When Will Iran Run Out of Money?

The Impact of Sanctions on Iran's Foreign Exchange Reserves and Balance of Payments

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Key Findings

- Iranian nuclear physics continues to beat Western economic pressure. Iran is less than a year from reaching critical nuclear capability, despite international sanctions designed to prevent this outcome. While its accessible FX reserves have fallen sharply, Iran has sufficient reserves, and "off-books" assets, to painfully muddle through for at least 12 months, if not longer. However, Iran's domestic political timeline may be considerably shorter given the considerable pressure on Iranian president Hassan Rouhani to deliver on his commitment to lift sanctions and stabilize the economy as quickly as possible. The Iranian government may fear that, without a short-term nuclear deal, further sanctions pressure could tip the economy into an unmanageable economic and political crisis before reaching undetectable nuclear breakout in mid-2014.

- Iran is moving steadily toward critical nuclear capability, defined as the point of "undetectable breakout," where Iran could produce enough weapons-grade uranium or separated plutonium for one bomb so quickly that the IAEA or Western intelligence services would be unable to detect the breakout. Iran is on track to reach this point in mid-2014, if not sooner. At this point, Iran will have considerable leverage even if it decides not to breakout to a bomb.

- Iran's foreign currency reserves, which are critical to the Iranian government's ability to withstand sanctions pressure, are being depleted and, in large part, impeded. We estimate that its FX reserves have fallen from $100 billion in 2011 to $80 billion by mid-2013, and more importantly that the Iranian government has unencumbered access to only $20 billion of those funds. Declines in the oil price, exports or output, restrictions on non-oil exports or further restrictions on access to funds would lead to a more rapid decline in total and accessible reserves.

- Although Iran's government is building up surpluses in accounts in China, India, Japan, South Korea and Turkey, these funds that can only be used to purchase humanitarian and non-sanctionable commercial goods as required under the "February 6" provision of the *Iran Threat Reduction & Syria Human Rights Act of 2012*. According to public reporting, almost half of the $3.4 billion in Iranian monthly oil revenues ($1.5 billion) is accumulating in these semi-accessible accounts, which reflect Iran's inability to find enough non-sanctionable goods on which to spend this money.

- We divide Iran's FX reserves into three categories: 1) fully inaccessible accounts (less than $10 billion); 2) semi-accessible accounts in countries that are currently buying Iran's oil (over $50 billion and rising as unspent oil revenues accumulate); and 3) fully accessible accounts (less than $20 billion and likely falling).

- Instead of eight months of import cover provided by its total reserves, Iran's fully accessible reserves cover less than three months of imports (2.5), just above levels economists would consider a warning sign of impending crisis. Over time, Iran could shift its imports to rely on its semi-accessible funds; however, it remains vulnerable to further restrictions on the use of these funds, and more dependent on its dwindling fully accessible foreign exchange reserves to purchase goods from Europe and other trading partners.

- Iran scores poorly on Roubini Global Economics' systematic country risk screening: Its external and fiscal cushions, as well as the health of its banking system, have deteriorated sharply since 2010. Iran's economy has become less flexible, reducing the government's ability to cope with shocks, resulting in a sovereign risk score well below the averages for Middle East and North Africa (MENA) countries and emerging markets (EMs). Levels are consistent with economic or debt crisis. These weaknesses are only partly offset by an increase in flexibility in Iran's exchange rate.

- Other pools of domestic capital could cover Iran's rising fiscal gap in the short term to avoid sharp fiscal cuts. Iran likely has tens of billions of dollars of off-books assets controlled by Supreme Leader Ali Khamenei, the Islamic Revolutionary Guard Corps (IRGC), the Quds Force, and other regime elements. It remains to be seen if these regime actors would be willing to part with these funds to help President Rouhani manage Iran's balance of payments and fiscal challenges.

