28, 2012.
<http://www.reuters.com/article/2012/11/28/us-iran-food-idUSBRE8AR0DG20121128>

There are many similar reports and indicators. Rising food prices, the fall of the Rial, and the general state of the economy resulted in demonstrations for the first time in Tehran on October 3, 2012.²⁹⁴ Some outside experts estimated Iran had lost half of the \$80 billion in currency reserves it had had in 2011.²⁹⁵ The Economist Intelligence Unit estimated in September that sanctions would cut the Iranian GDP by at least 1.2% in 2012-2013 - a forecast that seemed highly optimistic as the impact of sanctions accelerated later in the fall of 2012.²⁹⁶ More recent reporting by the Institute for International Finance has estimated that Iran's economy will shrink by 3.5% this year compared with 1.2% growth in 2011. Inflation is also expected to have increased from 26.5% in 2011 to nearly 50% in 2012. Government revenues from oil exportation, if the current price of \$110 a barrel holds, could be 40% less than in 2011.²⁹⁷

Iran has recently declared that it will cut imports of non-essential goods by dividing imports into 10 categories where importers of essential goods will receive dollars at a subsidized rate.²⁹⁸ Imports of other, non-essential, goods will have to obtain dollars on the open market, which was recently trading at roughly 37,000 Rials to the dollar.

Virtually every transaction affecting imports and exports was affected by either the decline of the Rial or the uncertainties surrounding the willingness of non-US banks and firms to deal with Iran, given the threat of US sanctions or pressure from Europe and the Arab Southern Gulf states.

These developments had a compounding influence because of the sanctions impact on Iranian monetary policy. One of the roles of the Iranian Central Bank is to use hard currency to regulate the value of the Rial, if the Central Bank cannot buy or acquire enough hard currency to regulate the Rial, the currency then becomes unstable. US sanctions on Iranian banks altered the availability of foreign currency and the exchange rate of the Iranian Rial has suffered in turn.

A CRS report on Iran Sanctions goes into further detail:

The deprivation of hard currency is causing a reduction in the value of Iran's currency, the Rial. The effects of existing sanctions, and the worry about further sanctions, have reportedly driven the value of the Rial down from about 13,000 to the dollar in late September 2011 to about 28,000 to the dollar as of mid-September 2012 - including a precipitous decline from about 23,000 to the dollar to the 28,000 to the dollar level in the first two weeks of September 2012. Some experts attribute the decline to the movement of money by the middle and upper class out of the country to preserve the value of their savings. The government has been unable to stanch the decline with measures such as raising official interest rates.²⁹⁹

²⁹⁴ Thomas Erdbrink and Rick Gladstone, "Violence and Protest in Iran as Currency Drops in Value," *The New York Times*, October 3, 2012. <http://www.nytimes.com/2012/10/04/world/middleeast/clashes-reported-in-tehran-as-riot-police-target-money-changers.html?pagewanted=all>

²⁹⁵ Joby Warwick and James Ball, "Iran's economy may offer opening," *Washington Post*, October 5, 2012, p. A1 and A8; Jay Newton-Small, "The Iranian currency Crisis: Three Possible scenarios," *Time*, October 4, 2012,

<http://swampland.time.com/2012/10/04/the-iranian-currency-crisis-three-possible-scenarios/>; Thomas Erdbrink, "As Iran Currency Keeps Tumbling, anxiety is Rising," *New York Times*, October 5, 2012, p. A1.

²⁹⁶ EIU, "Iran," September 2012, p. 3.

²⁹⁷ "Sanctions push Iran into recession: IIF," Reuters, December 10, 2012. <http://www.chicagotribune.com/news/sns-rt-us-iran-sanctions-economybre8b90of-20121210,0,1288929.story>

²⁹⁸ http://www.washingtonpost.com/world/middle_east/iran-says-it-will-cut-imports-of-nonessential-goods/2012/10/14/7291ba34-1640-11e2-a55c-39408f6e6a4b_story.html?tid=wp_ipad

²⁹⁹ "Iran Sanctions", Kenneth Katzman, CRS, September 13, 2012. Pg. 51

The costs of trading with Iran also rose substantially as a result of US, UN, and EU sanctions. Costs associated with Iranian trade increased by an estimated 40% to 60% and EU exports to Iran have fallen 32%, according to outside figures.³⁰⁰ Official numbers from Iran's Trade Commission painted a less dramatic rise but indicated that sanctions have slowed the pace of trade and increased trade costs for Iran between 5% and 10% in 2010.³⁰¹

In his January 2012 Worldwide Threat Assessment, US Director of National Intelligence James Clapper stated that:³⁰²

Iran's economy is weighed down by international sanctions. The new US sanctions will have a greater impact on Iran than previous US designations because the Central Bank of Iran (CBI) is more important to Iran's international trade than any of the previously designated Iranian banks. The CBI has handled a greater volume of foreign bank transactions than other designated banks and receives the revenue for the roughly 70 percent of Iranian oil sold by the National Iranian Oil Company...

Despite this, Iran's economic difficulties probably will not jeopardize the regime, absent a sudden and sustained fall in oil prices or a sudden domestic crisis that disrupts oil exports. In a rare public indication of the sanctions' impact, Ahmadinejad said in a speech to the legislature in early November that Iran is facing the "heaviest economic onslaught" in history, a sentiment echoed by the head of the CBI."

Steady Increases in the Nature and Scope of Sanctions

Iran may continue to face tightening sanctions in the near future. In October 2012 the EU instituted another set of sanctions that impacted Iran's oil and gas sector, banking and financial sector, and oil transportation sector to increase pressure on Iran to negotiate on its nuclear program. And new sanctions encompassed in the FY 2013 NDAA will take effect on February 6, 2013 that prohibit Iran from repatriating earnings from oil sales and only allow Iran to use its earnings on non-sanctioned trade originating from where the earnings are held.³⁰³ This will severely reduce the amount of currency available to the government.

Additional sanctions were introduced into the FY2013 NDAA that would blacklist Iran's energy, port, shipping, and shipbuilding sectors while restricting Iran from obtaining insurance on those industries.³⁰⁴ This amendment was inserted and passed as part of the FY2013 NDAA under Subtitle E and was called "The Iran Freedom and Counter-Proliferation Act of 2012." The new provisions use the same sanction implementation methods currently used under the CISADA sanctions act. A separate section would block the sale, transfer, or supply of precious metals to Iran.

However, the Administration opposed the new round of sanctions saying that they are not needed, will complicate current actions, and will impose a new burden on the Intelligence Community, specifically Section 1272, that mandates the President submit a list of vessels

³⁰⁰ "Iran Sanctions", Kenneth Katzman, CRS, September 13, 2012.

³⁰¹ Shayerah Ilias, "Iran's Economic Conditions: US Policy Issues," Congressional Research Service, April 22, 2010, <http://www.fas.org/sgp/crs/mideast/RL34525.pdf>

³⁰² "Unclassified Statement for the Record on the Worldwide Threat Assessment of the US Intelligence Community for the Senate Select Committee on Intelligence", DNI James R. Clapper, January 31, 2012.

³⁰³ Osamu Tsukimori and Nidhi Verma, "Fresh U.S. sanctions to trap more Iran oil revenue," Reuters, December 19, 2012. <http://www.reuters.com/article/2012/12/19/iran-sanctions-payments-idUSL4N09T3CV20121219>

³⁰⁴ Josh Rogan, "Congress set to consider new Iran sanctions package," Foreign Policy, November 29, 2012. http://thecable.foreignpolicy.com/posts/2012/11/29/congress_set_to_consider_new_iran_sanctions_package

docked at Iranian ports and airports that have been used by Iranian air carriers.³⁰⁵ These new sanctions will continue to squeeze the Iranian economy, but also perpetuate the cat and mouse game between the implementation of sanctions and Iran's attempt to bypass them.

Iran's View of the Economic Impact of Sanctions

The official Iranian message to the world regarding both sanctions and its nuclear programs has been that Iran is a developing nation being bullied by a country that feels its post-Cold War hegemony waning. Iran has accused the United States and its allies of using globalization as an instrument of Western power and to impose their will on non-Western states - what Ahmadinejad calls "forced globalization."³⁰⁶ Iran has cultivated an image as the voice of all Muslims in confronting an imperialist United States - "very helpful to Ahmadinejad's desire for greatness in the Arab world."³⁰⁷

Shifting From Denial Towards Reality

The degree to which sanctions and other external economic pressures have affected the Iranian economy has been a central - if changing - theme in Iran's rhetoric. Until the fall of 2012, key members of the Iranian leadership repeatedly stated that sanctions have had no effect on the country's economy and many statements still make this claim. On October 1, 2012, Speaker of the Iranian Parliament, Ali Larijani, said "The westerners make much hue and cry about sanctions sometimes...but the reality is that a little part of our economic problems is related to the sanctions..."³⁰⁸

In late November 2010, a close confidant and adviser to President Ahmadinejad stated that increased financial restrictions and sanctions had had "no noticeable effect on Iran's economy."³⁰⁹ Shakour Akbarnejad of the Iranian Parliament's Economic Commission stated that, "history has shown that sanctions have left no negative impact on the Iranian nation's movement and we have, in a word, become accustomed to them."³¹⁰

Other Iranian officials went so far as to claim that sanctions have benefitted Iran by engendering technological innovation and self-reliance. The Vice President for Science and Technology downplayed the effectiveness of sanctions, saying:

³⁰⁵ National Defense Authorization Act for Fiscal Year 2013, H.R. 4310, 112th Congress, Second Session. <http://www.govtrack.us/congress/bills/112/hr4310/text>

³⁰⁶ Kenneth Katzman, "Iran: U.S. Concerns and Policy Responses," CRS, 9 June 2011, p.54

³⁰⁷ The New York Times, "US walks out as Iran leader speaks", Neil MacFarquhar, September 23, 2010. <http://www.nytimes.com/2010/09/24/world/24nations.html?sq=iran&st=cse&adxnnl=1&scp=33&adxnnlx=1311283552-mCIoV4UtUt2CQBW78uZNg>

³⁰⁸ Fars News, "Speaker Downplays Negative Impact of Sanctions on Iranian Economy," October, 2, 2012. <http://english.farsnews.com/newstext.php?nn=9107110006>

³⁰⁹ The Washington Post. "Adviser to Ahmadinejad Says West's Sanction's Have Failed." Erdbrink, Thomas and Serjoie, Kay Armin. November 24, 2010. <http://www.washingtonpost.com/wp-dyn/content/article/2010/11/23/AR2010112307004.html>

³¹⁰ Fars News Agency, "MP: Iran's Targeted Subsidy Plan defU.S.es Effects of Sanctions," October 30, 2010. <http://english.farsnews.com/newstext.php?nn=8908080913>

“The sanctions imposed by the US and Europe have not posed any threat and restrictions to the Iranian researchers; rather all threats have been turned into opportunities to growingly increase the speed of Iran’s growth and flourishing in scientific arenas.”³¹¹

And in a statement the Islamic Revolutionary Guards Corps said that sanction had not affected growth of Iranian defense industries,

“Despite the full scale enmity of the oppression front and the global oppression system against the Iranian nation and the chain of sanctions during the past 33 years (since the victory of the Islamic Revolution in 1979), the field of defense industries has taken advantage of the existing potentials and cradles, as well as the capabilities of its own creative forces, providing the basic requirements and defense needs of the country.”³¹²

In July 2012, Supreme Leader Khamenei described how sanctions had “vaccinated” the country allowing Iran to make achievements in science and technology,

“These days, the westerners are making hues and cries about sanctions but they do not understand that they themselves have vaccinated the Iranian nation against any sanction with the embargos (that they have imposed) in the last 30 years...In the last three decades, the Iranian nation has stood against all plots and sanctions...and made progress in a way that today we are 100 times stronger than 30 years ago.”³¹³

On March 6, 2011, Ahmadinejad made similar allusions to the alleged positive effects of sanctions on Iran’s scientific and industrial development, stating that, “the Iranian nation learned to rely on their (own) resources and capabilities [...] and as a result, made great scientific achievements” as a result of sanctions.³¹⁴

The debate on the effects and causes of the economic difficulties also played out in the editorial sections of Iranian newspapers, with some blaming the government and some blaming outside powers:³¹⁵

In the past few years, economic decisions have been based on short-term solutions...Despite dramatic changes that altered the economic system, the Central Bank has not yet been able to understand the economic situation...These systems and work methods need to keep up with the changing times before it is too late. - Shargh (A reformist newspaper)

Some government officials try to make up excuses to avoid being accountable for the country’s situation...Government should pay attention to reality and refrain from making vague statements that the public does not believe. It is a blunder on the part of the government if it believes that it can do whatever it likes. - Mardom Salari (A centrist newspaper)

Although the economic trends are deteriorating short-term, the government’s new economic policies will lead to long-term economic growth over time and with the ability to adapt to the present situation. - Quds (A hardline conservative newspaper)

Our economic problems create empathy, cooperation and coordination between various government

³¹¹ Fars News, “VP: Sanctions Speed up Iran's Scientific Growth,” August 8, 2012.
<http://english.farsnews.com/newstext.php?nn=9106060816>

³¹² Fars News, “IRGC Praises Iranian Defense Industries' Achievements despite Sanctions,” August, 12, 2012.
<http://english.farsnews.com/newstext.php?nn=9104254693>

³¹³ Fars News, “Supreme Leader: Iran Vaccinated against Sanctions,” July 11, 2012.
<http://english.farsnews.com/newstext.php?nn=9103086002>

³¹⁴ Mehr News Agency, “Western companies circumventing Iran sanctions,” March 6, 2011.
<http://www.mehrnews.com/en/newsdetail.aspx?NewsID=1268563>

³¹⁵ Helia Ighani, “Talk of Tehran: Squabbling over the Economy,” The Iran Primer, September 24, 2012.
<http://iranprimer.usip.org/blog/2012/sep/24/talk-tehran-squabbling-over-economy>

branches that are trying to remedy the country's current economic challenges. Although the sanctions cause problems, the opportunity to develop relationships in international banking and investment...can be a substantial part of neutralizing problems from sanctions. - Iran (A centrist conservative newspaper)

The Iranian government also attempted to manipulate economic data relating to sanctions, and to make charges about the economic policies of other countries as the cause of Iran's economic problems. For example, Dr. Seyed Shamseddin Hosseini, the Minister of Economic Affairs and Finance of the Islamic Republic of Iran and Governor of the Bank for the Islamic Republic of Iran, both attacked the policies of the West and World Bank in a statement on the "Necessity to Rethink the World Bank Behavior" at the annual meeting of the IMF on September 23, 2011, and attempted to describe Iran's economy as a "success":

These meetings are held at a juncture that we still see the negative consequences of the global crisis on the economic and financial environment. The debt of the United States Government has exceeded 14 trillion dollars and the impacts of downgrading US credit rating, as well as low economic growth and its negative prospect, has resulted in severe fluctuations in the money, commodities and capital markets.

The Euro Zone, too, faces three contradictory policy challenges, namely implementation of austerity economic measures, low growth rate, and incapability in repaying its debts and honoring financial obligations.

These problems root from the following:

1. The current architecture of the world's economy, due to inconsistency between the financial and the real sectors, creates unavoidable periodical instabilities. Settling this issue requires amending the current financial and monetary models, and shifting toward new models, such as Islamic finance, which are based on the balance between the financial and real sectors of the economy.
2. Political instability influences the economic performance. What is now happening in the MENA region, though appears to be political, doubtlessly deepens the global economic crisis, if the political and military interventions are not avoided.
3. The management of the international monetary and financial institutions has been deviated from its original functions and pursues the political will of some certain shareholders.

Unfair sanctions imposed on countries, such as the Islamic Republic of Iran, and following the will of some certain countries by the World Bank, in drawing up its relations with Iran, is a proof to this point. That the World Bank management, contrary to its Articles of Agreements, avoids approving the Country Assistance Strategy for Iran, and refrains from offering technical assistance to Iran, is another evidence of its deviation.

As the representative of a country that is a founding member of the World Bank, I would like to emphasize on the loyalty of the management of the World Bank to its Articles of Agreement as well as good and corporate governance, instead of biased governance.

Let me briefly inform you of our economic structural and institutional reforms and achievements in recent years: Revising one of the Articles of Constitution improved the role of the private sector, the situation for non-governmental sector and doing business environment. Implementing the economic transformation plan, including targeting subsidies, amending customs, taxation and banking systems, goods and services distribution system as well as currency denomination reform and enhancing productivity are in our agenda.

The achievements of these plans are as per followings:

1. The Targeting Subsidy Plan, focusing on amending the energy carrier prices resulted in a 6 percent reduction in energy consumption. This policy reduced electricity consumption by 2 percent, while prior to implementation of the plan, there was an annual rate of growth of 8 percent.
2. Amending the flour price, reduced its consumption by 30 percent and prevented smuggling to neighboring countries. The savings strengthened the food security and also listed Iran among the

exporters of wheat.

3. The revenues of targeting subsidies are redistributed. A cash payment of one and a half dollars a day to 73 million plus Iranian, who have applied for it, led to a sharp fall of Gini Coefficient in Iran.
4. The capital market is developed, and privatizing state-owned firms and issuing Sukuk Bond are done through the stock exchange and OTC. These efforts led to 146 percent growth of stock exchange index and 100 percent growth in market value of Tehran Stock Exchange in December 2010, comparing to the end of 2007
5. Foreign direct investment to the country during 2009 and 2010 experienced 120 percent growth.
6. The growth of non-oil exports in 2009 and 2010 was 24 and 31 percent respectively.³¹⁶

Shifts in Iranian Statements

Iran's leaders have gradually become more frank about the impact of sanctions. Toward the end of 2011, there was a change in rhetoric coming out of Tehran. In a speech before Parliament, President Ahmadinejad characterized the most recent international efforts as “the most extensive sanctions ever” and that “this is the heaviest economic onslaught on a nation in history...every day, all our banking and trade activities and our agreements are being monitored and blocked.”³¹⁷ The true effects of sanctions are always opaque, but his rhetorical departure suggests that the renewed international pressure has at least succeeded in forcing a strategic shift by Tehran.

Other individuals within the Iranian government cautioned their colleagues about the dangers of economic sanctions and criticizing the regime's economic policies. Veteran Iranian politician Akbar Hashemi Rafsanjani said the Islamic Republic was under unprecedented global pressure and that the government was wrong to dismiss the sanctions as no threat to the economy.³¹⁸

Mojtaba Vahidi, a former top-level manager who served in Iran's finance and industry ministries for more than 20 years, observed that “the economic crisis [that Iran is] witnessing today is a direct result of the sanctions—and Iranian officials who say otherwise are fooling themselves.”³¹⁹

The following chronology provides other examples of how Iran has mixed denials with a growing degree of realism:

- “On the basis of the report, oil sales are down 40 percent and income has dropped 45 percent in the last nine months.” - Head of the parliament's budget committee, Gholam Reza Kateb, January 8, 2013. <http://www.irandailybrief.com/2013/01/08/oil-exports-have-fallen-40-in-the-past-nine-months/>
- All people who believed that the sanctions were nothing, but a worthless piece of paper and did not make the necessary arrangements to handle them will be required to account for their actions since the country is now suffering from the problem.” - Chief of the General Inspection Office, Mostafa Pourmohammadi, December 31, 2012.

³¹⁶Seyed Shamseddin Hosseini, “Statement by the Honorable Seyed Shamseddin Hosseini,” IMF, September 23, 2011. <http://www.imf.org/external/am/2011/speeches/pr16e.pdf>

³¹⁷The Washington Post, “Iran's Growing State of Desperation,” Fareed Zakaria, January 4, 2012. <http://thecommongood.net/2012/01/irans-growing-state-of-desperation/>

³¹⁸ Reuters, “Iran's Rafsanjani chides Ahmadinejad over sanctions,” September 14, 2010. <http://af.reuters.com/article/energyOilNews/idAFLDE68D06L20100914?sp=true>

³¹⁹ The Wall Street Journal, “Iran's Economy Feels Sting of Sanctions,” Fassihi, Farnaz, October 12, 2010. <http://online.wsj.com/article/SB10001424052748703735804575535920875779114.html>

<http://www.irandailybrief.com/2012/12/31/anyone-who-has-failed-to-prepare-to-cope-with-the-sanctions-will-be-required-to-account-for-their-actions/>

- “Liquidity disproportional to national production, (western) sanctions, the trend of fluctuations combined with the incompetency of the government’s monetary and economic affairs officials have been the key factors behind the rising currency exchange rate.” – Majlis Member Ahmad Tavakkoli, December 21, 2012.
<http://www.irandailybrief.com/2012/12/21/governments-mismanagement-sanctions-behind-rise-in-currency-exchange-rate/>
- “We can’t say that sanctions have not hurt us. They have, but we devised plans to control the damage and have been able to avoid serious damage to our economy...It’s a temporary high rate of inflation in Iran, and we are trying our best to control it and bring it down to where it should be in the near future.” – Central Bank of Iran Governor, Mahmoud Bahmani, November 22, 2012.
<http://www.irandailybrief.com/2012/11/22/cbi-governor-iran-has-avoided-a-serious-dent-to-its-economy-from-western-sanctions-thanks-to-large-gold-reserves-high-oil-prices-and-reduced-foreign-imports/>
- “There is no precedence in the world for a central bank to be sanctioned. But they have done this and they may even expand the sanctions further to include logistics issues. Today we are in a serious and dangerous confrontation. We must realize that confronting the enemy requires serious thought and intelligence.” - Minister of Industries and Business, Mehdi Ghazanfari, July 17, 2012.
<http://iranprimer.usip.org/blog/all/Helia%20Ighani>
- “With God's grace, as was the case in other issues which the enemies were not able to do anything, they can do no damn thing in their economic confrontation with our people...This is a war against a nation...But the Iranian nation will defeat them.” Supreme Leader Ali Khameni, October 15, 2012.
<http://www.google.com/hostednews/afp/article/ALeqM5iM-IjGUz6UP3aoMlfrKdJxG2lq4A?docId=CNG.c36ac90c578becd9b22b3b70fe27a38e.741>
- “One factor is from outside, and one factor is from inside. The enemy has stated that it will impose (more) sanctions, and part of the oil purchases from Iran has decreased, and a considerable segment of our foreign currency revenues was generated through oil sales...What is worse than the oil sanction is the sanctions on banking transactions. If oil is sold, the payment cannot be transferred, and a massive and great secret war (against Iran) is actually underway in the world.” “Are these currency fluctuations because of economic problems? The answer is no...Is this because of government policies? Never...It's due to psychological pressure. It's a psychological battle.” – President Mahmoud Ahmadinejad, October 2, 2012.
<http://www.guardian.co.uk/world/2012/oct/02/ahmadinejad-iran-currency-psychological-war?newsfeed=true>
- “[Sanctions constituted an]...all-out, hidden, heavy war” and that sanctions were impeding the economy, “there are barriers in transferring money, there are barriers in selling oil, but we are removing the barriers.” - President Mahmoud Ahmadinejad, September 5, 2012.
<http://english.farsnews.com/newstext.php?nn=9106061782>
- On dialogue with the West, “[t]his is good talk and shows and exit from delusion ...But the U.S. president continued saying that he wants to make the Iranian people kneel through sanctions. This part of this speech shows the continuation of illusion in this issue.” - Supreme Leader Ali Khameni, March 8, 2012.
<http://www.npr.org/blogs/thetwo-way/2012/03/08/148231349/irans-ayatollah-khamenei-gives-rare-if-brief-praise-for-u-s>
- The current sanctions regime was “the heaviest economic onslaught on a nation in history.” - President Mahmoud Ahmadinejad, February 2, 2012.
<http://www.guardian.co.uk/world/2012/feb/02/western-sanctions-iran-economy>
- “Losing the European oil market will have an impact on Iran’s economy which needs rational planning by the authorities. Selling oil at sub-market level prices is not a good way to counter the oil embargo.” - Former Iranian Oil Ministry deputy, Mehdi Hosseini, January 26, 2012.
<http://www.criticalthreats.org/iran-news-roundup/iran-news-round-january-26-2012>

- “Iran can readily find new customers for its oil. We have no problem in selling oil.” - National Iranian Oil Company director for international affairs, Mohsen Qamsari, January 24, 2012. <http://www.mehrnews.com/en/newsdetail.aspx?NewsID=1516783>

Impact on Popular Attitudes and Regime Security

It is still unclear how the growing impact of the new sanctions will affect the Iranian people and if their anger will be pointed towards the regime or the US, EU, and UN for instituting sanctions. Moreover, the impact of sanctions cannot be separated from the impact of Iran's other long-standing economic problems. These include major barriers to efficient investment, massive youth unemployment, and inflationary cycles. Iran must also deal with an uncertain and painful transition out of government-funded subsidies. However, it is clear from Iranian media the people are as aware as the government that sanctions are having a steadily more significant effect on Iran's ability to interact with international financial institutions and increased the diplomatic costs for Tehran's trading partners.

Previous polls did seem to indicate that Iranians still seemed to have faith in their economy before the new round of sanctions in late 2011. Tehran's stock market had seen a huge increase in trade, and there was no clear sign of a significant capital flight.³²⁰ Also, Iran had sizable hard-currency reserves to absorb shocks, and the isolation of its banking sector helped to protect the country from the worst of the global financial crisis.³²¹

Some believed at the time that Iran's people would tolerate economic effects of international sanctions as long as world oil prices remained high (nearly \$100 per barrel in June 2011) and the regime could benefit from the fact sanction would have less impact.³²² Reza Marashi, a former Iran Desk Officer at the US Department of State argued in the summer of 2011 that the negative effects of existing sanctions had become serious, but had not affected the regime as much as might be expected:

Sanctions exacerbate this dependence on the government. By raising the costs of doing business in Iran, sanctions slow economic development and decrease employment options for the middle class. When fewer companies invest in Iran, there are fewer jobs for skilled middle-class workers; fewer opportunities to develop professional skills; and less socially conscious investments while the government prioritizes differently to combat foreign pressure. Alternative options for Iran's middle class are increasingly narrow: unemployment, emigration, or becoming state employees. As a result, many middle-class Iranians not employed by the government live on unsustainable sources of income such as second jobs and remittances from family abroad. Survival for the middle class is at best unstable, and the conservative factions in power prefer to keep it that way - a struggling middle class focused on making ends meet is easier to control.

Sanctions have in fact strengthened the hand of conservative factions that increasingly disregard economic reforms from the 1990's and early 2000's. Instead, they have favored economic populism and tighter government control of resources. This allows Iranian hardliners to kill two birds with one stone: reallocating resources to lower-class Iranians in an effort to expand their political base, while squeezing middle-class Iranians that are the backbone of Iran's pro-democracy movement. Together, these policies

³²⁰ The Washington Post, “Sanctions begin to compound Iran's severe economic problems”, Thomas Erdbrink, October 5, 2010. <http://www.washingtonpost.com/wp-dyn/content/article/2010/10/05/AR2010100505972.html>

³²¹ The Wall Street Journal, “Iran's Economy Feels Sting of Sanctions,” Fassihi, Farnaz, October 12, 2010. <http://online.wsj.com/article/SB10001424052748703735804575535920875779114.html>

increase the percentage of the population beholden to the state for its livelihood. With no compelling alternative in sight, Iranians are less likely to revolt and bite the proverbial hand that feeds them.³²³

At the same time, there have since been popular protests against government mismanagement of the economy and the dwindling value of the Rial. Protests erupted on October 3, 2012 at the Grand Bazaar in Tehran when police attempted to shut down black-market money changers.³²⁴ Protesters were reportedly shouting anti-government slogans and joined by merchants who then marched towards the Iranian Central Bank.³²⁵ However, this seems to be an isolated incident.

The pressure of sanctions and the regime's concern over popular opinion may have been a factor in Iran's willingness to offer a new plan to end the nuclear confrontation in early October 2012 – although this seems doubtful.³²⁶ The new plan was largely a rehash of past negotiating proposals that called for early dismantling of the sanctions, and a slow dismantling of the key enrichment sites like Fordow in ways that could allow Iran to move its enriched stocks and send them to other concealed centrifuge facilities or store them for a future breakout attempt.

Similar uncertainties arise over indicators the Supreme Leader is using Iran's president as a scapegoat for the country's economic problems in the wake of the March 2012 Iranian parliamentary elections. There have been increasing tensions between President Ahmadinejad and Supreme Leader Khamenei. The Supreme Leader's allies in the judiciary and legislature have been attacking the President, accusing him of "the most severe corruption since the 1979 revolution" and blaming him for economic mismanagement, "which has resulted in rising inflation and unemployment and an unprecedented collapse of the Iranian currency..."³²⁷ These actions, however, seem more likely to be a reflection of internal power struggles than a reaction to sanctions and popular discontent.

Sanctions and Negotiations

What is clear is that the new sanctions have already a major impact, this impact grew steadily during 2012, and the new sanctions will continue to have a growing cumulative impact on Iran's savings, foreign exchange reserves, oil and gas export income, and the ability to fund imports.

Sanctions will also affect popular attitudes towards the regime. While they are not targeted at the Iranian people, they have and will continue impact every Iranian except the very poor and the very rich, and will do so in an economy where savings and investment have been hurt by inflation, a devalued currency, and economic mismanagement. Any new series of sanctions is certain to have a growing impact on every Iranian whose income is shaped by the market economy - the vast majority in a country that the World Bank and CIA estimate is 67% to 71% urbanized.

³²³ Reza Marashi, "The Iran Sanctions Fallacy," Al Jazeera, August 26, 2011. <http://english.aljazeera.net/indepth/opinion/2011/08/20118238150723914.html>

³²⁴ Thomas Erdbrink and Rick Gladstone, "Violence and Protest in Iran as Currency Drops in Value," The New York Times, October 3, 2012. <http://www.nytimes.com/2012/10/04/world/middleeast/clashes-reported-in-tehran-as-riot-police-target-money-changers.html?hp>

³²⁵ BBC, "Iran police clash with protesters over currency crisis," October 3, 2012. <http://www.bbc.co.uk/news/world-middle-east-19812482>

³²⁶ David E. Sanger, "Iranians Offer Plan to End Nuclear Crisis," *New York Times*, October 5, 2012, p. A6.

³²⁷ Mehdi Khalaji, "Is A Ahmadinejad the Scapegoat for Iran's Economy?," *Al-Monitor*, October 4, 2012

Therefore it seems likely that the new sanctions will eventually, if they have not already, produce a major economic crisis for Iran unless the country does more than simply negotiate, threaten, and posture. Sanctions relief will only come with successful negotiations. Iran's leadership may be able to persevere in spite of such pressures due to their ability to deflect sanctions, but there is a limit to this ability. Past polls and election results are one thing, popular discontent after new and continuing sanctions combine with an economy in crisis.

It is important to note, that the "hardliners" in the regime continue to reject any talks with the US over its nuclear program. And Iranians cannot avoid seeing the deep differences with in the clergy, the growing role of unelected leaders of the IRGC, and the bitter exchanges between the Supreme Leader Ali Khamenei and President Mahmoud Ahmadinejad. Iran's history of corrupt presidential and legislative elections and crackdowns on human rights do not help. The more that sanctions interact with repressive restrictions on normal life, the more these problems are likely to impact on all classes of Iranian society.

So far Iran seems to be sending mixed signals. There were reports in early October 2012 that that Iran had offered a new plan to end the nuclear confrontation.³²⁸ The plan was said to be largely a rehash of past negotiating proposals that called for early dismantling of the sanctions, and a slow dismantling of the key enrichment sites like Fordow in ways that could allow Iran to move its enriched stocks and send them to other concealed centrifuge facilities or store them for a future breakout attempt.

Some reports indicated that this plan was rejected by the United States because it would have allowed Iran to continue to enrich Uranium until sanctions were completely removed, and allow Iran's stockpile of 20% enriched Uranium to remain in the country - making it easier for Iran to retain a "breakout" capacity. This indicated Iran might have calculated that the end result would be to dismantle the sanctions effort in ways the US and EU could not rebuild, and be a variant on Iran's past "negotiate and proceed" tactics.

Other reports indicated that Iran's action were at least a sign that sanctions might drive Khamenei to accept a serious agreement.³²⁹ Two days later, however, Iranian officials dismissed the report. They claimed the report was "baseless," and that "Iran has never delivered any new proposal other than what had been put forward in talks with the P5+1."³³⁰

At the same time, Iran did become steadily more critical of the IAEA after the spring of 2012 - increasingly implying that the IAEA's activities and reports were an extension of US and Western sanctions efforts and intelligence activities. IAEA officials also became the target of anti-IAEA protests in Tehran mid-August.

Iran took an even harsher tone with the IAEA in the days that followed reports of a new Iranian negotiating proposal and Iran's denial. Iran accused the international agency's inspectors of sabotaging Iran's electrical grids supplying Iran's Fordow and Natanz enrichment plants during August's IAEA inspection. Iranian officials also accused the agency of tampering with

³²⁸ David E. Sanger, "Iranians Offer Plan to End Nuclear Crisis," *New York Times*, October 5, 2012, p. A6.

³²⁹ David E. Sanger, "Iranians Offer Plan to End Nuclear Crisis," *New York Times*, October 5, 2012, p. A6.

³³⁰ Thomas Erdbrink, "Iran Denies Plan to End Nuclear Standoff," *The New York Times*, October 6, 2012.

<http://www.nytimes.com/2012/10/07/world/middleeast/iran-denies-report-of-plan-to-end-nuclear-standoff.html>

equipment and Fereydoun Abbasi, Iran's chief nuclear official said that, "Terrorists and saboteurs might have intruded the agency and might be making decisions covertly."³³¹

Some experts felt that these developments reflected an Iranian effort to prepare for either downgrading its relationship with the IAEA or for removing the inspectors altogether. They also speculated that an increasingly hostile relationship between Iran and the IAEA might seriously imperil future negotiations. While the outright removal of inspectors would instantly increase tensions to the point that Israel would seriously consider a preemptive strike.

The IAEA did, however, continue to meet with Iran. Its meeting with Iran on December 15, 2012, was reported to be a "good meeting." There has been more recent news reports that Iran and the IAEA may come together on an agreement that resolves some of the issues between the international nuclear energy organization and the Republic of Iran.³³² It is not known if the deal includes IAEA visitation to the Parchin military facility, other specifics, or if the deal will even happen. Previous optimistic predictions in January 2011 and May 2012 did not come to fruition.³³³ A final agreement could be signed as soon as January.

However, reporting on January 16, 2013, threw the outcome of the IAEA-Iran meeting into doubt. The IAEA team arrived in Tehran on January 15, 2012, but after two days of negotiating, failed to reach an agreement; new talks are scheduled for February 12, but if these talks will succeed where so many others have failed is unknown.³³⁴

P5+1-Iran talks have similarly stalled. In mid-December 2012, Iran indicated that it was willing to enter into new talks with the western group of nations. Quickly the P5+6 agreed to a new package, similar to the one offered during negotiations in the summer of 2012, and it appeared that both sides were working towards determining a timetable for talks to begin sometime in January 2013.³³⁵ However, recent reporting detailed a silent Iranian negotiating team that has not responded to two proposals for possible meeting dates. Yet, some experts believe that the time is right, with sanctions continuing to impact Iran's economy and rife political infighting, for a deal between the two sides, "For the West to become confident about our peaceful nuclear activities and for us to get our rights and get past the effects of sanctions and the difficult path the enemy

³³¹ http://www.washingtonpost.com/world/national-security/with-sabotage-charge-iran-takes-hostile-tone-with-un-watchdog/2012/10/07/c738fbbc-0f36-11e2-bb5e-492c0d30bff6_story_1.html

³³² Rick Gladstone, "Iran: Progress on Nuclear Talks," The New York Times, December 15, 2012. http://www.nytimes.com/2012/12/15/world/middleeast/iran-progress-on-nuclear-talks.html?_r=0

³³³ Simon Sturdee, "Mooted IAEA-Iran 'deal' just the beginning: analysts," AFP, December 17, 2012. <http://www.google.com/hostednews/afp/article/ALeqM5hWZCLkpvmljXfi8NwMmEZsSBajng?docId=CNG.35f97d6d5a43bc48fb75934c43f11660.b1>

³³⁴ Mohammad Davari, "Iran, IAEA agree on new nuclear talks but no deal," AFP, January 17, 2013. http://www.google.com/hostednews/afp/article/ALeqM5hSb55ByO8fPhivatnA7OKJ_V6VZg?docId=CNG.c6543f538ef78269eccb286ca84c445f.e1

³³⁵ Joby Warrick, "New nuclear talks with Iran may be possible in coming weeks, U.S. says," The Washington Post, December 14, 2012. http://www.washingtonpost.com/world/national-security/new-nuclear-talks-with-iran-said-to-be-imminent/2012/12/14/8f02b5bc-462c-11e2-8061-253bccfc7532_story.html

has prepared for us, there is only one way, and it is negotiations,” said Hassan Rowhani, a former senior Iranian nuclear negotiator.³³⁶

Iran’s Limited Oil Export Income and Export Vulnerability

Iran’s economic vulnerabilities are compounded by the fact that its oil revenues have propped up much of the Iranian economy in the past, but have always been too limited to meet Iran’s requirements for national development or provide its people with a high per capita income.

Figure V.16 provides additional data that show that Iran’s oil revenues are not high in per capita terms, and are only a fraction of the per capita oil earnings of Qatar, Kuwait, and the UAE. To put such data in context, even before the new rounds of sanction in late 2011, the CIA estimated that Iran’s per capita income ranked only 101st in the world while a neighbor like Qatar ranked 1st and the UAE ranked 10th even before the new round of sanctions.³³⁷

This mix of economic weaknesses and vulnerabilities not only may lead to popular pressure in the regime, but presents problems for Iran in acting on the threats in made to “close the Strait” in late 2011, early 2012, and continuing through the year. Any actions that shut off the flow of oil through the Gulf would be more damaging to Iran than to any of the Southern Gulf exporting states. Iran’s currency reserves are far smaller and its economy is not sufficiently diversified to withstand a major loss in oil revenue that would go along with a complete halt of oil traffic through the Strait since Iran’s economy has long been marginal in meeting the needs of its people even when oil moves freely through the shipping lanes.

The Iranian government cannot support its people without imports of food, fuel, gasoline, and spare parts, a large portion of which it obtains through sea transportation due to its limited overland connections to its neighbors. Iran cannot maintain or expand its energy exports if it is at war or outside states refuse to deal with it, and the situation is becoming steadily more difficult for Iran even without a crisis in the Gulf or Strait of Hormuz that would cause a major cut in oil traffic.

³³⁶ Jason Rezaian and Joby Warrick, “Prospects for nuclear talks with Iran dim,” The Washington Post, January 16, 2013. http://www.washingtonpost.com/world/middle_east/prospects-for-nuclear-talks-with-iran-dim/2013/01/16/7f1113f4-5f42-11e2-a389-ee565c81c565_story.html

³³⁷ CIA World Factbook, 2012, <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>, accessed January 6, 2012.

*Figure V.16: Comparative Iranian and Other OPEC Oil Income***OPEC Net Oil Export Revenues**

Country	Nominal (Billion \$)				Real (Billion 2005\$)			
	2011	2012	2013	Jan-Apr 2012	2011	2012	2013	Jan-Apr 2012
Algeria	\$63	--	--	\$22	\$54	--	--	\$19
Angola	\$68	--	--	\$25	\$58	--	--	\$21
Ecuador	\$10	--	--	\$4	\$9	--	--	\$3
Iran	\$95	--	--	\$29	\$81	--	--	\$24
Iraq	\$71	--	--	\$26	\$61	--	--	\$22
Kuwait	\$85	--	--	\$33	\$72	--	--	\$28
Libya	\$13	--	--	\$15	\$11	--	--	\$13
Nigeria	\$90	--	--	\$32	\$77	--	--	\$27
Qatar	\$57	--	--	\$21	\$49	--	--	\$17
Saudi Arabia	\$311	--	--	\$117	\$265	--	--	\$99
UAE	\$101	--	--	\$35	\$86	--	--	\$29
Venezuela	\$60	--	--	\$21	\$51	--	--	\$18
OPEC	\$1,026	\$1,154	\$1,117	\$381	\$875	\$962	\$917	\$320

OPEC Per Capita Net Oil Export Revenues

Country	Nominal (\$)				Real (2005\$)			
	2011	2012	2013	Jan-Apr 2012	2011	2012	2013	Jan-Apr 2012
Algeria	\$1,811	--	--	\$632	\$1,545	--	--	\$531
Angola	\$5,106	--	--	\$1,858	\$4,356	--	--	\$1,560
Ecuador	\$711	--	--	\$243	\$607	--	--	\$204
Iran	\$1,409	--	--	\$424	\$1,203	--	--	\$356
Iraq	\$2,341	--	--	\$856	\$1,998	--	--	\$718
Kuwait	\$29,292	--	--	\$11,133	\$24,991	--	--	\$9,343
Libya	\$1,978	--	--	\$2,322	\$1,700	--	--	\$1,948
Nigeria	\$608	--	--	\$214	\$519	--	--	\$180
Qatar	\$57,641	--	--	\$20,597	\$49,185	--	--	\$17,285
Saudi Arabia	\$10,465	--	--	\$3,908	\$8,929	--	--	\$3,280
UAE	\$19,683	--	--	\$6,598	\$16,792	--	--	\$5,538
Venezuela	\$2,176	--	--	\$764	\$1,857	--	--	\$642
OPEC	\$2,683	\$2,964	\$2,816	\$984	\$2,289	\$2,470	\$2,312	\$826

Source: Adapted from http://www.eia.gov/cabs/OPEC_Revenues/Factsheet.html

Figure V.17: Iran's Top Energy Importers and Current Reductions

Country/Bloc	2011	Average 2012 (est.)
European Union (particularly Italy, Spain, and Greece)	600,000	Negligible
China	550,000	380,000
Japan	325,000	170,000
India	320,000	280,000
South Korea	230,000	180,000
Turkey	200,000	150,000
South Africa	80,000	0
Malaysia	55,000	30,000
Sri Lanka	35,000	20,000
Taiwan	35,000	20,000
Singapore	20,000	15,000
Other	55,000	25,000
Total	2.5 mbd	1.27 mbd

Source: Kenneth Katzman, *Iran Sanctions*, Congressional Research Service, December 7, 2012. Page 40

Foreign Companies Exiting the Iran Market

The current sanctions regime also creates strong penalties that act to push foreign companies and investors out of the Iranian economy. While none of the existing sanctions ban all trade with Iran (US and EU sanctions allow for exemptions for food and medical products), sanctions have made it exceedingly difficult to do business in the country has led to an exodus of foreign companies from Iran. **Figure V.18** shows this in more detail.

According to Treasury and State Department officials, at least 80 major banks had committed not to finance exports to Iran or to process dollar transactions for Iranian banks even before the newer and more stringent US and EU sanctions were passed.³³⁸ Among those that pulled out of Iran were Credit Suisse and UBS (Switzerland), HSBC and Barclays (Britain), Commerzbank, Dresdner Bank, BNP Paribas, and Deutsche Bank (Germany), Société Générale and Le Crédit Lyonnais (France) and even the National Bank of Fujairah, based in Dubai.³³⁹

This is only some of the evidence that sanctions are having a significant impact on Iran's economy, although not necessarily on its nuclear program. Given this exodus, Iran has had to scramble to find alternative ways to import food, refilled gasoline, and other critical supplies - precisely the effect that US officials have been hoping for.³⁴⁰

However, some Japanese and European companies walked away from lucrative contracts and projects in Iran made it clear at the time that they feared losing out to their competitors who may be anxious to step in.³⁴¹ US politicians and outside experts have expressed concern in 2011 that Asian firms, from China in particular, as well as from Malaysia, Vietnam, and countries in Eastern Europe, were "backfilling", or moving in to fill the void left by vacating European firms.

There is some reason for such concern. Some foreign firms have been picking up the slack left by exiting European nations, and using it to create a foothold in the Iranian marketplace. In May 2011, China and Iran signed a \$20 billion mining and industrial investment agreement.³⁴² China is also a major player in Iran's petroleum sector. In July 2012, China signed a \$20 billion deal to develop the Azadegan and Yadavaran fields with an end goal of 700,000 bpd, and has shown an interest in developing Iran's heavy oil fields.³⁴³ China however, has reportedly "gone slow" with new contracts or has not yet implemented agreements. It is not clear whether this is official

³³⁸Rachel L. Loeffler, "Bank Shots," Foreign Affairs, April 2009.

<http://www.foreignaffairs.com/articles/64822/rachel-l-loeffler/bank-shots>

³³⁹Rachel L. Loeffler, "Bank Shots," Foreign Affairs, April 2009.

<http://www.foreignaffairs.com/articles/64822/rachel-l-loeffler/bank-shots>

³⁴⁰The Washington Post, "In Iran, sanctions aim at shipping lifeline", Thomas Erdbrink, June 30, 2011.

http://www.washingtonpost.com/world/national-security/in-iran-sanctions-aim-at-shippinglifeline/2011/07/08/gIQAyJgw7H_story.html

³⁴¹ The Washington Post, "Chinese firms bypass sanctions on Iran, US says", John Pomfret, October 18, 2010.

<http://www.washingtonpost.com/wp-dyn/content/article/2010/10/17/AR2010101703723.html>

³⁴² Scott Harold, "China and Iran: Economic, Political, and Military Relations, RAND, July 27, 2012. Pg. 11

³⁴³ Press TV, "China to invest USD 20bn to develop two Iranian oil fields: Qasemi," July 8, 2012.

<http://www.presstv.ir/detail/2012/07/08/249976/china-to-invest-usd-20-bn-in-iran-oil-fields/>

policy stemming from Beijing or if Chinese companies are trying to reduce their risk in light of increased sanctions and tensions.³⁴⁴

So far, however, such “backfilling” has had its limits. A report the GAO issued in December 2012 identified 42 foreign firms involved in Iran’s energy sector between 2005 and 2012, however, by June 2011, 19 of those companies had withdrawn from Iran and between that period and September 2012, only 7 firms were reported to be engaged in the energy sector.³⁴⁵ According to the report, there was not enough open source information to positively determine the Iranian activities between June 2011 and September 2012 for the last 8 firms. Between January 2012 and September 2012, the only firm that was reported to have sold refined gasoline to Iran was Syria’s state-owned oil corporation Sytrol.