- Steps the U.S. and its allies could take to put further pressure on Iran's FX reserves and its balance of payments include: 1) sanctioning any financial institution that provides Iran access to, or use of, its foreign reserves; 2) dramatically reducing permissible imports of Iranian crude products; 3) requiring countries buying Iranian crude to dramatically reduce their exports of non-humanitarian commercial goods to Iran; 4) requiring a specified percentage of Iran's escrow funds be spent only on humanitarian goods; 5) blacklisting additional sectors of the Iranian economy owned or controlled by the government of Iran and/or the IRGC, including the mining, engineering and construction sectors; 6) vigorously enforcing gold sanctions to deny Iran access to gold to replenish its FX reserves; 7) imposing tighter sanctions on non-oil Iranian commercial exports; 8) expanding the definition of crude oil sanctions to include all oil products; and 9) imposing additional sanctions against the holdings of Iran's bonyads and investment funds, and entities owned and or controlled by the IRGC, the Quds Force, the Supreme Leader and other entities.

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U.S. Sanctions Have Squeezed Iran's Oil Earnings and FX Reserves, but Loopholes Have Permitted Gold Sales

Iran is moving its nuclear program steadily toward critical nuclear capability, defined as the point of "undetectable breakout," when Iran could produce enough weapons-grade uranium or separated plutonium for one bomb so quickly that the IAEA or Western intelligence services would be unable to detect the breakout. We estimate Iran will reach this point by mid-2014. If the number or efficiency of centrifuges unexpectedly increases, or if there is a secret operational enrichment site, Iran could reach critical capability prior to that. The date could also be delayed if Iran encounters unexpected difficulties in centrifuge operation or can no longer import centrifuge equipment and materials.[1] Once Iran reaches the point of undetectable breakout, it will have considerable leverage to negotiate for significant sanctions relief and other strategic benefits to advance its regional interests. It can continue to insist that it is not interested in building nuclear weapons but use the threat of undetectable breakout, at a time of its choosing, to extract concessions and project power as if it were already a nuclear-weapons state.

In response to Iran's nuclear progress, the U.S. and its allies have tightened the sanctions on Tehran's nuclear weapons program, with the goal of persuading its leadership to meet its international obligations including IAEA monitoring.

In December 2011, the U.S. ramped up sanctions significantly, with new measures against banks involved in processing Iranian crude oil transactions with the Central Bank of Iran. Under Section 1245 of the National Defense Authorization Act of 2012 (the "Menendez-Kirk" provision), countries importing Iranian crude could only receive exceptions if they significantly reduced their purchases.

On July 1, 2012, the EU intensified these oil-export sanctions when it imposed an oil embargo on all Iranian crude oil imports. In particular, EU insurance-related sanctions had a particularly damaging effect on the tanker insurance market for Iranian crude oil, given Europe's dominance in this market. Non-European importers of Iranian crude were forced to find insurance alternatives through sovereign guarantees from their countries or to increase their dependence on less reliable Iranian insurance companies.

The objective of these U.S. and EU measures was to reduce Iranian crude oil revenues (around 80% of Iran's hard-currency export earnings). The measures succeeded in reducing Iranian oil revenue from estimated monthly revenues of $8 billion in H1 2011 to $6.3 billion in H1 2012 to $3.4 billion in 2013. At the end of 2011, Iran exported 2.5 million barrels per day; Iranian oil exports are now down to about 1 million barrels per day.[2]

Although oil revenues declined sharply, gold emerged as a major loophole in U.S. sanctions laws. The windfall enabled Iran to forestall a severe balance of payments crisis, avoid economic collapse, and move closer to critical nuclear capability. Iran received payment for energy exports in gold or in the importer's local currency (e.g., Turkish lira), which it uses to buy gold, then repatriated the gold back to Iran. Iran received over $14 billion of payments in gold for its energy exports from March 2012 to July 2013, including over $8 billion since July 2012 when the Obama administration first banned gold sales to the government of Iran. Executive Order 13622, issued on July 30, 2012, penalized those who help the government of Iran acquire gold or other precious metals.[3]

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[1] David Albright and Christina Walrond, "Iran's Critical Capability in 2014: Verifiably Stopping Iran from Increasing the Number and Quality of its Centrifuges," Institute for Science and International Security, July 17, 2013.
http://www.isisnucleariran.org/assets/pdf/Iran_critical_capability_17July2013.pdf

[2] Marjorie Olster, "US: Iran Can't Access Much Oil Income," Associated Press, August 30, 2013.