Moreover, most of the actual and potential backfilling companies were not as technically capable as those that withdrew from Iran.³⁴⁶ In fact, many experts believe that, over time, the efficiency and output of Iran’s economy would decline as foreign expertise departs and Iran is forced to work with less capable foreign companies.³⁴⁷ The impact of new and much stricter sanctions will almost certainly make this worse.

³⁴⁴ Scott Harold, “China and Iran: Economic, Political, and Military Relations, RAND, July 27, 2012. Pg. 12

³⁴⁵ Government Accountability Office, “Firms Reported to Have Sold Iran Refined Petroleum Products or Engaged in Commercial Activities in Iran’s Energy Sector,” December 7, 2012. Pg 3. GAO-13-173R Iran Energy Sector

³⁴⁶ Kenneth Katzman, “Iran Sanctions,” CRS, June 22, 2011.

³⁴⁷ Kenneth Katzman, “Iran Sanctions,” CRS, June 22, 2011.

Figure V.18: Major Non-Petrol Related Foreign Companies Halting Business in Iran, 2010-2011

Country	Company	Field
China (Hong Kong)	NYK	Shipping
Denmark	Maersk	Shipping
Germany	Siemens	Telecommunications
	Thyssen-Krupp	Steel
	Daimler	Automotive
	Munich Re	Insurance
	Allianz	Insurance
	Hannover Re	Insurance
	Italy	Finmeccanica
Ireland	Ingersoll-Rand Plc	Manufacturing
Japan	Toyota	Automotive
South Korea	Kia	Automotive
	Hyundai	Automotive
Switzerland	ABB	Engineering
United Kingdom	Lloyds	Insurance
United States	Caterpillar	Construction/Mining
	Huntsman Corp	Chemical Manufacturing
	KPMG	Accounting
	PricewaterhouseCoopers	Accounting
	Ernst & Young	Accounting
France	Peugeot	Automotive
	BNP Paribas ³⁴⁸	Banking/Financial Management
Finland	Nokia	Telecommunications
India	Tata Group	Communications/Steel/Services

Sources:

Kenneth Katzman, "Iran Sanctions," CRS, 22 June 2011, p. 55

http://www.washingtonpost.com/world/national-security/in-iran-sanctions-aim-at-shipping-lifeline/2011/07/08/gIQAyJgw7H_story.html

<http://www.state.gov/r/pa/prs/ps/2011/05/164131.htm>

<http://www.foxbusiness.com/markets/markets/2010/10/01/factbox-foreign-companies-stepping-away-iran/>

³⁴⁸ Note: BNP Paribas has indicated that they will not pursue new business in Iran but will fulfill existing obligations

Figure V.19: Foreign Firms Selling Refined Petroleum Products to Iran between June 2011 and September 2012- Insufficient Information Available

Firm	Country ^a	Status in GAO's January 2012 report	Status in current GAO report
1. China Oil	China	Active	Insufficient information available
2. Petróleos de Venezuela S.A.	Venezuela	Active	Insufficient information available
3. Unipet	China	Active	Insufficient information available
4. Zhuhai Zhenrong	China	Active	Insufficient information available

Source: Government Accountability Office, "Firms Reported to Have Sold Iran Refined Petroleum Products or Engaged in Commercial Activities in Iran's Energy Sector," December 7, 2012.

Figure V.20: Foreign Firms Engaged in Iran's Energy Sector between June 2011 and September 2012- Confirmed

Firm	Country ^a	Status in GAO's August 2011 report	Status in current GAO report
1. China National Petroleum Corporation	China	Active	Active
2. Daelim	South Korea	Active	Active
3. Indian Oil Corporation Ltd.	India	Active	Active ^b
4. Oil India Ltd.	India	Active	Active ^c
5. ONGC Videsh Ltd.	India	Active	Active ^d
6. Sasol	South Africa	Active	Active ^e
7. Sinopec	China	Active	Active

Source: Government Accountability Office, "Firms Reported to Have Sold Iran Refined Petroleum Products or Engaged in Commercial Activities in Iran's Energy Sector," December 7, 2012.

Figure V.21: Foreign Firms Engaged in Iran's Energy Sector between June 2011 and September 2012- Insufficient Information Available

Firm	Country ^a	Status in GAO's August 2011 report	Status in current GAO report
1. Amona	Malaysia	Insufficient information available	Insufficient information available
2. China National Offshore Oil Corporation	China	Active	Insufficient information available
3. INA	Croatia	Active	Insufficient information available
4. Oil and Natural Gas Corporation (ONGC)	India	Active	Insufficient information available
5. Petrofield	Malaysia	Insufficient information available	Insufficient information available
6. Petróleos de Venezuela S.A.	Venezuela	Active	Insufficient information available
7. Petronet LNG	India	Insufficient information available	Insufficient information available
8. SKS Ventures	Malaysia	Insufficient information available	Insufficient information available

Source: Government Accountability Office, "Firms Reported to Have Sold Iran Refined Petroleum Products or Engaged in Commercial Activities in Iran's Energy Sector," December 7, 2012.

Outside Views of the Overall Economic Impact of Sanctions

If one looks at other indicators, it again becomes clear that there are no reliable data that can yet portray the full impact of the new energy, banking, sanctions that the US and EU have implemented over the past two years. There are only a series of rough and sometimes conflicting indicators.

The data on Iran in the World Bank web pages on Iran are often dated and many go back to 2009 and 2010.³⁴⁹ Partly because of this timing, they reflect progress in many human development indicators, including the rather ironic fact that twice as many women now graduate from university in Iran as men. The World Bank does state, however, that:

Economic growth increased by 3.5 percent in 2009/10 while prudent macroeconomic policies reduced inflation to about 10 percent and ensured a fiscal surplus. The initial impact of the removal of the substantial energy and food subsidies in December 2010 did not suppress Iran's economic performance despite stricter economic sanctions. Nevertheless, growth is projected to decline to 2 percent in 2011 and to decrease further thereafter, and inflation is expected to increase to around 20 percent in 2011 and 2012 due to the impact of the substantial increase in energy prices. The authority to release inflation statistics has been transferred from the Central Bank to a new agency, the Supreme Council of Statistics, which weakens the credibility of official inflation statistics.

The medium term outlook for economic growth is lower due to tougher sanctions and overall declining oil production. Exports of crude oil are expected to decline due to embargoes by the EU and lower demand from China and India after recent payment difficulties due to the US sanctions on the Iranian central bank. Moreover, higher than expected inflation after subsidy removals are projected to depress private consumption. The industry is also likely to struggle to adjust to higher energy prices also due to the sluggish provision of Government assistance that had been earmarked for the sector.

The recently imposed international sanctions between December 2011 and February 2012 have increased the cost of doing business, limited access to foreign direct investments and foreign technologies, and exacerbated international trade and financial transactions. The United Nations Security Council (UNSC) sanctions include a ban on financing and exports related to Iran's nuclear and military programs. In January 2012, the US imposed new sanctions including a ban on any financial institution doing business with Iran's central bank from conducting business in the US. In addition, the EU agreed to impose an embargo on imports of Iranian oil; no new contracts or delivery can be agreed starting July 1st.³⁵⁰

An updated *World Bank Economic Outlook* for 2012 also does include some more current details on Iran's economic situation:³⁵¹

- Growth in the MENA region was below trend in 2011, primarily because of country-specific factors. Among oil exporters, strong oil prices contributed to growth of 4 percent in 2011, which was held down by lower outcomes in the Islamic Republic of Iran related to a poor harvest and the effect of the subsidy reform.
- Among oil exporters, negative developments in the Islamic Republic of Iran are projected to be offset by increased oil production in Iraq and Saudi Arabia and a bounce back in Libya.

The data on the IMF web page includes both past estimates and future projections through 2012, 2013, and 2017. According to the IMF, Iran's real GDP growth in 2010 was 3.5%, which then dropped to a 2.0% growth in 2011 in spite of high oil prices and export revenues. The IMF

³⁴⁹The economic overview ends in 2009. See "Iran, Islamic Rep. at a Glance," http://devdata.worldbank.org/AAG/irn_aag.pdf.

³⁵⁰ The World Banks, "Iran Overview," October 2012. <http://www.worldbank.org/en/country/iran/overview>

³⁵¹ IMF, World Economic Outlook 2012, <http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/text.pdf>,

projects a further drop in growth to 0.4% in 2012, but an increase of 1.3% in 2013, and only a 2.0% in 2017. Furthermore, the IMF reported a 21.3% annual rise in consumer prices in 2011 - a near doubling over the 2010 rate and enough to seriously erode the value of incomes' and savings', the ability to pay for imports, and potentially to fund key aspects of life such as marriage, housing, educational expenses, and business expansion and investment.³⁵² The World Bank estimates an average inflation rate of 22.1% during 1993-2002 and rates ranging from 25.4% to 12.4% during 2003-2010.³⁵³

The CIA *World Factbook* provides additional detail on some of the aspects of the Iranian economy that help reflect the potential impact of steadily tighter sanctions. It notes that Iran is a highly populated country with a total population of some 78 million, a growth rate of 1.25%, and a median age of only 27.4 (24% of the population is 14 years of age or younger). The CIA not only estimates urbanization at 71%, it makes estimates by city that show how critically dependent the most advanced elements of the population are on the market economy: Tehran (capital) 7.19 million; Mashhad 2.592 million; Esfahan 1.704 million; Karaj 1.531 million; Tabriz 1.459 million (2009).³⁵⁴

At the same time, differences in estimates of estimate Iranian GDP data provide a warning about the uncertainty in almost every aspect of the data available on Iran and a partial explanation of why experts differ. The CIA estimates the GDP at \$990 billion in 2011 in purchasing power parity (PPP) terms but only \$474.7 billion in market terms at the official exchange rate – roughly 48% of the PPP total.³⁵⁵

As for other indicators, the CIA estimated real growth at only 2% in 2011 - roughly equal with IMF and World Bank data and only slightly greater than the population growth rate at 1.247%. It estimates industrial production dropping by 2.7% in 2011, and it may drop more as sanctions continue to hit the Iranian economy. It estimates a per capita income of \$13,200 in 2011 in PPP terms, which tends to sharply exaggerate the actual income of Iranians, which ranks only 94th in the world and is a fraction of the per capita income of the Southern Gulf states.³⁵⁶

The CIA's poverty level data are only as recent as 2007 and that estimate 18.7% was at or below poverty levels. More meaningfully, the total unemployment estimate for 2011 was 15.3%. It estimates youth unemployment in the 15-24 years of age category was 20.2% - 23% for males and 34% for women, and at least 715,000 more men and 677,000 more women reached the age where they should enter the labor force in 2010.³⁵⁷

³⁵² IMF, January 18, 2011, <http://www.imf.org/external/country/irn/index.htm>.

³⁵³ IMF, World Economic Outlook 2011, <http://www.imf.org/external/pubs/ft/weo/2011/02/pdf/text.pdf>, pp. 184, 190.

³⁵⁴ The Central Intelligence Agency, "World Factbook: Iran," January 2, 2013. <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

³⁵⁵ The Central Intelligence Agency, "World Factbook: Iran," January 2, 2013. <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

³⁵⁶ The Central Intelligence Agency, "World Factbook: Iran," January 2, 2013. <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

³⁵⁷ The Central Intelligence Agency, "World Factbook: Iran," January 2, 2013. <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

As is the case with every nation in the developing world, employment, labor force, and unemployment estimates are extremely uncertain in economies where disguised unemployment (jobs which have no productivity gain) is common. Productivity gain is often negligible, and dependent on energy export income. Moreover, the CIA estimates that the services sector accounts for some 45% of the labor force and 47.9% of the GDP.³⁵⁸ Moreover, Iran is heavily dependent on imports (\$76.1 billion in 2011) - not only of refined hydrocarbon products but key goods like industrial supplies, capital goods, foodstuffs and other consumer goods, and technical services.³⁵⁹

Some outside sources question the impact of sanctions. An IMF statement issued on June 13, 2011 did question how much impact international sanctions were then doing to harm Iran's economy. The statement was based on a May 28 to June 9 visit, and indicated that Iran's GDP was growing at a rate of about 3.5%, and that the government had brought inflation down from 25% in 2008 to about 12% in 2010/2011.³⁶⁰ The IMF also credited the government's privatization program with positive economic effects.

Hassan Hakimian, an economic expert and director of the Middle East Institute at the London School of Oriental and African Studies (SOAS) argued, however, that, "the IMF is on the optimistic side and comes across as rather rash in its judgment. Most independent observers believe that it's too soon to draw such conclusions."³⁶¹ Additionally, Hakimian noted, official data about Iran's economy such as inflation and unemployment rates are often disputed both internally and externally.³⁶² He seems to have been proved correct. The newer IMF data quoted earlier are substantially less favorable for Iran than the June report.

These differences illustrate the need for caution since some data exaggerate the impact of sanctions, while other data depend on official Iranian reports that are altered to make Iran's economy look better than it really is. What is clear at this point is that sanctions are continuing to hit the Iranian economy, Iran continues to export less and less oil, and its economy will increasingly come under extended strain.

Sanctions and Energy Competition

Iran's energy resources have become a key area of competition between the US and Iran. Iran's oil and natural gas reserves rank among the largest in the world - third in global proven conventional oil deposits, second in natural gas deposits, and fourth in production of crude oil.³⁶³

³⁵⁸ The Central Intelligence Agency, "World Factbook: Iran," January 2, 2013. <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

³⁵⁹ The Central Intelligence Agency, "World Factbook: Iran," January 2, 2013. <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

³⁶⁰ International Monetary Fund, "Statement by IMF Article IV Mission to the Islamic Republic of Iran," June 13, 2011. <http://www.imf.org/external/np/sec/pr/2011/pr11228.htm>

³⁶¹ The Guardian UK, "IMF report on Iran's economic success draws skepticism", Saeed Kamali Dehghan, June 17, 2011. <http://www.guardian.co.uk/world/2011/jun/17/imf-report-iran-economic-success>

³⁶² The Guardian UK, "IMF report on Iran's economic success draws skepticism", Saeed Kamali Dehghan, June 17, 2011. <http://www.guardian.co.uk/world/2011/jun/17/imf-report-iran-economic-success>

³⁶³ "Firms Reported in Open Sources as Having Commercial Activity in Iran's Oil, Gas, and Petrochemical Sectors," Government Accountability Office, March 23, 2010, <http://www.gao.gov/products/GAO-10-515R>

Regardless of sanctions, no outside power or energy company can ignore the potential value of energy deals with Iran. At the same time, they cannot ignore the extent to which Iran's politics and sanctions present serious risks in investing in Iran's energy development as well as in importing its petroleum.

Iran Needs Outside Investment As Much as the World Needs Iranian Petroleum and Gas

Iran needs outside investment and technology at least as much as outside powers need Iranian oil and gas. As has been discussed earlier, Iranian petroleum exports are a key part of Iran's national economy and its government's revenue. Oil export revenues account for more than 20% of their Gross Domestic Product, roughly 70% of Iran's foreign-currency earnings, and more than 60%-70% of its budgetary revenue.³⁶⁴ Iran's energy sector represents such a large share of the Iranian economy that it is as much a vulnerability as a strength. As a result, US and Iranian competition in this sector primarily plays out with the United States and its allies attempting to expand their unilateral sanctions while Iran attempts to avoid their enforcement.

Iranian senior officials and officers have threatened to close the Strait of Hormuz to international shipping if sanctions continue or Iran is attacked, warning explicitly that Iran can and will block the Strait in response to "any act of aggression or adventure."³⁶⁵ It is unclear how the Iranians would block off the Strait to oil traffic but it is assumed that small boat tactics, land base anti-ship missiles and mines will make up a large part of that strategy.

The Iranians have also stockpiled various types of naval mines over the years but their deployment systems, types, and numbers are still up for debate. Some estimate that Iran has some 5,000-20,000 mines and can deploy them with military, commercial, and civilian vessels.³⁶⁶ These include both traditional floating mines and more advanced captor and moored contact mines. However, mining the Strait would harm Iran more than the US or its neighbors by preventing Iranian oil exports and endangering their relations with all countries who transport cargo through the area.

Effect of Sanctions on Iran's Energy Sector

There are indications that existing sanctions had caused substantial injury to the energy sector even before the US and EU imposed far stronger sanctions throughout 2012. State Department Special Advisor Robert Einhorn testified on July 29, 2010, that about \$50 billion of investment

³⁶⁴ Katzman, Kenneth, "Iran Sanctions." Congressional Research Service. December 7, 2012; Economist Intelligence Unit - Iran Data, The Economist, October 2010

³⁶⁵ Fars News, "Senior MP: Iran Capable of Blocking the Strait of Hormuz," April 26, 2010, <http://english.farsnews.com/newstext.php?nn=8902061586>. See also Tehran Times, "Sayyari: Iran Powerful enough to Close the Hormuz Strait," November 30, 2008, http://www.tehrantimes.com/Index_view.asp?code=183642; and "IRGC Official: Persian Gulf Security is for All or None," IRNA, August 1, 2010, <http://www.globalsecurity.org/wmd/library/news/iran/2010/iran-100801-irna01.htm>.

³⁶⁶ http://e-ring.foreignpolicy.com/posts/2012/09/20/underwater_rpgs_floating_garbage_shazam_and_other_reasons_why_the_us_navy_is_so_wor

in Iran's energy sector had been deterred by sanctions and other forms of pressure.³⁶⁷ Some US officials have put the figure closer to \$60 billion in lost investment.³⁶⁸

IHS Global Insight has estimated that Iran requires approximately \$25 billion per year to maintain its current rate of oil production and considerably more to develop and deploy advanced recovery techniques needed to maintain or increase its daily output.³⁶⁹ With additional sanctions now in place, Iran will most likely not have the resources or hard currency necessary to make these investments itself and will be hard pressed to find foreign companies to risk being sanctioned by the EU and US if it does invest in Iran's oil industry.

Numerous companies have been sanctioned under the 2010 Comprehensive Iran Sanctions Accountability and Divestment Act, the most far-reaching sanctions implemented since the 1979 revolution.³⁷⁰ As a result of these sanctions, most major energy, transportation, and associated firms have pulled out of Iranian projects, declined to make further commitments, or resold their investments to other companies (See **Figure V.22**). Observers have reported little new investment in Iranian energy fields, with the absence of development particularly damaging at the massive South Pars gas field.³⁷¹

Possibly as a result of foreign companies ending business and investment, Iran's oil production fell to about 3.8 million barrels per day (mmbd) from about 4.1 mmbd in the mid-2000s, and was projected to fall to about 3.3 mmbd by 2015 before the new sanctions were imposed.³⁷² Depending on the source, Iranian gas production has continued to drop, now totaling between 3.2 mbpd and 2.6 mbpd according to outside sources and roughly 3.7 mbpd according to Iranian sources (See **Figure V.13**).

Although Iran remains a relatively minor natural gas exporter, it has the second largest proven natural gas reserves as seen in **Figure V.1** and some maintain that Iran's gas sector can more than compensate for declining oil exports.³⁷³ However, given the level of sanctions now imposed on all aspects of Iran's energy sector, it is highly unlikely that it will be able to attract the \$145 billion in new investment by 2018 Tehran's deputy Oil Minister has said Iran needs in order to develop its gas sector.³⁷⁴

³⁶⁷ Testimony of Special Advisor Robert Einhorn. House Committee on Oversight and Government Reform. July 29, 2010

http://democrats.oversight.house.gov/images/stories/Hearings/Committee_on_Oversight/2010/072910_Iran_Sanctions/TESTIMONY-Einhorn.pdf

³⁶⁸ Kenneth Katzman, "Iran Sanctions," CRS, 22 June 2011, p. 56-57

³⁶⁹ Government Accountability Office, "Firms Reported to Have Sold Iran Refined Petroleum Products or Engaged in Commercial Activities in Iran's Energy Sector," December 7, 2012. Pg 3. GAO-13-173R Iran Energy Sector

³⁷⁰ http://www.acus.org/new_atlanticist/china-undercuts-sanctions-iran

³⁷¹ Kenneth Katzman, "Iran Sanctions," CRS, 22 June 2011, p. 56-57

³⁷² The Wall Street Journal, "Irans falling oil output means less revenue, clout," Spencer Swartz, June 26, 2010. <http://online.wsj.com/article/SB10001424052748704569204575328851816763476.html>

³⁷³ Kenneth Katzman, "Iran Sanctions," CRS, 22 June 2011.

³⁷⁴ Government Accountability Office, "Firms Reported to Have Sold Iran Refined Petroleum Products or Engaged in Commercial Activities in Iran's Energy Sector," March 23, 2010. GAO-10-515R Iran Energy Sector

There has been concerns that sanctions will allow Asian firms to “backfill” vacated Iranian energy investments, and there has been some level of “backfill” by Chinese firms. However, the investment from China, who has four projects in Iran, the Masjed-i-Suleiman project, the North and South Azadegan oil fields, and Phase 11 of the South Pars offshore gas field, is miniscule compared to current Iranian investment needs.³⁷⁵ And this backfill may not happen at all; Iran has frozen a \$4.7 billion contract with China National Petroleum Corporation to develop the Phase 11 of the South Pars field because of the failure to start work, and Sinopec is behind schedule in developing the Yadavaran oil field.³⁷⁶ According to sources, China backed out of the South Pars development plan due to onerous contract clauses and a tight schedule.³⁷⁷ According to Iranian sources Iran will cancel its South Pars contract with China over delays. Oil Ministry Spokesman Alireza Nikzad-Rahbar said that given the [lack of] inclination on the part of the Chinese [company], the contract for [South Pars] Phase 11 is likely to be called off,” the South Pars project will be given to an Iranian company, and another field with “lower risk” may be given to China as an exchange.³⁷⁸

Some Iranian officials have acknowledged the vulnerability to vacating energy firms. In recent years, record oil prices insulated Iran from international sanctions and allowed the government to pursue populist policies intended to raise living standards of ordinary Iranians. From 2005, when Ahmadinejad came to power, until 2010, Iran took in nearly \$500 billion in total oil revenue, more than the combined earnings of all previous Iranian governments since the 1979 revolution.³⁷⁹

The problem now is that lower oil prices and reduced sales could cut government revenue from petroleum by 40% according to the Institute for International Finance; this corresponds to roughly \$110 million less each day and roughly \$3 billion per month.³⁸⁰ According to Economic Minister Shamseddin Hosseini, Iran’s revenues have been cut in half, but by managing the budget, “there will be no problem in paying salaries until the end of this year.”³⁸¹

According to reports, Iran’s government budget for the next year will assume the sale of only 1 mbpd, half of what Iran exported in 2011. Due to the difficulty in lowering production by

³⁷⁵ Wang Xiacong, “China’s CNPC performs balancing act in Iran,” *The Wall Street Journal*, September 26, 2012. http://articles.marketwatch.com/2012-09-26/industries/34084845_1_cnpc-south-pars-project-south-azadegan

³⁷⁶ Erica Downs, “China, Iran, and the Nexen Deal,” *Policy Options*, October 2012. <http://www.irpp.org/po/archive/oct12/downs.pdf>

³⁷⁷ Wang Xiacong, “China’s CNPC performs balancing act in Iran,” *Market Watch*, September 26, 2012. http://articles.marketwatch.com/2012-09-26/industries/34084845_1_cnpc-south-pars-project-south-azadegan

³⁷⁸ AFP, “Iran warns of cancelling \$5 bn China gas deal: media,” December 24, 2012. <http://sg.news.yahoo.com/iran-warns-cancelling-5-bn-china-gas-deal-132227514--finance.html>

³⁷⁹ Kenneth Katzman, “Iran Sanctions,” CRS, 22 June 2011.