[3] Gary Clark, Rachel Ziemba, & Mark Dubowitz, "Iran's Golden Loophole," Roubini Global Economics & Foundation for Defense of Democracies, May 13, 2013. http://defenddemocracy.org/stuff/uploads/documents/FDD_RGE_Iran_Gol_Report__May_2013_FINAL_2.pdf

The January 2013 passage of the Iran Freedom and Counter-Proliferation Act of 2012 (IFCA), broadened sanctions to include trade in precious metals, transactions in the energy, shipping, shipbuilding sectors (subject to exceptions for permitted oil purchases and humanitarian trade), and transactions with designated Iranian entities owned and controlled by the Iranian government. IFCA prohibits all gold transactions with Iranians, whether or not they are connected to the government of Iran, and tightens Executive Order 13622.

With IFCA, the sale, supply, or transfer (direct or indirect) to or from Iran of a precious metal to *any entity* in Iran was banned, whether or not connected to the Iranian government. This closed a loophole in Executive Order 13622 that permitted private sales of gold to Iran, and that allowed the Iranian government to use "private" front persons to access gold on behalf of the Central Bank of Iran or other Iranian government entities. At the insistence of the Obama administration, however, with P5+1 talks scheduled for April 2013 in Almaty, Kazakhstan, and gold sanctions relief to be offered to Iran as part of the P5+1 proposal at those talks, IFCA was only made effective as of July 1, 2013.[4]

Although the gold trade has been dampened by recent congressional sanctions, Iran still received about $2.5 billion in gold from Turkey between January and July 2013.

In sum, Iran pocketed the gold concession from the Almaty proposal, exploited loopholes in U.S. law that were only closed in July 2013, and obtained billions of dollars worth of gold to replenish its dwindling its foreign exchange reserves, without offering any reciprocal nuclear concessions.

On February 6, 2013, a powerful provision of the Iran Threat Reduction & Syria Human Rights Act of 2012 came into force. The provision limited the payment for Iranian crude to escrow accounts held on Iran's behalf in banks based in energy-importing countries, such as Turkey, China, India, Japan and South Korea. The new measure prohibited the repatriation of these funds or their use for third-country non-humanitarian trade, and forced Iran to spend the escrowed monies on non-sanctioned goods from local exporters only. However, the new measure did permit Iran to purchase humanitarian goods from any country.

According to recent U.S. government figures, of Iran's $3.4 billion in monthly oil revenue generated in H1 2013 from the sale of its crude oil, Iran was only finding about $1.9 billion in non-sanctionable goods to purchase with these escrowed funds; the remaining $1.5 billion in monthly oil revenue was accumulating in the designated escrow accounts as unspent funds.[5] As a result, monthly Iranian oil revenue that Tehran used to fund imports dropped from $8 billion in H1 2011 to $1.9 billion in H1 2013—a drop of over 75%. Because of the February 6 restrictions, monthly oil revenue that Tehran could use to repatriate back to Iran dropped from $8 billion to effectively zero.

To put further pressure on Iran to halt its nuclear program, on July 31, 2013, the House of Representatives passed the Nuclear Iran Prevention Act of 2013 by a vote of 400-20. If signed into law, the new bill would decrease Iranian oil exports by a further 1 million barrels per day within a year, sanction foreign banks giving Iran access to its FX reserves denominated in a currency over which it does not have primary jurisdiction (for example, euros in Chinese banks), and blacklist key sectors of the Iranian economy, including automotive, mining, construction and engineering.

As of October 1, 2013, the Senate version of the bill is currently under consideration by the Senate Banking Committee, with passage of the final legislation expected in the late fall of 2013.

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[4] Gary Clark, Rachel Ziemba, & Mark Dubowitz, "Iran's Golden Loophole," Roubini Global Economics & Foundation for Defense of Democracies, May 13, 2013. http://defenddemocracy.org/stuff/uploads/documents/FDD_RGE_Iran_Gol_Report__May_2013_FINAL_2.pdf
[5] Marjorie Olster, "US: Iran Can't Access Much Oil Income," Associated Press, August 30, 2013.

Iran's FX Reserves Are Depleting as Sanctions Tighten

Iran, like any country, needs access to foreign currency to finance trade and settle external liabilities. In the following analysis, we make some credible assumptions of Iran's total, accessible and semi-accessible reserves based on the accumulation of external surpluses and the increasing cost of imports, which necessitated the drawdown of Iran's FX reserves by $10 billion-$15 billion in 2012. In 2013, the February 6 measures limited Iran's ability to access its total reserves, which we estimate at $80 billion at mid-2013, leaving about $50-$60 billion inaccessible or only partly accessible to the government. According to public reporting, almost half of the $3.4 billion in monthly oil revenues ($1.5 billion) are being directed toward these semi-accessible accounts, rendering Iran unable to find enough non-sanctionable goods on which to spend this money.[6] Thus, even though Iran continues to accumulate oil revenues, these funds cannot be used for traditional balance of payments support.

Iran's data quality is poor and has deteriorated in the past five years, even as general data quality has improved in the Middle East. Estimates of Iran's FX reserves are scarce and analysts are forced to rely on intermittent and misleading estimates, ranging from $40 billion to over $100 billion. Some of the most realistic multilateral sources, such as the IMF, put Iran's reserves at $90 billion at the end of 2012, having fallen by about $10 billion-$15 billion during 2012. We believe that is consistent with the available data about Iran's import trajectory and income. We estimate pressure on Iran's reserves increased after Q2 2012 as sanctions tightened and Iran's oil exports and, thus, FX revenues declined, and the country was cut off from global financial transactions via the SWIFT system. The combination of weaker oil prices, tighter sanctions and persistent import growth perpetuated FX outflows in 2013. Although Iran's total reserves fell only moderately, its foreign asset accumulation was primarily in overseas in accounts that the government had trouble accessing. As a result, we estimate Iran's total reserves were $80 billion as of mid-2013 and are likely to end 2013 closer to $70 billion assuming no changes in policy. We also estimate that completely accessible reserves (defined below) will slip closer to $15 billion, while semi-accessible reserves remain steady at $50 billion.

Figure 1: Summary of Key Economic Variables

	2007	2008	2009	2010	2011	2012	Mid 2013
Reserves	82.9	79.6	78	78.9	101.5	89	80
Reserves (accessible)							20
Imports (billion/month)	7.43	9.96	6.19	8.24	10.81	8.54	7.77
Reserves to imports (months)	11.16	7.99	12.60	9.57	9.39	10.42	9.66
Reserves/imports (accessible, months)	11.16	7.99	12.60	9.57	9.39	9.37	2.57
Current account (% of GDP)	10.61	6.51	2.63	6.52	11.98	4.88	2.90
Fiscal balance (% of GDP)	7.40	0.68	0.91	3.05	4.15	-2.80	-4.00

Source: IMF, RGE

[6] Marjorie Olster, "US: Iran Can't Access Much Oil Income," Associated Press, August 30, 2013.

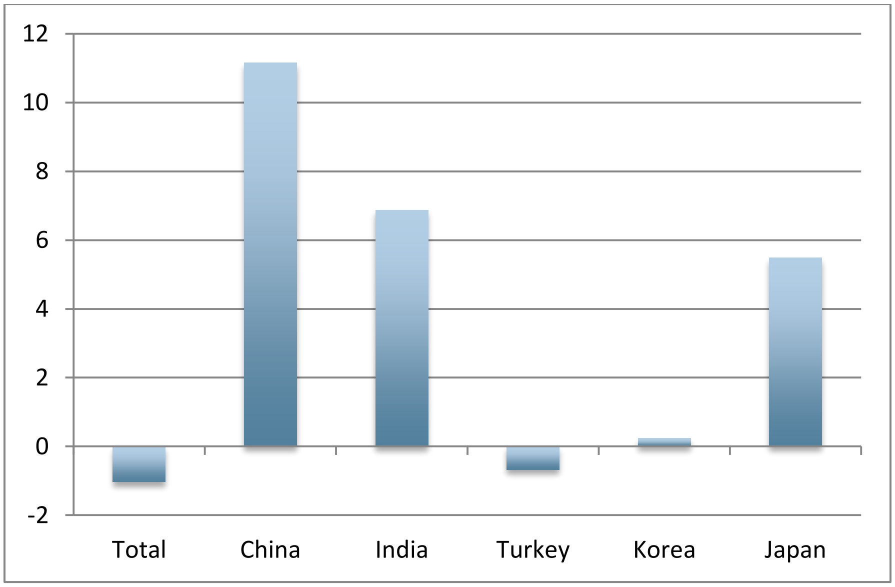
Accessible Reserves Are Even Smaller

The February 6 sanctions provisions have created three categories of Iranian reserves:

1. Totally frozen reserves are those reserves held outside of Iran in jurisdictions that fully abide by the financial sanctions and/or jurisdictions that are no longer buying Iranian crude. We estimate frozen funds currently stand at $10 billion, including $4 billion in banks reporting to the Bank for International Settlements (BIS).
2. Semi-accessible reserves are the proceeds of Iranian oil sales, held in escrow accounts in countries that buy Iran's oil. These funds are in excess of what Iran can import. We assume the bulk of these accounts are in China, India and Japan where the net surplus is mostly in Iran's favor (that is, where they struggle to find adequate goods to purchase). We estimate these semi-accessible escrow account holdings at around $50 billion. In fact, they may be growing as Iran struggles to find sufficient imports. U.S. government statements suggest Iran is accruing a surplus of $1.5 billion per month in these accounts. Assuming this continues, semi-accessible reserves could end 2013 at closer to $60 billion
3. Accessible reserves are foreign funds that can be used for anything the government wants. They are largely held in offshore jurisdictions. These accounts have likely been depleted in 2013 as other accounts have become inaccessible or partly accessible. Accessible reserves may be less than $20 billion and falling.

Reports in the public domain suggest that Iranian government and quasi-government holdings at banks in China are as high as $20 billion, and the government has other accounts in India, South Korea, Japan, and Turkey -- all major buyers of Iranian oil. However, the government's inability to access those reserves restricts its freedom to maneuver, and suggests that any increase in demand for FX could prompt another sharp devaluation of the currency.

Figure 2: Iran Is Building Up Trade Surpluses, Particularly in China, India and Japan ($, billions, 12-month cumulative trade balance ending in April 2013)



Source: IMF DOTS, RGE

Most of Iran's foreign assets are now housed in accounts at its major trading partners in Asia, as well as in Turkey and the UAE. These accounts are in local currency, which are subject both to national capital controls (China and India), as well as sanctions on Iranian government entities. As Figure 2 illustrates, although Iran is not running an overall trade surplus, it maintains surpluses in China, India and Japan, while its trade is roughly balanced with South Korea, suggesting its primary escrow accounts are in the former set of countries. Indeed, the gold trade mentioned above helped balance Iranian-Turkish trade.

Beyond an outright accessibility issue, some of Iran's FX reserves are backed up by local liabilities, including loans to companies, some of which have likely gone bad (non-performing loans), which limits the government's ability to use these assets.

Iran's low levels of accessible reserves put it at risk of a balance of payments crisis if it becomes unable to use these reserves to import basic needs. Further restrictions may increase pressure on the government from the private sector and reduce public support for the Rouhani administration as it is forced to purchase lower quality imports from the countries that buy its oil. Iran's trading partners will also have concerns about its ability to meet its liabilities. Despite other sources of resilience, these concerns may well be shortening Iran's political timeframe.

If Iran can import its key basic needs from the countries that import its oil, it can manage with this low level of accessible reserves, but doing so will undermine key elements of the Iranian economy, which prefer to import goods from Europe. Iran may also be unable to purchase the heavy machinery and industrial equipment that it has sourced historically from Europe from its Asian trading partners.

Benchmarking Iran Against Its Peers: Approaching Crisis Levels

Although total Iranian reserves cover more than eight months of imports, import coverage is closer to three months when based only on Iran's fully accessible reserves, a level where Iran would struggle to support its exchange rate if it came under pressure. By comparison, Egyptian FX reserves have averaged the equivalent of three months of imports this year, as GCC aid has helped offset a sharper devaluation. Iran's oil-exporting peers, including Libya and Algeria, have much higher buffers, of more than 50 months. Nonetheless, Iran's import coverage based on fully accessible FX reserves still narrowly exceeds the minimum level at which economists would warn of a balance of payments crisis, particularly in the context of its negligible short-term external debt. However, any pressure on the exchange rate could quickly deplete reserves, particularly if Iran's trading partners fear it is unable to meet its spending obligations.