³⁸⁰ Reuters, “UPDATE 1-Iran oil export revenues down 45 pct since March-ISNA,” January 7, 2013. <http://www.reuters.com/article/2013/01/07/irain-oil-exports-idUSL5E9C774T20130107>

³⁸¹ Reuters, “Iran says oil revenues down by half: paper,” December 16, 2012. <http://www.reuters.com/article/2012/12/16/us-iran-sanctions-revenues-idUSBRE8BF0A120121216>

capping wells, Iran is preparing to store more oil and add 8 million barrels of storage capacity in the coming year in preparation for continuing lower sales.³⁸²

Some of Iran's actions also speak as loudly as any statistics. When additional sanctions were implemented during the summer, Iran initially stored its unsold oil on part of its fleet of oil tankers. But as sanctions caused many shippers to lose their private insurance, Iran was forced to use its own tankers to transport oil, reducing its storage capacity.

According to the IEA, Iran has a total onshore storage capacity of 25 million barrels and is estimated to be filled to capacity. Iran had stored between 20-25 million barrels of crude in floating storage in April 2012 but it has been reduced to 13 million barrels in October 2012, whether this reduction is due to more Iranian tankers being used to transport oil or other reasons is unknown.³⁸³ IEA's December 2012 Monthly Oil Report details 13 million barrels in floating storage in either the Arabian Gulf or off Malaysia.

Iran also faces counter pressure from the Arab Gulf states. The United States and Saudi Arabia have worked together to both lower oil prices and reduce the need for Iranian oil by increasing output. In June 2011, the Obama administration, in conjunction with 27 other nations released 60 million barrels of oil from their strategic reserves. Simultaneously, Saudi Arabia announced that it would increase its production to 10 mbpd from 9.3 mbpd to offset any increase in prices that resulted from a reduced supply. This has allowed countries to convert some of their oil purchases from Iran to Saudi Arabia. In the words of Reza Zandi, an independent oil and gas expert based in Iran, "The Americans and Saudis are using oil as a weapon against us."³⁸⁴

Adding Banking Sanctions to Energy Sanctions

Petroleum is only part of the story. Even before the EU instructed SWIFT to halt transactions with Iranian banks and financial institutions, Iran encountered serious and growing problems in finding financial institutions willing to handle Iranian payments to energy companies as well as processing foreign payments for its exported oil.

Traders and oil company officials report that European and Middle Eastern banks all but stopped issuing letters of credit with Iranian financial institutions, making it very difficult to transact payments for oil sales. It has become so difficult to complete oil sales through regular banks that India and Turkey have resorted to paying for oil and gas purchases through local currencies, gold, or other commodities.

Reports indicate in 2010 that shipping companies refused to send tankers to Iranian oil terminals, and insurers became steadily more reluctant to cover cargoes even before additional sanctions on marine insurance were instituted.³⁸⁵ This indicated that the US strategy is having an effect, and

³⁸² Daniel Fineren, "UPDATE 1-Iran may slash oil sales outlook, store more as sanctions bite," November 26, 2012. <http://www.reuters.com/article/2012/11/26/iran-oil-storage-idUSL5E8MQ6ZW20121126>

³⁸³ Daniel Fineren, "UPDATE 1-Iran may slash oil sales outlook, store more as sanctions bite," November 26, 2012. <http://www.reuters.com/article/2012/11/26/iran-oil-storage-idUSL5E8MQ6ZW20121126>

³⁸⁴ The Washington Post, "In Iran, sanctions aim at shipping lifeline," Thomas Erdbrink, July 10, 2011. http://www.washingtonpost.com/world/national-security/in-iran-sanctions-aim-at-shipping-lifeline/2011/07/08/gIQAyJgw7H_story_1.html

³⁸⁵ Reuters, "Iran shipping companies face more heat," Jonathan Saul, May 24, 2010. <http://www.reuters.com/article/2011/05/24/iran-shipping-sanctions-idUSLDE74N16T20110524>

Peter Pham of the Atlantic Council predicts that, “At some point or another, Iran's shrinking pool of partners will conclude that the cost of doing business with it is too high.”³⁸⁶

Tehran confronted a dwindling number of financial institutions willing to facilitate its commerce, and faced a situation where few banks were willing to do business with Iran, and those that did exacted a premium in doing any business with the country.³⁸⁷

The pressures are also rising as a result of the new sanctions. While Asian importers such as South Korea, China, India, and Japan maintain Iranian Central Bank accounts in certain banks they are restricted to only processing transactions relating to oil purchases and are denominated in the local currency. Expanded sanctions in the FY 2013 NDAA alter the sanctions implemented in the FY2012 NDAA to prevent Iran from repatriating revenue gained from oil transactions unless those funds are used to purchase non-sanctioned goods from that country.

Even those foreign banks still doing business with Iran had growing trouble in financing energy deals. Reports showed even before the new sanctions that some Iranian officials were growing increasingly angry about the inability of Iran's largest oil customers to pay in US dollars or Euros, a problem that has now contributed to a shortage of hard currency and complicated the central bank's attempts to bolster the Iranian Rial, which has nearly halved in value.³⁸⁸ Some analysts believe that Iran's foreign currency reserves, estimated at \$106 billion on January 1st 2012, have begun to shrink, with one analyst estimating that Iran currently has \$50-70 billion of reserves left.³⁸⁹

Banking sanctions have hit third-party refiners of Iranian oil. Indian refiners faced crude supply disruptions from Iran because they could no longer process payments since in December 2010 the Reserve Bank of India barred trade-related payments to the Asian Clearing Union.³⁹⁰ By March 2012, India had resumed payments to Iran by using a barter system in which non-convertible Rupees will make up 45% of the total oil sales.³⁹¹ However, with new sanctions preventing Iran from repatriating its earnings from oil sales it is unclear how this relationship will have to change going forward.

In addition, US financial sanctions blocked China from paying at least \$20bn for oil imports, leading Tehran and Beijing to initiate talks about using a similar barter system to exchange

³⁸⁶ Reuters, “Iran shipping companies face more heat,” Jonathan Saul, May 24, 2010.
<http://www.reuters.com/article/2011/05/24/iran-shipping-sanctions-idUSLDE74N16T20110524>

³⁸⁷ The Financial Times, “Sanctions put choker on Iran oil exports,” Javier Blas, September 14, 2010.
http://www.ft.com/intl/cms/s/8efd517e-bf5d-11df-965a-00144feab49a,dwp_uuid=c91807cc-1c27-11dd-8bfc-000077b07658,print=yes.html

³⁸⁸ The Financial Times, “China and Iran plan oil barter,” Najmeh Bozorgmehr, July 24, 2011.
<http://www.ft.com/intl/cms/s/0/2082e954-b604-11e0-8bed-00144feabdc0.html#axzz1T53j9m88>

³⁸⁹ Yeganeh Torbati, “Iran rial plunges as Western sanctions bite,” October 1, 2012.
<http://www.reuters.com/article/2012/10/01/us-iran-currency-drop-idUSBRE89014620121001>

³⁹⁰ The Wall Street Journal, “India looks beyond Iran for oil,” Rakesh Sharma, July 19, 2011.
http://online.wsj.com/article/SB10001424052702303661904576455290145486746.html?mod=googlenews_wsj

³⁹¹ Kenneth Katzman, “Iran Sanctions,” CRS, September 16, 2012.

Iranian oil for Chinese goods and services such as wheat and consumer products, in order to circumvent sanctions.³⁹²

Many of these problems are a result of the EU's decision to bar Iranian banks from using the SWIFT interbank communication system on March 15, 2012. The SWIFT cut-off affects at least 19 Iranian member banks and 25 financial institutions, including Bank Melli, Bank Mellat, Tejarat Bank, Bank Refah, Future Bank, Persia International Bank, Post Bank and Europäisch-Iranische Handelsbank.

Iran has few alternatives to the use of SWIFT other than tightly regulated South Korean and Indian government controlled and other Asian banks, and it is likely to face even more serious problems during 2013 as further sanctions within the FY 2013 NDAA are implemented or the EU passes additional sanctions on Iran's banks, ability to conduct foreign trade, or transportation industries. The Senate and House of Representatives continue to work on bills that would seek to blacklist essentially every Iranian bank, threaten penalties against European and other overseas companies that deal with any of these banks, and to target communications, software and technology companies that continue doing business with Iranian banks.³⁹³

Nevertheless, high oil prices as a result of uncertainty or upheavals in the Middle East could still create a limited "cushion" for Iran. Prices are likely to remain high and volatile as long as protests and concerns about supply disruptions continue across the region. Iran may be able to paper over its fundamental economic problems as long as it can move its oil into export markets and find a way to repatriate those earnings back to Iran. But due to impending sanctions, this will require illicit means that may be harder to establish, may take longer, and may incur a risk premium, further cutting into Iran's revenues. However, as sanctions continue to isolate and cut off Iran from the international banking system, high oil prices cannot create a "cushion" if Iran cannot receive the proceeds for oil sales, receives non-convertible currency, or goods or services.

Finally, although many Western companies have fled from Iran, some remain interested in exploring profitable Iranian projects in the future, if possible. Despite European and American sanctions large multinational firms such as Volvo, Cannon, Samsung, Sony, and others are remaining in the Iranian market.³⁹⁴ And 315 foreign companies from 40 countries - including the UK, US, and Germany attended the 17th International Oil, Gas, Refining, and Petrochemical event in Tehran in April 2012.³⁹⁵ However, this number was a drastic reduction from the 1,500 firms that attended in April 2011 and the 315 that did show were vastly overshadowed by the 940 Iranian companies that attended the event.³⁹⁶

³⁹² The Financial Times, "China and Iran plan oil barter," Najmeh Bozorgmehr, July 24, 2011. <http://www.ft.com/intl/cms/s/0/2082e954-b604-11e0-8bed-00144feabdc0.html#axzz1TPEoItVf>

³⁹³ Laurence Norman and Jay Soloman, "EU-US Split on Iran Banks Seen as Widening," Wall Street Journal, March 16, 2012.

³⁹⁴ Kenneth Katzman, "Iran Sanctions," CRS, September 16, 2012.

³⁹⁵ Press TV, "Iran safest country for oil & gas investment: Rahimi," April 17, 2012. <http://www.presstv.ir/detail/236704.html>

³⁹⁶ Sadeq Dehqan, "More Foreign Firms At Oil Expo," Zawya, April 19, 2011.

Figure V.22: Energy Firms Ending Business with Iran 2009-2012

Country	Company	Action
France	Total	Ended investments in Iran
Germany	Linde	Stopped all business
	Schlumberger	Will exit Iran 2013
India	Reliance Industries	Stopped sales of refined products; will not import crude oil from Iran
	Ashok Leyland Project Services	Ended investments in Iran
Italy	Eni spA	Ended investments in Iran
	Edison	Ended investments in Iran
	Tecnimont	Ended investments in Iran
Belarus	Belneftekhim/ Belarusneft	Ended investments in Iran
Japan	Inpex Corp.	Exited from the Azadegan oil field
Kuwait	Independent Petroleum Group	Stopped sales of refined products
Malaysia	Petronas	Stopped sales of refined products
Netherlands	Royal Dutch Shell	Ended investments in Iran
Austria	OMV	Ended investments in Iran
Poland	PGNiG	Ended investments in Iran
Norway	Statoil	Ended investments in Iran
South Korea	GS Engineering & Construction	Cancelled a \$1.2 billion gas processing project in Iran
	Daewoo Shipbuilding & Marine Engineering	Ended investments in Iran
Spain	Repsol	Abandoned negotiations over development of phases 13 and 14 of the South Pars gas field.
Switzerland	Vitol	Committed to not supply refined petroleum products to Iran
	Glencore	Committed to not supply refined petroleum products to Iran
	Trafigura	Committed to not supply refined petroleum products to Iran
	Litasco	Stopped sales of refined products
Singapore	Hin Leong Trading	Stopped sales of refined products
Russia	Gazprom	Ended investments in Iran
Turkey	Tupras	Cancelled contracts to supply gasoline to Iran
United Kingdom	BP	Stopped supplying jet fuel to Iran Air at Germany's Hamburg airport; halted a BP-NIOC (National Iranian Oil Company) joint venture in the Rhum gas field

	Costain Oil, Gas & Process Ltd	Ended investments in Iran
United Arab Emirates	Emirates National Oil Company	Stopped sales of refined products
Kuwait	Independent Petroleum Group	Stopped sales of refined products
International	Trans-Adriatic Pipeline	The pipeline will not be used to transport Iranian gas to Europe

Sources:

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Kenneth Katzman, "Iran Sanctions," CRS, September 16, 2012, p. 64-65

<http://www.state.gov/r/pa/prs/ps/2011/05/164131.htm>

<http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7066132>

<http://online.wsj.com/article/SB10001424052748704779704575553440314351522.html>

<http://www.foxbusiness.com/markets/markets/2010/10/01/factbox-foreign-companies-stepping-away-iran/>

Gasoline and Product Imports - Iran's Energy Import Problem

Another critical Iranian vulnerability comes from its lack of refining capability. Iran's refining capability has never sufficient to produce enough petroleum products to meet its own domestic needs even before sanctions have constrained Iran's gasoline production, refining capacity, and imports.

In 2010 it was estimated that Iranian refineries can only fulfill 58% of local gasoline demand.³⁹⁷ Exact figures are impossible to come by, but it is estimated that in 2010 Iran was dependent on gasoline imports for about 40% of its consumption at a cost to the government at between \$5 and \$7 billion annually.³⁹⁸

Trading costs have reportedly risen 40%-60% due to sanctions, lack of shipping insurance and bunkering provisions, currency devaluation.³⁹⁹ Major international shipping companies have left the Iranian market due to US and EU sanctions on maritime insurance has forced Iran to form government entities to issue government-backed insurance to foreign and domestic shippers. But 90% of the world's insurance companies that insure tanker fleets are owned by EU and US-based companies, and have been barred from insuring ships carrying Iranian oil. German insurance giants Munich Re, Allianz, Hannover Re, as well as Britain's Lloyds of London - Iran's primary insurer - have all ended their business with Iran as of July 2010.⁴⁰⁰

Of the numerous companies that had provided gasoline to Iran before the imposition of CISADA sanctions in 2010, all European multinational companies have halted their sale of gasoline to Iran. However, some firms situated in China, Singapore, Venezuela, Syria, and the UAE, may

³⁹⁷ Ebel, Robert, "Geopolitics of the Iranian Nuclear Energy Program," Center For Strategic and International Studies, March 2010, http://csis.org/files/publication/100312_Ebel_IranNuclear_web.pdf

³⁹⁸ Ebel, Robert, "Geopolitics of the Iranian Nuclear Energy Program," Center For Strategic and International Studies, March 2010, http://csis.org/files/publication/100312_Ebel_IranNuclear_web.pdf

³⁹⁹ Kenneth Katzman, "Iran Sanctions," CRS, September 16, 2012.

⁴⁰⁰ Kenneth Katzman, "Iran Sanctions," CRS, 22 June 2011; Kenneth Katzman, "Iran: U.S. Concerns and Policy Responses," CRS, 9 June 2011

still be selling gasoline and other refined products to Iran.⁴⁰¹ By some accounts CISADA sanctions has resulted in the reduction of gasoline imports from about 120,000 bpd to about 30,000 thereafter; however, imports may have rebounded to about 80,000 bpd currently.⁴⁰²

Unfortunately, these numbers are just estimates and most data since 2011 remains suspect. Iran's official data is highly optimistic and most likely wrong and outside estimates are similarly doubtful due to Iran's inflated data and Iranian attempts to skirt sanctions. Sanctions have forced Iran to employ gray-market tactics in order to buy oil and gas products, making the amount of imported energy products imported every month increasingly hard to estimate.

Iran has tried for several years to compensate for the increasing difficulties in importing refined oil and gas by attempting to increase domestic production of petroleum products. Tehran has been converting petrochemical plants into refineries and has dedicated \$2.2 billion for accelerated renovations and improvements to existing gasoline refineries. However, the majority of Iranian crude is of the heavy type, which requires more energy to refine into useful products. Iranian domestic gasoline contains 10 times more harmful particles than the imported version and may contribute to increased pollution and health problems.⁴⁰³

Iran's drive to ramp-up domestic production supposedly culminated in September of 2010 when Oil Minister Massoud Mir Kazemi proclaimed that Iran had become self-sufficient and had halted all gasoline imports.⁴⁰⁴ In July 2010, Iranian Deputy Oil Minister announced an ambitious new plan to invest \$46 billion in upgrading nine existing refineries and constructing nine brand new facilities.⁴⁰⁵ However, this data is highly suspicious considering that the Joint Oil Data Initiative shows Iran importing refined products as recently as July 2011.⁴⁰⁶

According to Iranian sources, Iran has improved its domestic production capacity from 43 million liters per day according to the Iranian calendar year (20 March 2010 - 19 March 2011) to 70 million liters per day at the end of this current Iranian calendar year ending in March 2012.⁴⁰⁷ Iranian sources also report that the country exported gasoline in 2011, worth roughly \$134 million.⁴⁰⁸ While these numbers are small and should be taken with appropriate skepticism, it does show that Iran may be slowly improving its petrochemical production. Most likely the truth is somewhere in between; Iran is most likely continuing to import refined oil products through grey-market tactics while at the same time attempting to boost domestic production. However, with sanctions continually squeezing the financial resources of the government, it is unlikely that Iran will be completely self-sufficient in domestic refined petroleum products in the near future.

⁴⁰¹ Kenneth Katzman, "Iran Sanctions," CRS, September 16, 2012, p. 65-66

⁴⁰² Kenneth Katzman, "Iran Sanctions," CRS, September 16, 2012, p. 64

⁴⁰³ The Wall Street Journal, "Iranians blame smog on West's sanctions," Farnaz Fassihi, December 11, 2010.

⁴⁰⁴ UPI, "Iran Halts Gasoline Imports," September 20, 2010. http://www.upi.com/Business_News/Energy-Resources/2010/09/20/Iran-halts-gasoline-imports/UPI-47021284993256/

⁴⁰⁵ Kenneth Katzman, "Iran Sanctions," CRS, June 22, 2011.

⁴⁰⁶ Joint Oil Data Initiative Data

⁴⁰⁷ Fars News, "Iran Doubling Gasoline Production," August 8, 2012. <http://english.farsnews.com/newstext.php?nn=9104254519>

⁴⁰⁸ Fars News, "Iran Exports 123,000 tons of Gasoline in 2011," May 1, 2012. <http://english.farsnews.com/newstext.php?nn=9102110040>

In addition to boosting production, Iran has also made reforms in an effort to reduce domestic demand for gasoline, diesel, electricity, and natural gas, and lower wasteful consumption. The Targeted Subsidies Reform discussed earlier made Iran the first major energy producing country to make dramatic cuts to subsidies on energy products and replace them with across the board “energy dividend transfers” (cash handouts) to the population.⁴⁰⁹

A 2011 report by the IMF observes that the phase-out of gasoline subsidies had reduced demand:

The increases in prices of energy products, public transport, wheat, and bread adopted on December 19, 2010, are estimated to have removed close to US\$60 billion (about 15 percent of GDP) in annual implicit subsidies to products. At the same time, the redistribution of the revenues arising from the price increases to households as cash transfers has been effective in reducing inequalities, improving living standards, and supporting domestic demand in the economy. The energy price increases are already leading to a decline in excessive domestic energy consumption and related energy waste. While the subsidy reform is expected to result in a transitory slowdown in economic growth and temporary increase in the inflation rate, it should considerably improve Iran’s medium term outlook by rationalizing domestic energy use, increasing export revenues, strengthening overall competitiveness, and bringing economic activity in Iran closer to its full potential.⁴¹⁰

This reform package has been controversial within Iran, and is blamed for substantial increases in energy and basic staple prices. Some reports have estimated that a person living in a 90 square meter apartment who paid \$3-4 a month for gas will now pay around \$97 for the same level of consumption.⁴¹¹ Gasoline, which was \$.36 cents a gallon before the reform, quadrupled to \$1.44 a gallon and now runs on a tiered system, \$1.60 until an unidentified amount and \$2.60 after this set amount.⁴¹²

For a country whose GDP per capital (PPP) is only estimated at \$13,200, and ranks only 92nd to 93rd in the world, the removal of these subsidies is a major blow to the middle and lower classes. This is especially true because Iran’s income distribution puts so much of its income in the hands of a small elite. Coupled with cash handouts that are decreasing in value due to high levels of inflation the Iranian economy and the devaluation of the Rial, people are finding it difficult to buy even the most modest staples and are transferring their Rial’s into safer investments such as gold, US dollars, or real estate.

However, the Majlis voted to “suspend” the second phase of the sanctions plan in November 2012 even though the government had not shown any intension to begin the second phase, and the massive devaluation of the Rial, increased sanctions, and lower oil sales, prevented its implementation.⁴¹³ Iranian MP Mohammad Reza Bahonar has said that the issues stemming from the first phase must be solved before the second phase in instituted. However, President

⁴⁰⁹ Farnaz Fassihi, “Iranians, Given No Choice, Adjust to Soaring Prices,” The Wall Street Journal, January 20, 2011. <http://online.wsj.com/article/SB10001424052748704637704576081990207590326.html>

⁴¹⁰ Statement by IMF Article IV Mission to the Islamic Republic of Iran, Press Release no. 11/228, June 13, 2011. <http://www.imf.org/external/np/sec/pr/2011/pr11228.htm>

⁴¹¹ International Affairs Review, “It’s all about the price of watermelon: Subsidy reform in Iran,” Reza Akbari and Monica Witt, March 28, 2011. <http://www.iar-gwu.org/node/291>

⁴¹² <http://news.nationalgeographic.com/news/energy/2012/06/pictures/120618-large-fossil-fuel-subsidies/>; Kenneth Katzman, “Iran Sanctions,” CRS, September 16, 2012, p. 55

⁴¹³ Jahangir Amuzegar, “Iran’s Subsidy Reform: RIP,” Middle East Economic Survey, December 17, 2012. <http://www.mees.com/en/articles/6519-iran-s-subsidy-reform-rip>

Ahmadinejad has recently urged the Majlis to institute the second phase saying, “One of the best development measures to ensure sustainable growth and circumvent the sanctions and neutralize the enemy's pressures has been the targeted subsidies plan.”⁴¹⁴

The subsidy removal and the increase in prices coupled with inflation has led some to speculate that the increased economic pressure on the middle class could lead to widespread protests against the government.⁴¹⁵ This has not appeared to be the case, and the only recent unrest occurred on October 3, 2012 when police attempted to shut down black-market money changers.⁴¹⁶ But additional protests have not occurred.

Circumventing Energy Sanctions

There still are limits to the combined impact of the old and new sanctions regimes, driven in part by the world's steadily growing need for oil imports. The UN sanctions - partly as a concession to Russia and China - do not place limitations on oil or natural gas transactions. However, US and EU sanctions have removed Europe as a source of earnings from Iran and are slowly lowering Iranian oil revenue by threatening sanctions against Asian importers.