To better compare Iran to its peers, and assess its resilience we rescored Iran within Roubini Global Economics' systematic country risk model, which benchmarks 174 countries across a wide range of variables to highlight resiliency and risk. We adjusted our global model to include the forecasts for accessible reserves, fiscal and current account surplus, inflation and growth mentioned in this paper to better map Iran's resiliency. The results highlight the deterioration in Iran's institutional capacity to respond and stimulate its economy. Iran's overall scores have approached levels consistent with an economic shock, and the low level of government effectiveness suggests that Iran's government might struggle to cope with such a shock.[7] Iran's overall country risk score of 5.1 (0 = weak; 10 = strong), which includes both sovereign risk and medium-term growth potential is quite weak for an emerging or frontier market and is comparable with the scores of other vulnerable countries, such as Iraq, and slightly worse than the scores of Egypt, Jordan, Morocco, Algeria and Libya, which benefit from regional/IMF support. However, Iran does score higher than economic basket cases like Sudan and Yemen.

[7] Our systematic country risk model compares 174 countries across four pillars: Resilience to an external shock, institutional strength, flexibility of the economy and political risks.

Although a score of below 5 tends to be indicative of some sort of debt or banking crisis in developed markets (DM) which tend to have more debt and stronger and more credible institutions, the model considers scores below 6 to be of concern for emerging and frontier markets. Although Iran's overall score has remained relatively stable, albeit at a level where it would be on a watch-list for crisis, the sharp declines in its fiscal reserves to imports and banking sector scores should be concerning to Tehran. To place Iranian scores in the context of other emerging markets (EMs), Brazil's overall score is now 6.2, China's 6.6, the Czech Republic's 6.8 (one of the strongest EMs), Mexico's 6.6, and India's 5.6. **Therefore, Iran's overall scores are much weaker than even the EM average, despite its low level of external debt.**

Iran scores somewhat better (5.6) on the external resilience indicators that measure the exposure and capacity of a country to respond to an external shock. However, these relatively high scores reflect the increased flexibility that came from allowing the rial to depreciate, as Iran lacked the reserves to defend the currency. Although greater flexibility is a positive macroeconomic factor, further depreciation could undermine other elements of the economy, particularly if the currency struggles to find a nominal anchor. After years of keeping the Iranian currency pegged at too strong an exchange rate to boost the elites' purchasing power abroad, fast adjustment could hurt Iran's resilience.

Of particular concern to Tehran, Iran's external resilience indicators are weaker than those of its oil-exporting peers, like Saudi Arabia and Algeria, and outperform only those of some of the MENA oil importers. However, most of the latter countries can draw upon credit lines and swaps from either the IMF (Morocco, Jordan) and/or wealthy GCC countries (Egypt), which reduce the risk of a currency crisis. They also tend to have more dynamic and flexible economies, which could help increase their medium-term growth trajectories. With Iran's reserve buffer depleting sharply as a result of rising imports, restricted exports, and restricted access to its reserves, any attempt to restrict its currency would raise the risk of a currency crisis. Iran's fiscal policy, reserves buffer, and banking system have deteriorated significantly since 2011, while its growth potential has weakened further, damaging the country's long-term flexibility.

Figure 3: Iran Ranks Near the Bottom of its MENA Peer Group (0 = weak, 10 = strong)