The increasing pressure from sanctions has evolved into a cat and mouse game between Iran and the US and EU. New sanctions force Iran to find new ways to bypass them, which it has done, but that result in limited returns. Iran has attempted to avoid sanctions through offering state-backed insurance mechanisms, reflagging its tankers, trading oil for local currency that is then used to buy gold, surreptitiously transferring oil to other ships through ship-to-ship transfers, turning off its transponders, and transmitting false communication signals.

Prior to the imposition of the EU oil embargo, Iran reflagged its ships in Tuvalu and Tanzania to avoid sanctions, and was successful until both countries de-registered all Iranian vessels in August 2012. Further, Iran has used and may continue to use, the port of Labuan in East Malaysia to avoid Western sanctions by using middle-of-the-night ship-to-ship oil transfers to floating storage ships.⁴¹⁷ Then, in a complex set of inter-company transfers, the oil is then sold through multiple companies, one of which is reportedly an affiliate of the National Iranian Oil Company.⁴¹⁸

As detailed in a late September 2012 Reuters report, Vitol, the world's largest oil trading firm admitted to trading at least one large cargo of Iranian crude last year. According to the report, one of Vitol's Bahraini subsidiary bought 2 million barrels of oil in a ship-to-ship transfer off the Malaysian port of Tanjung Pelepas from a company that has subsequently been stripped of its

⁴¹⁴ “Iran's Ahmadinejad pushes subsidy reform as antidote to economic woes,” Reuters, January 16, 2013. <http://uk.reuters.com/article/2013/01/16/uk-iran-economy-ahmadinejad-idUKBRE90FOJS20130116>

⁴¹⁵ National Geographic, “Pictures: Eleven Nations With Large Fossil-Fuel Subsidies,” June 18, 2012. <http://news.nationalgeographic.com/news/energy/2012/06/pictures/120618-large-fossil-fuel-subsidies/>

⁴¹⁶ Thomas Erdbrink and Rick Gladstone, “Violence and Protest in Iran as Currency Drops in Value,” The New York Times, October 3, 2012. <http://www.nytimes.com/2012/10/04/world/middleeast/clashes-reported-in-tehran-as-riot-police-target-money-changers.html?pagewanted=all>

⁴¹⁷ Luke Pachymuthu and Randy Fabi, “Insight: Iran parks oil off Malaysia to dodge Western sanctions,” Reuters, September 12, 2012. <http://www.reuters.com/article/2012/09/12/us-iran-oil-sanctions-idUSBRE88B1IO20120912>

⁴¹⁸ Luke Pachymuthu and Randy Fabi, “Insight: Iran parks oil off Malaysia to dodge Western sanctions,” Reuters, September 12, 2012. <http://www.reuters.com/article/2012/09/12/us-iran-oil-sanctions-idUSBRE88B1IO20120912>

maritime insurance.⁴¹⁹ A statement from Vitol confirmed the purchase and said that the company was in compliance with all applicable international sanctions.

China is also playing a role in helping Iran circumvent Western energy sanctions. Firms such as Zhuhai Zhenrong, Unipet, and China Oil of China are reportedly continuing to supply gasoline to Iran even though one company Zhuhai Zhenrong was sanctioned for this activity in January 2012.⁴²⁰ China's enormous energy needs has led it to invest in countries where US sanctions forbid American and European companies from doing business, such as the Sudan and Iran.⁴²¹ As a result, Iran has become one of the largest suppliers of China's foreign oil, providing 11% of its oil imports in 2011.⁴²² Iran reportedly exports half of its production to China. In the face of US sanctions, China has reduced its imports of Iranian oil by 23% from January-November 2012 and may reduce its 2013 purchases by 5-10%. But it was reported that Zhuhai Zhenrong will maintain its current rate of Iranian oil imports at roughly 230,000 barrels a day.⁴²³ But 2012's drop in Chinese imports was caused largely by a pricing and contract dispute between Iran and China earlier this year.⁴²⁴

This relationship has led China to resist UN sanctions in the past due to fears that it will hamper China's energy supply. And Chinese energy ties to Iran may become stronger, 166 Chinese firms attended the 16th International Oil, Gas, Refining and Petrochemical event held in Tehran in April 2011.⁴²⁵

However, past Chinese statements may indicate that China will not completely reduce its purchases of Iranian oil despite the threat of sanctions. In March of 2008, a US diplomatic cable reported a conversation between Chinese Arms Control Director General Cheng Jingye and Senate Foreign Relations Committee East Asia specialist Frank Jannuzi. Jimgye warned that,

“China has made clear its need for energy resources and has previously stated that its cooperation with Iran on energy has nothing to do with the Iran nuclear issue...The threat of sanctions against Sinopec [a major Chinese oil company] is a very serious issue...Sinopec is very important to China and Cheng ‘can’t imagine’ the consequences if the company is sanctioned.”⁴²⁶

China has also defended its imports of Iranian crude and has resisted unilateral sanctions against Iran. In June, the Chinese Foreign Ministry Spokesman Hong Lei, stated in a press conference that,

⁴¹⁹ Luke Pachymuthu, Randy Fabi, and Chen Aizhu, “Exclusive: Vitol trades Iranian fuel oil, skirting sanctions,” Reuters, September 26, 2012. <http://www.reuters.com/article/2012/09/26/us-iran-oil-sanctions-vitol-idUSBRE88P06C20120926>

⁴²⁰ Kenneth Katzman, “Iran Sanctions,” Congressional Research Service, September 13, 2012. Pg. 62

⁴²¹ Susan Shirk, *China: Fragile Superpower* (New York: Oxford University Press, 2007), 138.

⁴²² People's Daily Online, “Saudi Arabia, Angola, Iran remain top 3 oil suppliers to China,” February 10, 2010. <http://english.peopledaily.com.cn/90001/90778/90858/90863/6892818.html>

⁴²³ Chen Aizhu and Manash Goswami, “RPT-UPDATE 1-Asian buyers to deepen Iranian crude import cuts in 2013,” Reuters, December 23, 2012. <http://www.reuters.com/article/2012/12/23/oil-iran-asia-idUSL4N09V3HK20121223>

⁴²⁴ Kenneth Katzman, “Iran Sanctions,” Congressional Research Service, September 13, 2012. Pg. 51

⁴²⁵ The Financial Times, “Deadlock over Iran oil and gas take toll,” Najmeh Bozorgmehr, April 20, 2011.

⁴²⁶ “China undercuts sanctions on Iran,” Barbara Slavin, Politico, June 2, 2011. <http://www.politico.com/news/stories/0611/56031.html>

“China has been importing crude oil from Iran through normal channels based on its needs of economic development. Such import is reasonable, justified and legal. It does not violate relevant UN Security Council resolutions or undermine the interests of a third party or the international community. China always opposes one country's imposition of unilateral sanctions on another country on the grounds of its domestic laws, even less will it accept such sanctions to be imposed onto a third country.”⁴²⁷

Iran's energy relationship with China may be more important than China's energy relationship with Iran. In July 2011, China represented half of Iran's gasoline imports that amounted to approximately 45,000 barrels per day.⁴²⁸

Russia, another partner of Iran, has also resisted expanded sanctions, partly for energy reasons. Iran and Russia have in the past pursued economic partnerships involving oil and gas exportation and refining.⁴²⁹ But since 2011, Russian companies have not signed any deals with Iran to develop or improve their energy sector.

Iran and its neighbor Turkey have a complicated, and at times acrimonious, relationship, but Turkey represents a profitable energy partner for Iran. While Turkey has asserted in the past that UN and US sanctions will not prevent its cooperation with Iran in supplying its own and Europe's growing energy needs, recent events and the current deterioration in Turkey-Iran relations point to a decreasing reliance on Iranian oil and natural gas. In March 2012, Turkey reduced its importation of Iranian oil by 10-20% and was granted two sanctions waivers in June 2012 and December 2012.

Iran is possibly using its trade with Turkey in its attempt to circumvent sanctions. Recent news reports detail that Turkey, through the state-owned Halkbank, is paying for Iranian natural gas in Turkish Liras, which is of limited value for Iran in the international market due to its inconvertibility, but is being used to buy gold in Turkey.⁴³⁰ This gold is then possibly transferred or sold in the U.A.E. and then shipped to Iran.⁴³¹

Turkey's method of paying for Iranian oil is not strictly illegal under EU sanctions or previous US sanctions; the FY 2013 National Defense Authorization Act does include new sanctions prohibiting the transfer or sale of gold or other precious metals to Iran.⁴³² This will most likely impact the hard currency reserves that Iran is able to repatriate. Responding to this move, Economy Minister Zafer Çağlayan defended Turkey's practice saying, “The U.S. sanctions stand

⁴²⁷ Xinhuanet, “FM press conference on June 29 (Full Text),” June 29, 2012. http://news.xinhuanet.com/english/bilingual/2012-07/05/c_131697440.htm

⁴²⁸ Reuters, “Iran buys July gasoline from Turkey, Chinese sellers,” July 8, 2010. <http://in.reuters.com/article/2010/07/08/iran-gasoline-imports-idINLDE6671KD20100708>

⁴²⁹ Reuters, “Tehran says Russia eyes gas swaps with Iran,” November 1, 2008; U.S. Energy Information Administration (EIA) - U.S. Dept. of Energy- U.S. Government, International Petroleum (Oil) Production Report, October, 2008.

⁴³⁰ Joe Parkinson and Emre Peker, “Turkey Swaps Gold for Iranian Gas,” *The Wall Street Journal*, November 23, 2012. <http://online.wsj.com/article/SB10001424127887324352004578136973602198776.html>

⁴³¹ Humeyra Pamuk, “Exclusive: Turkish gold trade booms to Iran, via Dubai,” *Reuters*, October 23, 2012. <http://www.reuters.com/article/2012/10/23/us-emirates-iran-gold-idUSBRE89M0SW20121023>

⁴³² Roberta Rampton, “RPT-US Senate works on new package of Iran sanctions,” *Reuters*, November 28, 2012. <http://www.reuters.com/article/2012/11/28/usa-iran-sanctions-idUSL1E8MS1SI20121128>

for the U.S... We have multilateral international agreements. These deals, which we are a party to, are binding for us. The statements by the EU are not binding since we are not a member...⁴³³

In the past, Turkey and Iran had discussed the construction of a new Caspian to Europe pipeline called Nabucco that would deliver Iranian and Caspian natural gas across Turkey to Europe. However, as a result of EU sanctions and Nabucco Gas Pipeline International, due to what it calls “the current political situation,” decided not to plan a pipeline to the Turkish-Iranian border as of 2011.⁴³⁴ Turkey’s decision to proceed with the Trans-Anatolian Gas Pipeline has replaced Nabucco’s original Turkish route and it is extremely unlikely that it will carry any Iranian gas.

The end result is that influencing third country decisions to circumvent or ignore sanctions will remain an important part of US and Iranian competition. Iran still possesses enormous energy resources that will continue to be an attractive investment opportunity. The desire to build a lucrative foothold in Iranian energy may become a consideration for countries that are ambivalent about supporting Western regional influence in the future or have large energy needs.

However, what is far less clear is how Iran can avoid the impact of the growing sanctions on its banking industry and ability to carry out foreign currency transactions and trade. The combined actions of EU sanctions and the SWIFT cut-off, coupled with US banking sanctions have largely isolated Iran from the world finance and banking industries. This has almost eliminated Iran’s access to world markets and has hampered its ability to both pay for and receive the proceeds of trade. This may have played a part in destabilizing Iran’s currency, increased inflation, reduced foreign-exchange reserves, and limited financing options.

The Risks in a “Long Game”

So far, Iran seems to have backed away from any military confrontation, but it far less clear what will happen if sanctions result in a prolonged confrontation or “long game”. Iran has at least as much to lose as any other Gulf state if closes the Strait of Hormuz to oil traffic. It also cannot hope to win any serious long-term conflict with the US and its regional allies and would take devastating losses if the US and Iranian forces were directly involved in a conflict.

However, Iran can attempt to put a wide range of less serious pressures on the follow of oil. As **Figure V.23** shows, Iran’s threats and exercises helped raised crude oil prices during December 2011 and January 2012, but scarcely to new levels or ones that had a major practical impact on the US and other developed economies.⁴³⁵ Low level attacks, floating mines, new exercises, and other measures could put prolong pressures of shipping costs.

Saudi Arabia, Libya, Iraq, and other oil exporting states may be able to compensate for cuts in Iranian oil exports if a conflict were to completely eliminate them. All three states have increased their production capacities in the past few years, allowing Asian and European oil buyers to

⁴³³ Hurriyet Daily News, “Turkey snubs US move on gas-for-gold Iran trade,” November 29, 2012. <http://www.hurriyetdailynews.com/turkey-snubs-us-move-on-gas-for-gold-iran-trade.aspx?pageID=238&nID=35712&NewsCatID=344>

⁴³⁴ Nabucco International, “Nabucco: Modification of feeder line concept,” August 23, 2010. <http://portal.nabucco-pipeline.com/portal/page/portal/en/NewsEdit/8E79E5BF557DCC2DE040A8C0010178CA>

⁴³⁵ The EIA shows a far more serious surge in US short-term gasoline and crude oil prices in the spring of 2011 – driven by market forces – than during the period from September 2011 to late January 2012. See the graphs in EIA, “Petroleum and Other Liquids,” <http://www.eia.gov/petroleum/>, accessed January 21, 2012.

reduce and eliminate their purchases of Iranian oil. The threat of far more serious Iranian escalation could be used to put pressure on oil prices without actual Iranian attacks, but Iran runs the risk of desensitizing the world to its threats and making them less effective over time. However, a desperate Iranian regime might escalate a conflict that disrupts world oil prices for at least several weeks.

A period of confrontation and/or sanctions that lasted for several years could give Iran time to steadily improve its options and tactics for asymmetric attacks as well as their domestic refining capabilities. But additional sanctions and a continuing cat and mouse game would continue and Iran would find loopholes and methods to both export oil and repatriate their earnings through the black market or other means.

However, Iran would take risks of its own, and has no inherent advantages in playing the “long game.” Continued Iranian antagonism and confrontation would inevitably strengthen US, European, and Southern Gulf resolve and support for sanctions. Iran would therefore pay a steadily higher cumulative cost as a result of sanctions over time and popular support for the regime may erode.

Furthermore, Iran’s options for retaliating against sanctions and pressure are limited. On one hand, overt action will inevitably provoke US escalation and possible military strikes. On the other hand, covert action works slowly, and Iran has not proved that it can engage in covert activities effectively outside Syria, Lebanon, or Iraq. The bungled attacks on Israeli diplomats in the summer of 2012 do not show the IRGC or Quds force is an effective covert unit. Yet the July 2012 bus bombing in Bulgaria contradicts this, leaving the question open as to the IRGC’s or Quds Force’s asymmetric ability outside Iran. Regardless of their effectiveness or ability, Iran cannot be certain it can continue to use lower level asymmetric tactics without provoking the US or other states to escalate to a much higher level of conflict. Nor can Iran be certain it can control the course of events.

However, as a “long game” continues, Israel may find it increasingly difficult to conduct a preventive strike or strikes as Iran disperses and hardens its facilities. Israel has far more options in the near and mid-term to improve its nuclear forces and nuclear delivery options. Iran has already pushed Israel towards extending the range-payload of its missiles and options such as submarine delivered nuclear weapons.

While Iran can improve its asymmetric forces and develop a nascent nuclear force, nations like Saudi Arabia and the UAE have already begun to build up their conventional capabilities at far faster rates than Iran. Iran cannot dismiss the possibility that its actions will provoke the US into offering regional nations “extended deterrence” or push Saudi Arabia towards developing its own nuclear option. Iran would also risk Israeli or US preventive military strikes if sanctions fail to end Iran’s nuclear weapons program and doing so with growing support from Iran’s neighbors.

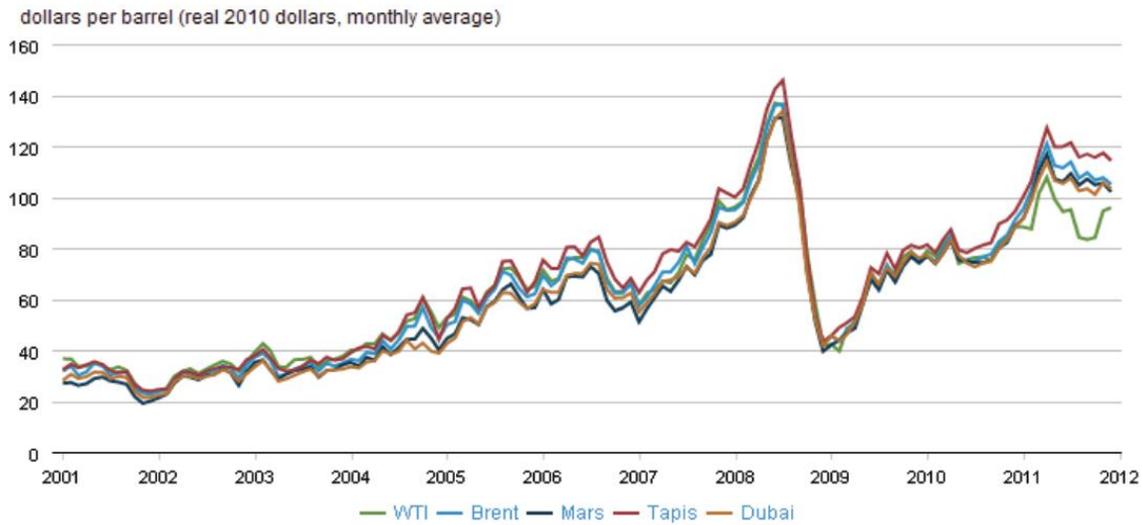
On an economic level, Iran would risk long-term shifts in investment and energy developments to other exporters, ranging from oil and gas development to pipelines and export facilities. A period of heightened sanctions and tensions between Iran and the West will continue to scare off investors such as China who see the stability of Gulf nations as a better bet for their money and source of energy. In the short to mid-term, Iran will see its oil and gas export capacity decline because of a lack of technology, capital, and parts. In the long run, Iran’s impact in creating

sustained high oil prices may increase in gas fracturing and alternative liquids in the US and Europe.

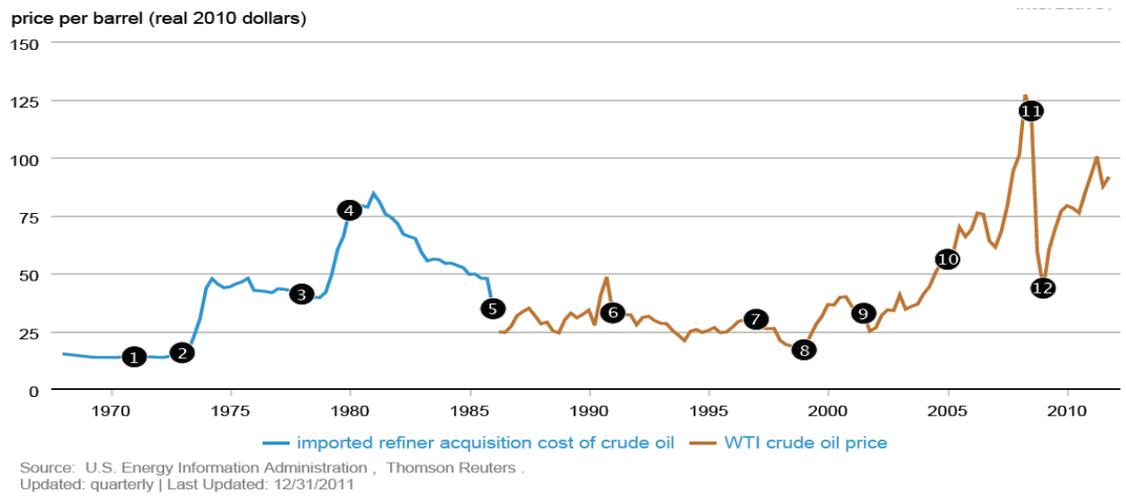
The other side of the coin is what happens if - and after – Iran is confirmed to have a nuclear device via intelligence collection or is confirmed to test a nuclear device. Pakistan, North Korea, and India are all cases where major political efforts to halt their nuclear programs faded quickly after their nuclear capability became a fact and there was de facto acceptance. This may not be the case for Iran, but Iran is certainly aware that other states have not only won the “long game,” but eventually benefited from it in terms of regional power, influence, and the ability to use a nuclear capability as leverage in international politics. In contrast, a Libya whose regime gave up weapons of mass destruction is an example of exactly the opposite kind of outcome.

Figure V.23: Trends in Oil Prices

World Prices Did Rise as a Result of Iran’s Recent Threats



But Crises, Weather, Speculation, and Economic Pressures Have Also Led to Massive Swings in the Past



- | | |
|---------------------------------------|--|
| 1: US spare capacity exhausted | 7: Asian financial crisis |
| 2: Arab Oil Embargo | 8: OPEC cuts production targets 1.7 mmbpd |
| 3: Iranian Revolution | 9: 9-11 attacks |
| 4: Iran-Iraq War | 10: Low spare capacity |
| 5: Saudis abandon swing producer role | 11: Global financial collapse |
| 6: Iraq invades Kuwait | 12: OPEC cuts production targets 4.2 mmbpd |

Source: EIA, “What Drives Oil Prices,” January 21, 2012, http://www.eia.gov/finance/markets/spot_prices.cfm

Sanctions and Arms Deals

As has been touched upon in Chapter III, arms sales are another way in which Iran and the US are competing in the Middle East. The US and its allies make use of the Nuclear Non-Proliferation Treaty (NPT), the inspection and reporting role of the International Atomic Energy Agency (IAEA), arms control treaties such as the Chemical Weapons Convention (CWC), and the Missile Technology Control Regime (MTCR) to try and halt Iran's efforts to produce long range nuclear-capable missiles and other weapons of mass destruction.

The United States has pursued a two-pronged approach to controlling the balance of military power in the region. First, the US has relied on unilateral, multilateral, and UN sanctions to block arms sales to Iran. UN Resolution 1929 prohibits the sale to Iran of, "any battle tanks, armored combat vehicles, large caliber artillery systems, combat aircraft, attack helicopters, warships, missiles or missile systems or related materiel, including spare parts."⁴³⁶

In addition to banning Iran's acquisition of nearly all major conventional weapons systems, the US has transferred major weapons and technology to its Gulf allies. Between 2005 and 2009, the United States sold nearly \$37 billion worth of weapons and military equipment to Gulf nations, including Saudi Arabia, the United Arab Emirates (UAE), Bahrain, Qatar, Oman, and Kuwait.⁴³⁷ In 2010, the United States negotiated a \$20 billion arms package with a number of Gulf States as part of the Gulf Security Dialogue. Later that year, Saudi Arabia alone finalized an enormous arms deal with the United States that will total more than \$60 billion over 10 years.⁴³⁸ In 2011, US worldwide arms sales jumped to \$66.3 billion, with Saudi Arabia and other Middle East nations making up more than half of that figure.

The Southern Gulf States have upgraded most of their Patriot systems to the PAC 3 version that has far better missile defense capabilities. The UAE and Qatar are seeking to purchase wide area Ballistic Missile Defense (BMD) systems like Terminal High Altitude Area Defense (THAAD), and the GCC is studying the creation of a broader wide area BMD system.

In late 2012, Qatar and the UAE requested permission from the United States to buy the THAAD system. Qatar has asked to purchase two fire units, 12 launchers, 150 interceptors, and associated radar units, spare parts, and training. The UAE requested 48 interceptors, nine launchers, and associated spare parts and training. The requested systems were worth over \$7.6 billion, with the bills totaling \$6.5 billion for Qatar and \$1.135 billion for the UAE.⁴³⁹

The US has begun to deploy Aegis-equipped destroyers in the Gulf and will upgrade to the Standard SM-6 beginning in 2015. The new US strategy announced in October 2011 calls for

⁴³⁶ UN Department of Public Information, "Security Council Imposes New Sanctions on Iran," June 9, 2010. <http://www.un.org/News/Press/docs/2010/sc9948.doc.htm>

⁴³⁷ Christian Science Monitor, "How Arms Deals are Shaping the Mideast," Kristen Chick, October 6, 2010, <http://www.csmonitor.com/World/Middle-East/2010/1006/How-arms-deals-are-shaping-the-Mideast>

⁴³⁸ Christian Science Monitor, "Blockbuster US Arms Sale to Saudi Arabia: Will it Deter Iran?" Anne Mulrine, September 21, 2010. <http://www.csmonitor.com/USA/Military/2010/0921/Blockbuster-US-arms-sale-to-Saudi-Arabia-Will-it-deter-Iran>

⁴³⁹ AFP. "Qatar, UAE seek US missile defense system." November 6, 2012. <http://www.google.com/hostednews/afp/article/ALeqM5iScEOYAWOwSpk1ay311dobpABYA?docId=CNG.ef98f8ad6038bc04d2a2696b8b2c7df3.c1>

four advanced guided missile defense destroyers - with wide area ballistic missile defense coverage - to be based in Rota, Spain that can be used to defend Europe and Israel.⁴⁴⁰

Other key missile defense assets in the region include US Navy Aegis anti-ballistic missile cruisers stationed in the Gulf, and advanced versions of the MIM-104 Patriot surface-to-air missile system that Bahrain, Egypt, Israel, Jordan, Kuwait, and Saudi Arabia have acquired from the US.

Lastly, in September 2011 the US and Turkey reached an agreement whereby a missile defense radar site will be constructed only 435 miles from the Turkey-Iran border.⁴⁴¹ This system is part of Phase 1 of the European Phased Adaptive Approach system. While Iran's missiles have not been stated as the exclusive target of the system, it will greatly enable the US' ability to detect and intercept an Iranian missile.

Iran has responded by turning to Russia and China in order to purchase military hardware. Since 1992, Russia has sold Iran hundreds of major weapons systems, including T-72 tanks, Tor-M1 missile systems, and a handful of combat aircraft like the MiG-29 and SU-24.⁴⁴² Moscow and Tehran signed a nearly \$1 billion deal in 2007 to supply Iran with five batteries of long-range S-300 air-defense missiles, which are similar to the US Patriot system.⁴⁴³ The S-300 system was a high priority for Tehran as it would have improved their ability to defend nuclear installations from attack.

However, Russia delayed its delivery of the S-300 system in 2009 amid the "diplomatic reset" with the United States. After Russia voted in favor of the latest round of UN sanctions in 2010, Russia officially canceled the project and barred all future sales of sophisticated weapons to Iran.⁴⁴⁴ Russian Foreign Minister Sergei Lavrov said, "There are fundamental principles linked to the sale that we never, in accordance with our legislation, and according to our international obligations, take any actions that will lead to the destabilization of certain regions."⁴⁴⁵

Supplying weapons to Iran was also beginning to hinder Russia's ability to upgrade its domestic military capability and purchase top-of-the-line arms from Western countries. Russia closed a deal in 2009 to purchase unmanned aerial vehicles from Israel and reached a \$1.52 billion deal in

⁴⁴⁰ Geoff Ziezuleqicz, "Four U.S. Navy ships to be stationed at Rota as part of missile defense system," October 5, 2011. <http://www.stripes.com/news/four-u-s-navy-ships-to-be-stationed-at-rota-as-part-of-missile-defense-system-1.157031>

⁴⁴¹ Shanker, Thom. "U.S. Hails Deal With Turkey on Missile Shield." New York Times. September 15, 2011, <http://www.nytimes.com/2011/09/16/world/europe/turkey-accepts-missile-radar-for-nato-defense-against-iran.html>

⁴⁴² Lionel Beehner, "Russia-Iran Arms Trade," Council on Foreign Relations, November 1, 2006. <http://www.cfr.org/iran/russia-iran-arms-trade/p11869>; The Times UK, "Russia Ratchets up US tensions with arms sales to Iran and Venezuela," Tony Halpin, September 19, 2008. <http://www.timesonline.co.uk/tol/news/world/europe/article4781027.ece>

⁴⁴³ Christian Science Monitor, "Why Russia is cutting off major arms sales to Iran," Fred Weir, September 23, 2010. <http://www.csmonitor.com/World/Europe/2010/0923/Why-Russia-is-cutting-off-major-arms-sales-to-Iran>

⁴⁴⁴ Christian Science Monitor, "Why Russia is Cutting Off Major Arms Sales to Iran," Fred Weir, September 23, 2010

⁴⁴⁵ The New York Times, "Russia Links Iran Arms Sale to Regional Tensions," February 24, 2010.

2011 with France to supply them with two Mistral class helicopter carriers.⁴⁴⁶ These were Moscow's first major foreign arms purchases in the two decades since the fall of the Soviet Union.⁴⁴⁷

Moscow may currently value its relationship with Western arms and technology suppliers more than its weapons trade with Iran. The Russian Ministry of Defense is also hoping that displaying restraint with Tehran will convince Israel not to resume weapon sales to Georgia, which it discontinued at Moscow's request, after the outbreak of the 2008 South Ossetia War.⁴⁴⁸ In any case, the estimated value of new arms transfer agreements between Iran and Russia has dropped from \$1.6 billion from 2004-2007 to \$100 million from 2008-2011⁴⁴⁹

China, like Russia, was a consistent arms supplier to Iran. Dr. Bates Gill wrote in 1998 that "with the exception of Pakistan and possibly North Korea, China's arms trade with Iran has been more quantitatively and qualitatively comprehensive and sustained than that with any other country."⁴⁵⁰ China has been responsible for resupplying Iran during their war with Iraq, supplied Iran with cruise missile technology, and reportedly helped with the development of Iran's indigenous military-industrial sector.⁴⁵¹

However, also like Russia, Beijing has reduced its weapons sales to Iran in recent years and has largely complied with the Missile Technology Control Regime and limits regarding the exportation of nuclear-related technology. China made over \$3 billion in arms transfer agreements with Iran from 1980-1987, supplied \$400 million worth of weapons from 1993-1996, \$600 million from 1997-2000, and \$300 million between 2004 and 2007.⁴⁵² In the period from 2008 to 2011, China did not enter into any arms transfer agreements with Iran.

As talks stalled with Russia over delivery of the S-300 missile system, Iran reportedly looked to China, which had recently put a replica of the S-300 on the export market.⁴⁵³ The US, however, has consistently opposed Chinese military sales to Iran. Speaking with CNN in 2007, Under Secretary of State for Political Affairs Nicolas Burns pointedly stated that the US has "irrefutable evidence" that the Iranians were transferring arms to militants in "Lebanon, in Gaza, in

⁴⁴⁶ United Press International, "Russia, Israel sign spy drone deal," April 10, 2009.
http://www.upi.com/Top_News/2009/04/10/Russia-Israel-sign-spy-drone-deal/UPI-52871239374884/

⁴⁴⁷ Reuters, "Russia, France sign Mistral helicopter deal," Alexei Anischuk, June 17, 2011.
<http://www.reuters.com/article/2011/06/17/russia-france-mistral-idUSLDE75G1K520110617>

⁴⁴⁸ Richard Grimmett and Paul Kerr, "Conventional Arms Transfers to Developing Nations," Congressional Research Service, August 24, 2012. Pg. 44, 45

⁴⁴⁹ Richard F. Grimmett, "Conventional Arms Transfers to Developing Nations, 1993-2000," Congressional Research Service, August 2001, p. 28; and Richard F. Grimmett, "Conventional Arms Transfers to Developing Nations, 203-210," Congressional Research Service, August 2001, pp. 43-44.

⁴⁵⁰ Bates Gill, "Chinese Arms Exports to Iran," Middle East Review of International Affairs, Vol. 2, No. 2 (May 1998), 57.

⁴⁵¹ Scott Harold, Alireza Nader. "China and Iran: Economic, Political, and Military Relations". RAND. Pg. 7

⁴⁵² Richard F. Grimmett, "Conventional Arms Transfers to Developing Nations, 1993-2000," Congressional Research Service, August 2001, p. 28; and Richard F. Grimmett, "Conventional Arms Transfers to Developing Nations, 203-210," Congressional Research Service, August 2001, pp. 43-44.

⁴⁵³ Iranian Press TV, "Russia 'Losing to China on Iran S-300 Quest,'" May 9, 2009.
<http://edition.presstv.ir/detail/94183.html>

Afghanistan, and in Iraq” in direct contravention of UN Security Council Resolution 1747, which bans Iranian arms exports.⁴⁵⁴ John McConnell, the former Director of National Intelligence, testified to Congress that the PRC’s arms sales in the Middle East were “destabilizing” and “a threat” to US forces.⁴⁵⁵

Faced with sanctions tightening its arms procurement abilities, Iran has begun investing in a nascent domestic defense industry. When the S-300 sale fell through, the Iranian military announced that it would upgrade existing S-200 systems to exceed the specifications of the S-300 system.⁴⁵⁶

General Seyed Reza Taheri boasted in July 2011 that:

“The air defense systems' operational speed and range have been promoted thanks to the attempts made by our country's experts. We are witnessing a jump in this field when considering the previous models.”⁴⁵⁷

Iran may be able to develop a more robust arms development capability in the medium to long term, but their domestic capability in the near future is fairly limited. Iranian weapons developers focus primarily on modifying older technology and are therefore still heavily reliant on weapons imports.⁴⁵⁸

However, Iran has made some progress in producing domestic arms. Theodore Karasik, a regional affairs expert at the Dubai-based Institute for Near East and Gulf Military Analysis, has said, “...compared with five or 10 years ago, Iran seems to have made significant strides. They probably aren't fully self-sufficient for defense needs, but they are moving in that direction.”⁴⁵⁹ Iran has shown a technical aptitude in the past by improving their arsenal and in September 2012 the Iranians seemed to have displayed an optimized version of the S-200 air defense system with a range of 50km and a ceiling of 75,000 feet. But if this system is comparable to the export version of the S-300 is unknown.

As Chapters III and IV have shown, however, Iran has a long way to go, and the new sanctions have had a major impact on the extent to which Iran can fund critical imports of arms, munitions, spare parts, military production equipment, and other technology. There are no reliable figures on the size of either Iran’s total military-related imports – due to smuggling dual use technology and the use of false names or licenses. There are no meaningful public estimates of Iran’s current military spending because the reporting of the state sector expenditures on almost every aspect of

⁴⁵⁴ CNN, “Iran arming Taliban, US claims,” June 13, 2007.

<http://edition.cnn.com/2007/WORLD/asiapcf/06/13/iran.taliban/index.html>

⁴⁵⁵ Shirley Kan, “US-China Counter-Terrorism Cooperation: Issues for US Policy,” Congressional Research Service, July 15, 2010. 36.

⁴⁵⁶ Fars News Agency, “Iran to develop new generation of S-200 air-defense missiles,” November 14, 2010. <http://english.farsnews.com/newstext.php?nn=8908231551>

⁴⁵⁷ Fars News, “Iran to Develop New Generation of S-200 Air Defense Missiles,” November 11, 2010. <http://english.farsnews.com/newstext.php?nn=8908231551>

⁴⁵⁸ Associated Press, “Iran showcases homegrown arms in war games,” Ali Akbar Dareini, July 5, 2011. <http://news.yahoo.com/iran-showcases-homegrown-arms-war-games-102403551.html>

⁴⁵⁹ Associated Press, “Iran showcases homegrown arms in war games,” Ali Akbar Dareini, July 5, 2011. <http://news.yahoo.com/iran-showcases-homegrown-arms-war-games-102403551.html>

security is distorted and cloaked. US experts tentatively put the 2011 level at “well over” \$10 billion a year, but state this is little more than a guesstimate.⁴⁶⁰

Similarly, work by Richard F. Grimmett of US Congressional Research Service estimates Iranian arms imports at \$700 million in current dollars from 2007-2010, as opposed to \$800 million in 2003-2006. He also estimates Iran’s new arms agreements at a cripplingly low \$700 million in 2007-2010, compared with \$2.7 billion in 2003-2006. The updated 2012 report revises these figures, estimating that Iran imported \$900 million worth of arms in 2004-2007 and only \$200 million in 2008-2011. These totals do not include major amounts of nuclear, dual use, military production-related, and “black” hidden imports. But they show that Iran’s arms transfer agreements and black market imports can only give it a fraction of the amount that Gulf States are importing. It is clear that Iran is importing far too few weapons to modernize and sustain its forces.⁴⁶¹

Arms Control: Iran, Israel, and the WMD Free Zone

The US and other members of the P5+1 have long sought to use both sanctions and arms control agreements to limit Iran’s nuclear programs. Iran has attempted to combat this by championing a WMD Free Zone in the Middle East as a way of putting pressure on the US and Israel, gaining Arab support, and limiting Arab pressure on Iran over Iran’s nuclear programs.

Efforts to Negotiate with Iran

While the US has stated in different ways that Iran must not be allowed to have nuclear weapons, Washington has not announced fixed “red lines” that would trigger preventive attacks. However, during the UN General Assembly in late September, Israeli Prime Minister Benjamin Netanyahu appeared to suggest that if Iran were to produce enough 20% enriched Uranium it would have crossed a “red line” and could face military action. But “unacceptable” has been a distinctly relative term that has evolved over time. Any limits that Iran agrees to as a result of negotiations must be tied to some form of arms control protocol and verification arrangement based on the capabilities Iran has at the time of the actual agreement and what it can acquire in the future.

The history of past negotiations is complex, but the Arms Control Association has developed an excellent summary history that shows the pattern of negotiations to date. This history is shown in **Figure V.24**.

⁴⁶⁰ Anthony Cordesman, “The Conventional Military,” The Iran Primer. <http://iranprimer.usip.org/resource/conventional-military>

⁴⁶¹ Richard F. Grimmett, Conventional Arms Transfers to Developing Nations, 2003-2010, Congressional Research Service, R-42017, Washington, DC. September 22, 2011 pp. 43-44, 75-58

Figure V.24: Arms Control Association History of Official Proposals on the Iranian Nuclear Issue.

Spring 2003 Proposal

According to Tim Guldimann, former Swiss ambassador to Tehran, Iran issued a proposal to the United States in May 2003 calling for negotiations on a variety of contentious issues between the two countries. The document listed a number of agenda items that the two countries would negotiate and proposed the creation of three parallel working groups to carry out negotiations on disarmament, regional security, and economic cooperation. Key among the agenda items were:

- Relief of all U.S. sanctions on Iran
- Cooperation to stabilize Iraq
- Full transparency over Iran's nuclear program, including the Additional Protocol
- Cooperation against terrorist organizations, particularly the Mujahedin-e Khalq and al-Qaeda
- Iran's acceptance of the Arab League's 2002 "land for peace" declaration on Israel/Palestine
- Iran's full access to peaceful nuclear technology, as well as chemical and bio-technology

The Bush administration dismissed the proposal in favor of placing additional pressure on Iran.

EU3-Iran Proposals

Several months later, France, Germany, and the United Kingdom agreed to discuss with Iran a range of nuclear, security, and economic issues as long as Tehran suspended work on its uranium enrichment program and cooperated fully with an investigation by the International Atomic Energy Agency (IAEA). However, that agreement unraveled the following year when Tehran continued work on uranium conversion, the precursor to enrichment. Iran then agreed with the EU3 in November 2004 to implement a more stringent suspension. Negotiations between the two sides began shortly afterward.

Iran presented four proposals during the course of these negotiations. In addition to Iran's nuclear program, the proposals covered subjects such as Tehran's support for terrorist organizations, regional security issues, and economic cooperation.

The Iranian proposals were as follows:

January 17, 2005

This Iranian proposal to the EU3/Iran Political and Security Working Group outlined commitments on both sides in general terms, including:

- An Iranian commitment not to pursue weapons of mass destruction
- A rejection of any attacks, threats of attack, or sabotage of Iran's nuclear facilities
- Cooperation on combating terrorism, including intensifying the exchange of information and the denial of safe havens
- Regional security cooperation, including on Iraq and Afghanistan
- Cooperation on strategic trade controls and the EU removal of restrictions on transfers of conventional arms and dual use goods to Iran

March 23, 2005

The Iranian proposal to the EU3/Iran steering committee in March provided greater detail into the "objective guarantees" Iran was willing to discuss regarding its nuclear program, including:

- Iran's adoption of the IAEA Additional Protocol and continuous on-site inspections at key facilities
- Limiting the expansion of Iran's enrichment program and a policy declaration of no reprocessing
- Immediately converting all enriched uranium to fuel rods
- An EU declaration recognizing Iran as a major source of energy for Europe
- Iran's guaranteed access to advanced nuclear technology along with contracts for the construction of nuclear plants in Iran by the EU
- Normalizing Iran's status under G8 export controls

April 29, 2005

In April Iran's proposal repeated some of the items in the March proposal, but focused more on short-term confidence-building measures than long term resolutions. Its key terms included:

- Iran's adoption of the IAEA Additional Protocol
- A policy declaration of no reprocessing by Iran
- Continued enrichment suspension for six months
- Establishment of joint task forces on counter-terrorism and export control
- An EU declaration recognizing Iran as a major source of energy for Europe

July 18, 2005

Iranian Message from Hassan Rowhani, then-Secretary of Iran's Supreme National Security Council, to France, Germany, and the United Kingdom. In his statement Rohani proposes:

- An agreement on initial limitations on uranium enrichment at Natanz
- Negotiations for the full-scale operation of Natanz
- Arrangements to import material for uranium conversion and the export of UF6
- Negotiation of an "optimized" IAEA monitoring mechanism for Natanz

In **August 2005** the three European countries presented their own comprehensive proposal for a long-term agreement, outlining the following:

- Arrangements for the assured supply of low enriched uranium for any light water reactors constructed in Iran
- Establishing a buffer store of nuclear fuel located in a third country
- A commitment by Iran not to pursue fuel cycle technologies, reviewable after 10 years
- A legally binding commitment by Iran not to withdraw from the NPT and Iran's adoption of the Additional Protocol
- Arrangements for Iran to return spent nuclear fuel to supplier countries
- EU recognition of Iran as a long-term source of fossil fuel energy
- EU-Iran cooperation in a variety of political-security areas, including Iraq and Afghanistan, terrorism, and drug trafficking

Iran rejected that proposal days later, claiming that it did not recognize Iran's right to enrichment. Tehran proceeded with uranium conversion, breaking the suspension agreement with the EU3 and ending negotiations.

In order to support Iran's talks with the EU, Russia proposed to Iran in October 2005 that Tehran share ownership of a uranium-enrichment plant located in Russia. Following months of discussions on that proposal, Iran ultimately rejected it in March 2006.

P5+1 Proposals

China, Russia, and the United States joined the three EU3 countries in June 2006 to offer another proposal for comprehensive negotiations with Iran. The proposal mirrored some of the previous offers for negotiations and included the following key points:

- Iran's suspension of enrichment-related and reprocessing activities
- The establishment of a mechanism to review this moratorium
- Iran's resumption of the Additional Protocol
- The provision of state-of-the-art light water reactors to Iran through joint projects, along with nuclear fuel guarantees and a 5-year buffer stock of fuel
- Suspension of the discussion of Iran's nuclear program in the UN Security Council
- Cooperation on civil aviation, telecommunications, high-technology, and agriculture, and other areas, between the United States, EU, and Iran

Tehran responded to this proposal in August 2006. It rejected the terms of the proposal due to its requirement that Iran suspend its enrichment-related activities, but noted that the proposal contained "useful foundations and capacities for comprehensive and long-term cooperation between the two sides." It did not, however, identify what those useful foundations were.

In March 2008, the P5+1 agreed to “repackage” the June 2006 proposal in order to specify some of the benefits that they would offer Iran as part of a long-term agreement on its nuclear program and to better demonstrate the nature of those benefits to the Iranian public. This agreement to revise the 2006 proposal coincided with the adoption of Security Council Resolution 1803, the third UN sanctions resolution on Iran.

Before that package was formally submitted to Iran, however, Tehran issued its own proposal to the six-country group. While the Iranian proposal also called for comprehensive negotiations leading to cooperation on nuclear energy, and political and economic concerns, it offered very few details regarding the steps Iran would take to resolve concerns related to its nuclear program. Some of its key provisions were:

- “Establishing enrichment and nuclear fuel production consortiums in different parts of the world-including Iran”
- Improved IAEA supervision “in different states”
- Cooperation on nuclear safety and physical protection
- Cooperation on export controls
- Cooperation on regional security and global economic issues

The P5+1 group presented their revised package during a June 2008 meeting in Tehran that included participants from five of the six countries, excluding the United States. During the meeting, the six-countries relayed an understanding that preliminary talks could begin under a six-week “freeze-for-freeze” period in which Iran would halt the expansion of its enrichment program while the six countries would agree not to pursue additional sanctions against Tehran. The proposal also entailed:

- The 2006 package remains on the table
- Consideration of nuclear energy R&D and treatment of Iran’s nuclear program as any other NPT non-nuclear-weapons state once confidence is restored
- Technological and financial assistance for Iran’s nuclear energy program
- Reaffirmation of the UN Charter obligation to refrain from the use and threat of use of force in a manner inconsistent with the Charter
- Cooperation on Afghanistan, including drug-trafficking, refugee return, reconstruction, and border controls
- Steps towards normalizing economic and trade relations, including support for WTO membership for Iran
- Further details on the prospect for cooperation on agriculture, the environment and infrastructure, civil aviation, and social development and humanitarian issues

Representatives of the six-country group, including the United States for the first time, followed up the June meeting with a meeting in July 2008 in Geneva. At the meeting, Iran issued a non-paper proposing a process for negotiations, highlighting that such discussions would be “based on the commonalities of the two packages” issued by Iran and the P5+1 group in May and June. Both the P5+1 and Iranian proposals called for political, economic, and security cooperation but the Iranian proposal did not address steps that Tehran would take in regard to its nuclear program. The Geneva discussions were inconclusive.

Following the election of U.S. President Barack Obama, who sought to abandon the previous U.S. policy requiring Iran to fulfill UN Security Council demands to suspend nuclear fuel cycle activities prior to negotiations, the P5+1 sought to renew their negotiations with Iran. They issued a statement in April 2009 in which the other five countries welcomed “the new direction of U.S. policy towards Iran,” formally inviting Iran to talks once again.

Iran did not respond to that invitation until that September, when Tehran issued a revised proposal. Although that proposal repeated several of the provisions of the one Iran issued in 2008, it did not include a section on the nuclear issue. Instead, the proposal covered the following:

- Cooperation to address terrorism, drug trafficking, organized crime, and piracy
- UN and Security Council reform
- The codification of rights for the use of space
- Promoting a “rule-based” and “equitable” IAEA oversight function
- Promoting NPT universality and WMD nonproliferation

Tehran Research Reactor “Fuel Swap” Proposal

In June 2009, Iran informed the IAEA that it was seeking assistance to refuel its Tehran Research Reactor (TRR), a U.S.-supplied 5 megawatt research reactor that produces medical isotopes. Following Iran’s entreaty, the United States proposed that, in return for a supply of 120 kilograms of fuel for the TRR, Iran ship out an equivalent amount of uranium enriched to 4%, totaling about 1,200 kilograms. The 1,200 kilograms accounted for roughly 80% of Iran’s LEU stockpile at that time, a percentage that diminished as Iran continued to produce LEU. At an initial meeting between the United States, France, Russia, Iran, and the IAEA October 1, 2009, Iranian officials agreed “in principle” to the exchange.

- Iran exports 1,200 kilograms of LEU in a single batch before the end of the 2009
- Russia further enriches Iran’s LEU to about 20%, a process producing about 120 kilograms of 20%-enriched uranium for the TRR fuel rods
- France manufactures the TRR fuel rods for delivery about one year after the conclusion of the agreement, prior to the depletion of the current TRR fuel supply
- The United States works with the IAEA to improve safety and control implementation at the TRR

Following reservations expressed by Iran about the terms of the deal, the P5+1 indicated their readiness to take some steps to facilitate the arrangement:

- A political statement of support by the six countries to guarantee that the TRR fuel would be delivered to Iran
- Financing for the movement of LEU and fuel
- An option for the IAEA to hold Iran’s LEU in escrow in a third country until the TRR fuel is delivered

In the months following the initial agreement of the TRR proposal Oct.1, Iran delayed giving the IAEA and the P5+1 a definitive response to the proposal, with many prominent Iranian politicians voicing their opposition to the arrangement, motivated at least in part by their opposition to President Ahmadinejad. Iranian officials publicly suggested alterations to the fuel swap proposal, including: staggering the export of Iran’s LEU over the course of a year or transporting 400 kilograms of LEU to Iran’s Kish Island to exchange for TRR fuel. These proposals, however, undermined or eliminated the confidence-building nature of the export of the bulk of Iran’s LEU. Tehran began to increase the enrichment level of some of its LEU to 20% in February 2010, ostensibly for TRR fuel.

Brazil, Turkey, Iran Tehran Declaration

Brazil and Turkey carried out a diplomatic initiative in the Spring of 2010 to broker the TRR fuel swap with Iran. In an April 20 letter to the leaders of the two countries, President Obama said Iran’s agreement to export 1,200 kilograms of LEU “would build confidence and reduce regional tensions by substantially reducing Iran’s LEU stockpile.” The initiative resulted in the May 17 Tehran Declaration agreed between Presidents Lula da Silva, Erdogan, and Ahmadinejad.

- The three countries “recall the right of all State Parties, including the Islamic Republic of Iran, to develop research, production and use of nuclear energy (as well as nuclear fuel cycle including enrichment activities)”
- Iran transfers 1,200 kilograms of LEU to be held in escrow in Turkey within one month
- Pending their approval of the Tehran Declaration, the IAEA, France, Russia, and the United States (the Vienna Group) would agree to provide 120 kilograms of 20%-enriched uranium fuel to Iran within one year
- If the terms were not filled by the Vienna Group, Turkey would transfer the LEU back to Iran (which maintains legal possession of the material)

France, Russia, and the United States rejected the Tehran Declaration on a number of grounds identified in a June 9 letter to IAEA Director General Yukiya Amano. The key critique was that the declaration did not address Iran’s production of 20%-enriched uranium and Iran’s accumulation of a larger amount of LEU.

Russian Step-by-Step Proposal

Russian Foreign Minister Sergei Lavrov first publicly proposed a “road map” to implement the P5+1’s proposed incentives package July 12 during a speech in Washington. The specific details of the plan have not been made public, but they have been characterized as a “step-by-step” process in which confidence-building and transparency measures taken by Iran are met with an easing of sanctions by the P5+1.

- Each side takes a series of reciprocal actions in four stages
- Iran initially freezes the expansion of its enrichment program and limits enrichment to 5%
- Iran gradually provides greater IAEA access to its nuclear program
- Iran ultimately suspends enrichment for 3 months
- The P5+1 gradually lifts UN sanctions
- The P5+1 each gradually lift unilateral sanctions
- The P5+1 implement the incentives identified in their 2006 and 2008 proposals

Other P5+1 members have not voiced public opposition to the Russian proposal, but some do not appear to support it in its current form. U.S. officials have said that Washington is studying the proposal, and have held meetings with Moscow regarding the plan. Similarly, Iran publicly welcomed the proposal but has been non-committal regarding its terms, claiming it would take several months to study.

2012 Proposals

In April 2012, the P5+1 and Iran renewed diplomatic negotiations in Istanbul. Two more rounds of talks were held May 23-24 in Baghdad, and June 18-19 in Moscow. The negotiators decided in Istanbul to adopt a step-by-step process with reciprocal actions, in order to create momentum towards a long-term solution. Two proposals are being discussed in the ongoing negotiations, one proposed by the P5+1 and another from the Iranians. Both sides agreed to expert-level talks, which took place in Istanbul on July 3, to discuss the technical aspects of each proposal. A fourth round of top-level political meetings has not yet been scheduled.

Iranian 5 Step Proposal

Step 1 - Guidelines

- Iran emphasizes commitments under the NPT and its opposition to nuclear weapons based on the Supreme Leader's fatwa.
- P5+1 recognizes and openly announces Iran’s nuclear rights, particularly its enrichment activities, based on NPT Article IV.

Step 2 - Transparency Measures

- Iran continues broad cooperation with IAEA and will transparently cooperate with the IAEA on “possible military dimensions.”
- P5+1 will end unilateral and multilateral sanctions against Iran outside of the UNSC resolutions.

Step 3 - Confidence Building Steps

- Beyond continuous IAEA monitoring of enrichment activities for Tehran Research Reactor (TRR) fuel, Iran will cooperate with P5+1 to provide enriched fuel needed for TRR.
- P5+1 will terminate the UN sanctions and remove Iran’s nuclear file from UNSC agenda.

Step 4 - Strengthening Cooperation on Mutual Interests

- Parties will start and boost cooperation on: designing and building nuclear power plants and research reactors (Iran’s priorities);
- And light water research reactors, nuclear safety and security, nuclear fusion (P5+1 priorities).

Step 5 - Strengthening Joint Cooperation

- Parties will start cooperating on: regional issues, especially Syria and Bahrain (Iran’s priorities);
- And combating piracy and countering narcotics activities (P5+1 priorities).

P5+1 Proposal

Iranian actions:

- Iran halts all 20 percent enrichment activities.
- Iran transfers all 20 percent enriched uranium to a third country under IAEA custody.
- Iran shuts down the Fordow facility.

P5+1 Actions:

- P5+1 will provide fuel assemblies for the Tehran Research Reactor.
- P5+1 will support IAEA technical cooperation to modernize and maintain the safety of the TRR.
- P5+1 could review the IAEA technical cooperation projects and recommend to the IAEA Board restarting some of them.
- P5+1 has put together a detailed package to provide medical isotopes for cancer patients in Iran.
- The United States is prepared to permit safety-related inspection and repair in Iran for Iranian commercial aircraft and provide spare parts.
- The P5+1 will cooperate in acquiring a light water research reactor to produce medical isotopes.

Source: Arms Control Association, "History of Official Proposals on the Iranian Nuclear Issue," *Contact*: Peter Crail, Research Analyst, (202) 463-8270 x102, <http://www.armscontrol.org/print/2570>

As **Figure V.24** shows, each major step in Iran's nuclear and missile progress - or the discovery of Iranian efforts at concealment - has tended to make some aspects of earlier arms control proposals obsolete. This does not mean, however, that the NPT is ineffective or that the IAEA cannot produce credible verification if past agreements are updated and tailored to the circumstances that exist at the time. Groups like the Arms Control Association and ISIS have shown that there are still realistic options for Iran's compliance.⁴⁶²

Weapons of Mass Destruction (WMD) Free Zone

Iran has countered US and outside pressure to comply with the NPT and IAEA inspections by denying and concealing its own activity while calling for a Weapons of Mass Destruction Free Zone in the Middle East, which attempts to refocus attention on Israel.

Iran has attempted to exploit the fact that Arab states have long called for a WMD Free Zone in the Middle East which exerts political pressure on Israel as the only state in the region with nuclear weapons but largely ignores their own chemical and biological weapons efforts. This gives Iran an opportunity to shift the debate to Israel, and forces the US to deal indirectly with Israel's current nuclear monopoly.

In 2010, the US, Iran, and other Arab nations agreed to call for UN talks in 2012 on a treaty to ban nuclear weapons from the Middle East.⁴⁶³ Under the treaty sponsored by the IAEA, permanent inspectors and surveillance technologies would be installed in current or future civilian nuclear development programs of all twenty-two of the Arab League nations, plus Israel and Iran, backed by the threat of immediate sanctions and possible military action.⁴⁶⁴

Most Middle Eastern nations, have agreed to participate in the 2012 Conference. However, the three most important nations involved in any future Middle East WMD Free Zone are questionable. Israel has remained undecided about its participation, Iran may not attend if Israel does not, and Syria, embroiled in a bloody civil war, will most likely not attend or be of any help if it did.⁴⁶⁵ And even if these nations do attend, it does not mean they will support a functional agreement that requires all states to establish verification regimes for all forms of WMD - chemical, biological, radiological, and nuclear - and probably for key possible delivery systems as well. Moreover, Israel repudiated the language of the 2010 NPT consensus agreement, which noted that Israel's entrance into the NPT would be part of the process of creating a WMD-free zone, forcing Israel to decommission its undisclosed nuclear arsenal as a result:

This resolution is deeply flawed and hypocritical. It ignores the realities of the Middle East and the real threats facing the region and the entire world. It singles out Israel, the Middle East's only true democracy and the only country threatened with annihilation. Yet the terrorist regime in Iran, which is racing to

⁴⁶² For an excellent analysis of the trade-offs, risks, and cost-benefits involved see David Albright, Paul Brannan, Andrea Stricker, Christina Walrond, and Houston Wood, "Preventing Iran from Getting Nuclear Weapons, Constraining its Future Nuclear Options," The Institute for Science and International Security, March 5, 2012, <http://isis-online.org/>

⁴⁶³ BBC News, "UN talks back conference on nuclear-free Middle East", May 29, 2010. <http://www.bbc.co.uk/news/10185256>

⁴⁶⁴ Time, "Is a nuclear-free Middle East a pipe dream?", Andrew Butters, September 23, 2009. <http://www.time.com/time/world/article/0,8599,1925255,00.html>

⁴⁶⁵ Martin Malin, "Unconventional Wisdom," Bulletin of the Atomic Scientists, May 28, 2012. <http://www.thebulletin.org/web-edition/op-eds/unconventional-wisdom>

develop nuclear weapons and which openly threatens to wipe Israel off the map, is not even mentioned in the resolution...as a non-signatory state of the NPT, Israel is not obligated by the decisions of this [NPT] Conference, which has no authority over Israel.⁴⁶⁶

Iran is almost certain to use the WMD free zone proposal to save face and maintain its ostensibly civilian nuclear program and in exchange for the decommissioning of Israel's weapons, reassure the rest of the world that Iran isn't going to get the bomb either. It would also fit into their rhetoric of claiming the West holds a "double standard" that allows Israel to go unpunished for its reputed nuclear weapons arsenal.⁴⁶⁷

It would be desirable to have a WMD free zone agreement if it could be made real, tied to an Arab-Israeli peace, and end the growing arms race in the Gulf. The current climate of tension and military competition in the region preclude such an agreement and this is certain to continue as long as Iran moves towards an unknown nuclear future and drives an ongoing arms race.

As a result, proposals for a WMD free zone pose something of a dilemma to the US. Anything but a fully verifiable and enforceable agreement might help keep a nation like Iran from openly acquiring nuclear weapons but not eliminate an ongoing effort to acquire all of the technology and equipment necessary to rapidly acquire a bomb in the future. The US must also risk choosing between rejecting the Arab position or confronting Israel if it sides with Arab states - some of which do not recognize Israel.

Moreover, there is a wide range of other issues that make any effort to fully and effectively draft an agreement all side can trust extremely difficult:

- Iran's emphasis on its nuclear and missile programs, and the fact that its enrichment and other activities have already brought it to the nuclear threshold level. It has progressed to the point that it can now disperse and conceal its program, which vastly increases the problems in verification and inspection of both its activities and ability for a nuclear weapons "break out".
- The uncertainties surrounding the ability to verify an Iranian agreement to give up all aspects of its nuclear weapons-related research and development and ensure that there is no covert program. The IAEA has stated repeatedly that there is a "lack of cooperation" on the part of the Iranian government.
- Israel's perception of the need to maintain and improve the size and capability of its nuclear and missile forces, its monopoly or a decisive lead in such forces, and the near impossibility of being certain that Israel had actually given up every weapon: the "Nth weapon" problem.
- Negotiations that focus on Iran's nuclear program will be limited even if they are successful. Iran is building up its conventional long-range missile force, seeking to give them far more accuracy and terminal guidance which would allow them to be used against key point targets. Iran is also examining options for similarly precise drones and long-range cruise missiles which could be used against critical targets as "weapons of mass effectiveness". These weapons may be capable of destroying key power, water, desalination, energy, and other targets with conventional warheads and in ways that would have major economic effect and sometimes threaten the civil population.
- Such "weapons of mass effectiveness" attacks could be combined with the use of cyberwarfare, special operations, and infiltrators or third part sabotage. Shorter and medium range missiles could also be transferred to non-state actors and other countries with few of the risks associated with BRN weapons.
- Depending on the final course of negotiations and the following level of Iranian compliance in actual inspections. Iran can seek to maintain a nuclear weapons program by continuing to develop more efficient

⁴⁶⁶The Prague Project, "A WMD-Free Middle East", Reid Pauly, February 24, 2011.
<http://www.pragueproject.org/2011/02/24/a-wmd-free-middle-east/>

⁴⁶⁷ Kenneth Katzman, "Iran: U.S. Concerns and Policy Responses," CRS, 9 June 2011, p.34.

centrifuges, carrying cover nuclear weapons design efforts including testing of weapons designs using non-fissile cores, or launching bomb and missile warhead designs for reliability and safety testing. It could make significant progress towards developing boost and thermonuclear weapons using such efforts. It might be able to create and conceal small chains of centrifuges and make progress in small, more concealable, heavy water reactor designs.

- Iran has previously declared its chemical weapons power and has all the civil technology and production facilities to make advanced biological weapons. It claims to have destroyed its past stocks, but has had years in which to develop better chemical weapons and a surge capability to produce and load them even if it appears to comply with the Chemical Weapons Convention. It has all of the research, development, and production equipment and technology necessary for the production of advanced biological weapons. Unlike chemical weapons, such weapons can match or exceed the lethality of fission nuclear weapons and there currently is no credible inspection or verification regime that could determine whether Iran was substituting a biological capability for a nuclear one.
- As Iran's military exercises in the Gulf show, Iran is also building up its capabilities for asymmetric warfare in ways that can threaten conventional navies and employ a wide range of tactics. It continues to use its Al Quds force, intelligence services, and diplomats to pose a growing threat to the Arab states and Israel, in addition to controlling an axis of influence that includes Iraq, Syria, and Lebanon. Iran is a sponsor of movements that might support its proxy attacks like the Hezbollah, some Shi'ite extremist groups in Iraq, and similar Hazara movements linked to the Al Quds force in Afghanistan.
- Iran can also use cyberwarfare, special operations, and infiltrators or third party sabotage.
- The lack of any real prospects for a full Arab-Israeli peace, and the uncertainties created by the political upheaval in the Arab world.
- Syria's history of covert nuclear programs.
- Pakistan's growing nuclear weapons production and potential export capability - raising the threat of an outside supplier or forcing expansion of the arms control region to include Pakistan and India.
- Uncertainties regarding other weapons of mass destruction in Israel and Arab forces, and regarding the size and nature of their missile, chemical, and biological weapons programs.
- The prospect that biotechnology will advance enough in the region so that both Israel and major Arab states could develop effective genetically engineered or modified biological weapons.
- The steadily growing difficulty in creating convincing verification and inspection regimes that affect all of these interacting variables.

At the same time, some Arab nations like Saudi Arabia have begun to consider creating their own nuclear programs to counterbalance the possibility of a future nuclear-armed Iran and a number of other Arab countries have expressed a growing interest in acquiring nuclear technology. According to the New York Times, Saudi Arabia is “scrambling to hire atomic contractors, buy nuclear hardware and build support for a regional system of reactors [...] Egypt has announced plans to build one on its Mediterranean coast [...] and] roughly a dozen states in the region have recently turned to the IAEA [...] for help in starting their own nuclear programs.”⁴⁶⁸ According to King Abdullah II of Jordan, “The rules have changed.”⁴⁶⁹

⁴⁶⁸The New York Times, “Fearing Iran, Arab states seek nuclear power”, William Broad, April 15, 2007. <http://www.nytimes.com/2007/04/15/world/africa/15ihtnuke.1.5293038.html?scp=1&sq=Fearing%20Iran,%20Arab%20states%20seek%20nuclear%20power&st=cse>

⁴⁶⁹ The New York Times, “Fearing Iran, Arab states seek nuclear power”, William Broad, April 15, 2007. <http://www.nytimes.com/2007/04/15/world/africa/15iht-nuke.1.5293038.html?scp=1&sq=Fearing%20Iran,%20Arab%20states%20seek%20nuclear%20power&st=cse>

However, on November 23, 2012, the State Department issued a statement postponing the December conference and it has not yet been rescheduled. At the time of the announcement Israel had not yet decided if it was going to attend. Even if the meeting is rescheduled and is held, with both Israel and Iran in attendance, most likely little will happen; Israel will not give up its weapons if Iran still poses a threat, and Iran will not bow to Israeli demands to reduce or eliminate their nuclear program. And member states - especially Israel, Syria, and Iran - will not agree to a framework that includes extensive weapons inspections in the absence of a wide-ranging peace accord between Israel and its neighbors or Iran and its rivals in the region.

Regime Change and Regime Modification

The US does compete with Iran by seeking regime change or modification in Iran; although the scale and nature of this effort is often grossly exaggerated and the US has focused on sanctions and diplomacy as means of altering the current regime's behavior rather than changing the regime. Although, given the existing pressures on the Iranian people from corruption, internal power struggles, a devalued currency, high inflation, high unemployment, and rising food costs, some experts see the prolonged application of sanctions as a possible way to change Iran's regime.

There is no way to accurately list and assess past and current US efforts at regime change and separate fact from fiction. In general, the current Administration seems to feel that changes in Iran's regime must come largely from within as a result of action by the Iranian people. Many experts also feel that any direct or visible form of US support for regime change or support of the opposition within Iran would be counterproductive.

Iranians are keenly aware of the West's past interventions in Iran. Every Iranian knows all too well that the US and Britain have actively intervened in Iranian affairs in the past. US and British involvement in Iranian politics stretches back to the World War II occupation of Iran and the CIA and British-backed overthrow of democratically elected Prime Minister Mosaddegh in 1953.

Iran's current leaders aggressively use Iran's history and Iranian nationalist fears of outside intervention to try to win domestic support. Moreover, much of Iran's current foreign policy is influenced by the desire to limit what Iranian clerics and officials view as corrosive foreign influence.

Rhetoric versus Reality

It is clear that the US has pursued a variety of different approaches to regime change or modification over the last decade. The George W. Bush Administration took a strong stand in favor of regime change - although this stand was more rhetoric than substance. In his 2006 State of the Union address, President Bush expressed his belief that "our nation hopes one day to be the closest of friends with a free and democratic Iran."⁴⁷⁰

Some accounts suggest that President Bush went as far as to authorize covert operations to destabilize the regime, some of which involved assistance to some of the ethnic-based armed groups in Iran.⁴⁷¹ These reports reflect Iranian claims that the US backed unrest among Iranian

⁴⁷⁰ Kenneth Katzman, "Iran: U.S. Concerns and Policy Responses," Congressional Research Service, June 9, 2011, p. 59.

⁴⁷¹ ABC News, "Bush Authorizes New Covert Action Against Iran," Brian Ross & Richard Esposito, May 22, 2007. http://blogs.abcnews.com/theblotter/2007/05/bush_authorizes.html.

Baluchis and covert support of violent opposition movements as a result of the Iran Freedom Support Act. This legislation authorized funding for the active promotion of democracy in Iran, and was debated in ways that gave the impression that the US might use the funds to directly seek the overthrow of the Iranian regime.⁴⁷²

However, there is no meaningful evidence that the US actively backed Baluchi or any other violent Iranian opposition or actively intervened internally in Iranian politics. The Bush Administration clearly realized the damage that any such action could do to Iranian dissidents and moderates if - as was inevitable - it became public.

President Obama initially took a more moderate public approach regarding regime change. The first major public manifestation of this vision for change came in March 2009 during his Nowruz message. He stated that the United States “is now committed to diplomacy that addresses the full range of issues before us, and to pursuing constructive ties among the United States, Iran, and the international community.”⁴⁷³

He also referred to the country as “The Islamic Republic of Iran”, a formulation that appeared to some to suggest that the US had accepted the regime and Islamic revolution, and was no longer seeking regime change.⁴⁷⁴ In concert with that approach, Obama Administration officials initially withheld overt support for hardline approaches, such as military action, although no options were explicitly “taken off the table”.⁴⁷⁵

The tone in Washington changed when Iran failed to respond to these overtures, nuclear talks stalled and Iran violently put down protests after the disputed 2009 election. These events hardened the belief that the regime would not become more moderate. The US reacted cautiously because of the fear that the Iranian regime would use US criticism to discredit moderates’ demands for greater freedom and increased government accountability.

However, it became apparent that US restraint would not help. In December of 2009, President Obama addressed the protests in Iran and declared: “Along with all free nations, the United States stands with those who seek their universal rights.”⁴⁷⁶ Obama’s 2011 Nowruz statement reflected this changing diplomatic approach, expressing criticism of the government in Tehran and support for pro-democracy movements. President Obama stated: “Just as the people of the region have insisted that they have a choice in how they are governed, so do the governments of the region have a choice in their response...So far, the Iranian government has responded by

⁴⁷² HR 6198, “Iran Freedom Support Act,” The Library of Congress, September 30, 2006.
<http://www.gpo.gov/fdsys/pkg/BILLS-109hr6198rds/pdf/BILLS-109hr6198rds.pdf>

⁴⁷³ The Washington Post, “Obama’s Message to Iran,” Thomas Erdbrink, March 21, 2009.
<http://www.washingtonpost.com/wp-dyn/content/article/2009/03/20/AR2009032000398.html>

⁴⁷⁴ The Washington Post, “Obama’s Message to Iran,” Thomas Erdbrink, March 21, 2009.
<http://www.washingtonpost.com/wp-dyn/content/article/2009/03/20/AR2009032000398.html>

⁴⁷⁵ Kenneth Katzman, “Iran: U.S. Concerns and Policy Responses,” Congressional Research Service, June 9, 2011, p. 53-54.

⁴⁷⁶ White House, Office of the Press Secretary. “Statement by the President on the Attempted Attack on Christmas Day and Recent Violence in Iran.” December 28, 2009.

demonstrating that it cares far more about preserving its own power than respecting the rights of the Iranian people.”⁴⁷⁷

This address was widely noted for its open support of Iranian protesters, its condemnation of abuses against specific, named dissidents, and absence of any renewed overture to Iran’s leaders.⁴⁷⁸ Obama Administration officials did stop short of publically calling for regime change and no credible reports have surfaced of any form of US covert action against the regime.⁴⁷⁹

The Obama Administration appears to have remained cautious - in large part because it still feels new and visible US efforts could be used to discredit the Iranian opposition. However, Congress took a stronger position on the Iran issue. In 2011, legislation was introduced in the House of Representatives that called for the United States to: “deny the Government of the Islamic Republic of Iran the ability to continue to oppress the people of Iran and to use violence and executions against pro-democracy protestors and regime opponents” and to “to fully and publicly support efforts made by the people of Iran to promote the establishment of basic freedom, which build the foundation for the emergence of a freely elected, open, and democratic political system...”⁴⁸⁰

The Impact of Iran’s March 2012 Parliamentary Elections

It seems less likely that either popular unrest or the internal power struggles within Iran’s regime will change this situation in the near future. In March 2012, Iran held its first national election since the disputed presidential elections in 2009. The run-up to the March 2012 elections was quite unusual in that the contest was not between reformist and conservative elements as in the past. Rather, this election quickly became an unusually public referendum on President Ahmadinejad and his challenge of the Supreme Leader.

The dispute between rival factions of the conservative camp was over power, but more importantly, it was over the direction the Islamic Republic was to take three decades after Khomeini’s revolution. While some saw this internal division as the first signs of the regime’s eventual downfall, Khamenei’s overwhelming victory consolidated his control, strengthening his command over the parliament, judiciary, and security forces.

As political tension between Ahmadinejad and the Supreme Leader became more overt in the lead up to the election, Supreme Leader Khamenei declared participation was religiously obligatory:

“On Friday’s election day...the Iranian nation will give a slap harder than the previous ones in the face of [Global] Arrogance and will show its decisiveness to the enemy so that the front of Arrogance understands that it can’t do anything when confronting this nation...All over the world, an enthusiastic election is the symbol of the nation being alive and [a symbol of] their will. Therefore, in any country in which there is

⁴⁷⁷ “Obama addresses Iran youth, not leaders, in New Year message,” CNN, March 20, 2011.

http://articles.cnn.com/2011-03-20/politics/iran.new.year_1_iranian-protests-obama-administration-islamic-revolution?s=PM:POLITICS

⁴⁷⁸ The White House Blog, “President Obama’s Nowruz Message,” Nikki Sutton, March 20, 2011.
<http://www.whitehouse.gov/blog/2011/03/20/president-ob-ama-s-nowruz-message>

⁴⁷⁹ Kenneth Katzman, “Iran: U.S. Concerns and Policy Responses,” Congressional Research Service, June 9, 2011, p. 59.

⁴⁸⁰ Iranian Human Rights and Democracy Promotion Act of 2011, Library of Congress.
<http://www.gpo.gov/fdsys/pkg/BILLS-112hr1714ih/pdf/BILLS-112hr1714ih.pdf>

vast popular participation in the election, it is a sign of their vigilance and their harmony with the regime...⁴⁸¹

The elections easily handed the vast majority of the parliamentary seats to conservative MPs, who won 143 of 290 possible seats. Reformists, who largely boycotted the elections, won only 59 seats. More importantly, pro-Khamenei candidates made considerable gains over those loyal to Ahmadinejad. Having contested the Supreme Leader's power, Ahmadinejad has found himself significantly weakened and marginalized in the aftermath of these elections.

Statements by Pro-Khatami loyalists since the March 2012 elections suggest this trend had already begun:⁴⁸²

- "We were under circumstances in which the elected president acted against Islam, Imam Khomeini, and the interests of the state. He was even guilty in shedding the blood of hundreds of innocent martyrs...One can't say there was electoral fraud and that he came to power by fraud. There was no fraud. However, there was lack of knowledge. After that some events took place and we understood that we were mistaken [in our support to Ahmadinejad]." -Ayatollah Mohammad-Taqi Mesbah Yazdi
- "Ahmadinejad was not without guilt in the post-election events." -Abd al-Hossein Rouh-al-Amini, Development and Justice party Secretary General
- "Opposing the Resistance Front is opposition to original Islam." -Hojjat al-Eslam Mojtaba Mesbah Yazdi, advocating for one anti-Ahmadinejad party

Since that time, Ahmadinejad has ceased to contend for power, and his role has now been limited in scope. The question now is as the regime comes under increased scrutiny for its nuclear program, sanctions continue to take their toll on Iran's economy, and the conservatives dominate Iran's new parliament will be enough popular opposition to Iran's nuclear efforts to matter.

By the spring and summer of 2012, Khamenei seemed to be attempting to deflect criticism of his leadership by attacking President Ahmadinejad instead. By the fall, Ahmadinejad was being attacked by Supreme Leader's allies - who accused him of everything from corruption to economic mismanagement and some of whom began to allege that his nuclear policies were the cause of UN, EU, and US sanctions. Khamenei seemed to be using Ahmadinejad as a scapegoat, hoping to pin Iran's growing social and economic problems on him during his last nine months in office as well as possibly marginalize the office of the presidency.

While Khamenei seemed to have consolidated his control of power, it may come at an increased cost. Once Khamenei assumed the office of Supreme Leader, following Khomeini's death in 1989, he was able to wield power without assuming accountability, allowing Iran's far weaker Presidents to take responsibility and blame for the country's problems.

This was the case during the presidential tenures of Rafsanjani, Khatami, and Ahmadinejad's first term. However, Khamenei's domination of the March 2012 parliamentary elections, attacks on Rafsanjani, and the impact of sanctions created a growing risk of eroding this carefully cultivated buffer between the Supreme Ruler and the ordinary citizen, to the point where he would be held fully accountable by much of the population.

⁴⁸¹ "Iran News Round Up, February 29, 2012", AEI Iran Tracker, February 29, 2012.

⁴⁸² "Iran News Round Up, March 1, 2012", AEI Iran Tracker, March 1, 2012.

US Initiatives and Information Campaigns Over the Last Decade

There is no question that the US would like to see a different, and far more moderate and democratic regime in Iran. The US has relied largely on information campaigns and the support of Iranian exiles to influence Iranian public opinion since the fall of the Shah and faces the reality that any overt support of Iran's internal opposition could lead to serious backlash and may reinforce the existing regime. The same is true of most options for covert action. The US has limited practical leverage over internal events in Iran, and any direct support of Iranian dissidents would inevitably leak, discredit them, and do more harm than good.

The US has launched a series of initiatives over the last decade to promote opposition parties in Iran. Radio Farda ("tomorrow," in Farsi) began in October 1998 as a project of Radio Free Europe/Radio Liberty, in partnership with the Voice of America (VOA) and now broadcasts 24 hours a day. The VOA also established a Persian language service to Iran (VOA Persian Service) in July 2003.⁴⁸³ In July 2007, it was renamed Persian News Network (PNN), encompassing radio (1 hour a day of original programming); television (7 hours a day of original or acquired programming, rebroadcast throughout a 24 hour period); and Internet.⁴⁸⁴

Since 2010, the Obama Administration has broadened the scope of its democracy promotion programs. In addition to the traditional efforts to fund journalists, human rights activists, visit programs, the Administration has sought to work directly with individuals inside Iran who are organized around apolitical issues such as health care, the environment, and science.⁴⁸⁵ Washington has begun to "tweet" in Farsi as well as Arabic, and the Obama administration has made efforts to help the Iranian opposition circumvent government attempts to monitor or cut off communications.⁴⁸⁶

According to the *New York Times*, the Administration has initiated a global effort to deploy "shadow" Internet and mobile phone systems that dissidents can use to undermine governments that censor or shut down telecommunications networks.⁴⁸⁷ Similarly, the State Department is financing the creation of stealth wireless networks that would enable activists to communicate outside the reach of governments; an effort with clear implications for any Iranian opposition party.⁴⁸⁸ The US has taken a number of additional steps to aid Iranians' access to the internet by easing restrictions on Iranians to download free mass market US software and allowing exports of US software intended to circumvent Iranian internet restrictions.⁴⁸⁹

⁴⁸³ Kenneth Katzman, "Iran: U.S. Concerns and Policy Responses," Congressional Research Service, June 9, 2011, p. 62.

⁴⁸⁴ Kenneth Katzman, "Iran: U.S. Concerns and Policy Responses," Congressional Research Service, June 9, 2011, p. 62.

⁴⁸⁵ Wall Street Journal, "U.S. Shifts Its Strategy Toward Iran's Dissidents," June 11, 2010.

⁴⁸⁶ Kenneth Katzman, "Iran: U.S. Concerns and Policy Responses," Congressional Research Service, June 9, 2011, p. 59.

⁴⁸⁷ The New York Times, "U.S. underwrites internet detour around censors," James Glanz and John Markoff, June 12, 2011. <http://www.nytimes.com/2011/06/12/world/12internet.html?pagewanted=all>

⁴⁸⁸ The New York Times, "U.S. underwrites internet detour around censors," James Glanz and John Markoff, June 12, 2011. <http://www.nytimes.com/2011/06/12/world/12internet.html?pagewanted=all>

⁴⁸⁹ Kenneth Katzman, "Iran: U.S. Concerns and Policy Responses," Congressional Research Service, September 5, 2012, p. 72-73

In December 2011, the US launched a “virtual embassy in Iran”, a website which was quickly blocked by Tehran amidst allegations that the US was attempting to recruit spies and foster internal regime change. US State Department officials claimed that the site was merely an attempt to communicate to Iranians about their ability to secure student visas and explain US policy. It appears clear, though, that the effort was aimed at weakening support for the regime among young, technically-savvy Iranians. The President Nowruz message in March 2012 stated that the United States was seeking to help Iranians circumvent governmental restrictions on the internet and other media. These are only the latest US attempt to make pro-American media and resources available to populations inside Iran.

It is unclear if such US efforts are making progress in changing the nature or behavior of the Iranian regime. Although they almost certainly help keep Iranian moderates and opponents of the regime informed and provide some outside support. There is still hope in Washington that the kind of protests that followed the last presidential election in Iran will lead to popular political upheavals. However, the evidence to date indicates that the government in Tehran has successfully consolidated power after widespread uprisings in 2009 and a brief spat of protests in early 2011 and October 2012.

The March 2012 Iranian “election” for Iran’s 290 seat parliament did not produce wide protests, in spite of the fact that any serious opposition candidates were barred from running and there were at least some discrepancies in the vote count. The Supreme Leader seems to have been able to push aside President Mahmoud Ahmadinejad’s faction with comparative ease and consolidate the power of the one main conservative faction.

There are few signs of any active challenges or divisions within the military, IRGC, Basij, or intelligence services. There have only been token signs of organized opposition since the two-year crackdown following the last Presidential election, the opposition consists largely of the clerics that have lost power, and polling data showed consistent popular support for Iran’s nuclear programs through late 2011.

Yet many political upheavals begin after years of repression and without warning. Expanded sanctions have impacted the Iranian economy and Iranian’s daily life, and significant minorities within Iran appear disillusioned by the government in Tehran.⁴⁹⁰ This may force the regime to modify its position on the nuclear issue and US should continue to position itself on the side of democracy and human rights. There is little evidence to date that the US should expect regime change, or that any covert program is likely to make substantial progress versus convincing many Iranians of America’s hostile intent once it is exposed. Regime change from within, however, is at least possible.

The “Indirect Approach”

The best approach for the US may well be to let Iranians take the lead in whether to modify or change the regime. This does not mean abandoning strategic communications efforts that allow Iranians outside Iran to talk to Iranians inside Iran, information campaigns that prevent the Iranian government from distorting or concealing the realities surrounding issues ranging from economics to human rights, or strongly backing the efforts of the UN and outside human rights organizations.

⁴⁹⁰ Kenneth Katzman, “Iran: U.S. Concerns and Policy Responses,” Congressional Research Service, June 9, 2011,

It does mean avoiding political posturing and hollow calls for covert action, actual covert action that will inevitably be discovered and discredit the internal opposition in Iran, backing extremist cults like the MEK, and repeating the mistakes the US made in Iraq and Afghanistan in backing exiles that lack credibility.

The MEK was listed as a terrorist group for a reason. It attacked and killed US officials during the 1970s, and carried a campaign of murderous terrorism in its power struggle with Khomeini. When it lost, it became the tool of Saddam Hussein until the US invasion of Iraq in 2003, and is now little more than a Rajavi cult with little influence in Iran and even less popularity. It played Congressional politics to become delisted and effectively bribed a number of US officials with high speaking fees in the process. Even if the US were to fund or provide it supplies, it lacks any significant popular support inside Iran and is known for joining with Iraq during the Iran-Iraq War and terrorist attacks against the Iranian government.

The US needs to consider whether it would do better in working with European and NGOs in strategic communications and decoupling the US as much as possible from the message - minimizing links between the US and its historical baggage - and calls for reform.

However, the US should do far more to modify or change the regime in a different way. The US message to the Iranian people - and to any elements in the regime that want change and are willing to give up the dangerous elements of Iran's nuclear programs and behavior - should not focus so heavily on sanctions and the threat of war.

The US should make it clear both independently and in working with the P5+1 that there are strong incentives for Iran to give up its nuclear weapons related efforts and to establish better relations with the US. This includes a rapid end to sanctions, trade and investment incentives, easing of visa restrictions, and other measures that show the Iranian people and the regime that the US has clearly defined positive programs and goals that will benefit Iran. This does not mean abandoning either sanctions or the search for security, but it does mean trusting in the fact that the best way to both modify and change the regime is to create a climate where it cannot use the US "threat" to solidify the Iranian people.

The sanctions, while hurting the people more than the regime, are working, and working well. As the economic situation continues to deteriorate the regime may have to resort to increasingly heavy handed approaches to controlling the population's outrage at the economic situation. This has the potential to alter the regime internally, rather than imposed on it from an outside power.

Implications for US Policy

While the full effects of the most recent sanctions will not become apparent until late 2012 at the earliest, they already are cutting Iranian energy exports and revenues, and creating serious banking and trade problems. Iran has made its frankest admissions to date that sanction are having a major impact. The Iranian Rial has become destabilized, and it fell to record lows in October 2012 as currency markets reacted to the prospect of more limited foreign trade. The Iranian government, the Iranian economy, and the Iranian people are already feeling the pressure.

As Chapters III and IV have discussed, the US must be ready for contingencies that could trigger a significant clash or conflict in the Gulf, Israeli preventive strikes, and even serious US military action that escalates to the point where the US might have to strike at Iran's overall base of asymmetric forces, conventional forces, nuclear technology, or missile forces. But while the US

should pursue sanctions and diplomatic options, it must also begin to make hard longer-term choices regarding the possibility that sanctions and diplomacy may fail.

This means choosing between containment and preventive strikes, and doing so on the basis of the kind of classified analysis of future options that require full access to both intelligence and military planning data. The choice between bad options should always be as objective as possible, and based on the best information and modeling, and many of the key variables are now so highly classified that outside analysis is severely limited.

The Key Near-Term Choices for US Policy

In the near-term, the US needs to do everything it can to ensure that sanctions lead to successful negotiations. This means the US should pursue the following options:

- *The US should do everything possible to create UN, multilateral, and unilateral sanctions that are effective as possible.* The time for gradual approaches is over. If there is to be a peaceful outcome to this conflict, it must come before Iran tests a nuclear device or deploys a nuclear weapon. It must come before Israel takes preventive action, the region becomes locked into a nuclear arms race, or Iran creates a technology base so advanced that current IAEA inspection methods cannot detect a covert nuclear weapons program.
- *Make it clear that the US and its allies offer Iran incentives to halt and reverse sanctions continuously.* Show other countries that the US and the P5+1 offer Iran real incentives to halt illicit weapons related activities, and explain and justify sanctions in terms that nations in other regions can understand. Sanctions relief is not enough. Iran needs to see that the US and the rest of the P5+1 will offer incentives in terms of fuel supplies, trade, investment, and energy development. If sanctions are the “stick”, the US must act to ensure that there are real and immediate “carrots”.
- *Work closely with European, Gulf, and Israeli allies.* The US cannot assume its allies will follow if it does not communicate, consult, and treat them as partners. This is an area where the US must be transparent enough to convince the world it is not repeating the mistakes it made in going to war in Iraq, that it will not act rashly, and it will listen as much as it attempts to lead.
- *Make a convincing case to the Iranian people, its allies and the world that Iran is seeking to obtain nuclear weapons.* It is not enough to cite IAEA reports and continue diplomatic pressure. The US must continue to work with the IAEA and key allies to show the dangers in Iran’s actions and make the threat it poses convincing. Explain how a crisis in the Gulf could threaten all countries - including the developing countries outside the region. Make the case through effective strategic communications and as objectively as possible.
- *Use arms transfer efforts to supplement sanctions.* The US must continue to ensure that China, Russia, and other nations will not from transfer advanced arms and military technology to Iran, nor any technology and equipment that could be used to develop nuclear weapons. In the past few years, Russian and Chinese arms transfers to Iran have dropped significantly - this needs to continue. At the same time, as is outlined in Chapter VI, it must work with its Arab Gulf allies and Turkey to give them a strong mix of defenses and deterrents, help Israel the security needed to reduce the incentive for preventive strikes, and - as is discussed in Chapter VII - do what it can to make Iraq secure and a real security partner.
- *Work with the UN, IAEA, and its allies to update the agreements necessary to ensure full compliance with a meaningful and verifiable agreement.* It will not be enough for Iran to ally with the immediate concerns raised by the IAEA. It must be clear that any negotiation ends in a viable agreement.
- *Avoid aggressive interference in the form of regime change, but support strategic communications from Iranian exiles and encourage internal movement towards moderation and democracy.* Focus on regime modification when dealing with the nuclear issue and the threat in the Gulf, and leave regime change to Iranians.

- *Attempt to prevent pre-emptive strikes from the Israelis that would stir up nationalism and a “rally around the flag” sentiment in Iran, improving the regime’s chances at long term survival.* An Israeli attack would not cause the Iranian people to blame their government or the nuclear program, it would instead cause an outpouring of nationalism and support for the government. As the new sanctions are beginning to take hold and people are angry at the government for its irresponsible economic policies, a pre-emptive strike would reverse the progress of the past few years.
- *Support arms control in enforcing the NPT and giving the IAEA the necessary tools and freedom of action as critical policy option. However, a weapons of mass destruction free zone has virtually no chance of being negotiated in a meaningful form for five reasons.*

The Uncertain Result: Giving Diplomacy Priority While Preserving Security

Sanctions and diplomacy are the best of a bad (or at least highly uncertain) set of options, but it is far from clear that they will stop Iran’s progress toward a nuclear weapons capability. Despite the lack of diplomatic progress, and the appearance that the Iranians are stalling for time, negotiations may still be successful. Successful negotiations might also bring about long-term changes in the US-Iranian relationship.

But, failed negotiations will either lead to preventive strikes at levels that are actually a preventive war, or become the beginning of years of intensive confrontation with Iran at every level. The risks become steadily higher as time goes on if negotiations do not succeed before Iran can develop an advanced a base of centrifuges and other technology that preventive strikes may not be fully effective. If sanctions and negotiations fail, the US and Iranian competition may turns into a version “long game” more dangerous than the uncertainties growing out of preventive strikes.

So far, Iran has backed away from military confrontation, but it is also far less clear what will happen as sanctions result in a major Iranian economic crisis. Iran has at least as much to lose as any other Gulf state if it halts oil traffic through the Strait. Iran also cannot hope to win any serious conventional conflict with the US and its Gulf allies, and will therefore attempt to use asymmetric means to confront the US.

Rising pressure on Iran can lead it to take risks, and exercise the kind of military options described in Chapters III and IV. Limited or demonstrative military actions can become serious clashes and accidents can escalate into war. At the same time, Iran’s progress towards a nuclear weapons capability may lead Israel to carry out preventive strikes, which will force the US to choose between launching its own strikes to “finish the job” or doing nothing and wasting an opportunity to set back the nuclear program for a longer period of time.

If a period of confrontation and sanctions does last for several more years, without Iran actually moving to acquire nuclear weapons, there may be a lasting increase in oil prices and pressure on the world economy. This period of time will also allow Iran time to steadily improve its asymmetric capabilities and political warfare. If Iran does complete a nuclear weapon during this time without a decisive US military response, it might lead many nations to abandon sanctions or aggressive posturing in fear of Iranian retaliation.

At the same time, Iran will have to take risks of its own. It has no inherent advantages in a regional nuclear arms race and playing the “long game”. Hostile Iranian actions and Iran’s movement towards a nuclear weapons capability might also strengthen the US’s, European’s, and Southern Gulf state’s resolve and support for sanctions.

If sanctions continue without preventive strikes, Iran will continue to pay a steadily higher cumulative cost as a result and popular support for the regime will most likely continue to erode. In addition, Iran cannot be certain that the use of low-level asymmetric tactics can be used without provoking the US and other states to escalate the conflict economically or militarily. Nor can Iran achieve escalation dominance at any level, and the steadily growing level of conflicts that might occur if nuclear weapons are ever used will risk that the war leads to a process of spiraling escalation - leading to the destruction of Iran's military forces and other assets.

These risks should in theory give all sides reason to negotiate. In practice, they have so far failed to do so. Moreover, even if sanctions do lead to successful negotiations, they may well have serious limitations. Negotiations that focus on Iran's nuclear program will have limited effects even if they are successful. Iran can continue many aspects of nuclear weapons development with little risk of detection. As its recent exercises in the Gulf show, Iran is also building up its capabilities for asymmetric warfare in ways that can threaten conventional navies and employ a wide range of tactics. It continues to use its Al Quds force, intelligence services, and diplomats to pose a growing threat to the Arab states and Israel, in addition to controlling an axis of influence that includes Iraq, Syria, and Lebanon.

This means that a continued focus on sanctions and arms control efforts must be supported by the continued development of military capabilities to deter and contain Iran. The US should preserve and enhance its ability to use force against Iran. The US and its allies should make it clear to Iran that if it conducts nuclear tests, is found to be assembling nuclear weapons, or deploys a nuclear weapon it will justify the use of military force. The US and its allies should also find ways to warn Iran that any major Iranian effort to "close the Gulf," or a large-scale clash between Iran and the US or its allies could lead to escalating military action.

At the same time, the real world political and strategic results of replacing sanctions and diplomacy with the use of force are so unpredictable, and the risks are so high, that force must be a last resort. The use of force may end any chance of diplomacy for the life of the Islamic Republic, lead Iran to lash out militarily or by using proxies, and create a major energy and economic crisis in the process.

Temporary success from limited preventive strikes may end up convincing the Iranian regime that nuclear weapons are required at any level of sacrifice in order to survive and prevent future attacks. They may lead Iran to withdraw from the NPT and start a far more intensive and dispersed nuclear weapons program. They may usher in a period of containment analogous to the Cold War.

Any military strike should only be taken if it becomes clear that Iran's regime has reached the point where it cannot be deterred and there is strong evidence Iran will produce and quickly deploy nuclear weapons. It should only come after clearly assessing the relative risks of continuing with sanctions and containment and only after a careful assessment of the relative risks of this option versus preventive strikes. It is far easier to begin a conflict and trigger the law of unintended consequences than live with the result.