	MENA Average	Algeria	Egypt	Iran	Iraq	Jordan	Libya	Saudi Arabia	Turkey
Country Strength (Overall score)	5.8	5.8	5.6	5.1	5.0	5.5	6.1	6.6	5.8
Sovereign Risk (External Adjustment and Institutions)	5.9	6.8	5.0	5.6	6.0	4.6	6.6	6.7	6.2
1. External adjustment capacity	6.3	7.7	6.1	7.0	6.4	4.3	6.6	6.4	6.5
Exchange rate mechanism	4.9	7.0	4.0	7.0	3.0	3.0	4.0	3.0	7.0
Reserve to imports	8.3	10.0	4.0	5.6	n/a	7.8	n/a	10.0	9.3
Current account	6.7	10.0	5.3	10.0	8.0	0.0	8.8	8.3	3.1
Trade vulnerability	4.3	2.8	5.0	2.0	2.8	7.4	2.9	2.5	8.3
Energy intensity	5.4	5.9	1.5	0.0	4.8	4.4	6.4	2.9	8.7
2. Institutional robustness	5.4	5.9	3.9	4.2	5.6	4.9	6.7	7.1	5.8
Monetary policy	4.4	2.4	0.8	0.0	4.7	5.3	10.0	7.8	2.7
Fiscal policy	6.4	8.8	1.6	6.5	10.0	2.0	10.0	10.0	8.3
Fiscal deficit	5.2	7.7	0.0	3.1	10.0	0.5	10.0	10.0	6.7
Total indebtedness	6.8	9.8	6.1	9.8	8.1	3.6	10.0	9.5	8.6
Banking sector	6.3	6.8	6.8	3.4	6.1	8.3	6.0	7.1	5.9
Government effectiveness	3.6	2.7	3.0	2.1	0.9	5.1	0.7	3.7	5.7
Rule of Law	4.2	2.5	4.3	2.0	0.2	6.2	1.2	5.7	5.8
Political risk	4.7	4.7	5.0	3.6	3.7	5.3	3.3	4.4	3.9
Inequality	5.8	8.7	6.9	4.1	7.6	6.0	n/a	4.3	4.4
3. Medium term growth potential	5.1	3.7	5.5	3.9	3.3	5.4	4.7	6.0	5.1
Human resource potential	4.1	2.3	2.8	2.9	2.6	2.6	4.7	5.0	3.4
Education	4.8	5.0	3.0	7.2	2.3	6.1	2.4	6.6	5.6
Innovation & technology	3.2	1.3	3.5	2.0	0.2	2.8	1.5	3.9	3.2
Infrastructure	6.5	5.4	7.0	4.8	4.8	7.4	6.0	8.3	7.6
Business environment	4.7	2.8	4.3	3.2	1.9	5.4	3.1	6.4	4.7

Source: RGE Country Insights (see Roubini.com for more details) Note: We use RGE's forecasts for Iran's accessible FX reserves and imports, in the absence of consistent data from the cross-country sources we rely on for other countries.

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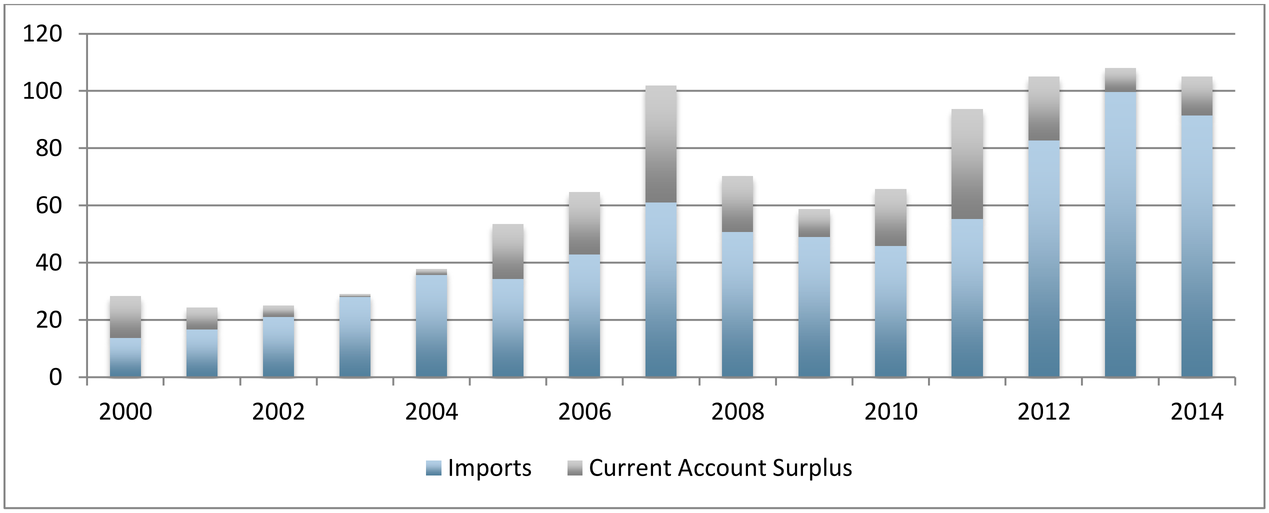
Iran's Vulnerabilities Include:

- Iran has one of the least energy-efficient economies, worse even than many of its oil-exporting peers.
- Iran's banking sector score is the lowest in MENA, only slightly higher than those countries in the Eurozone (EZ) periphery like Greece in 2009-10. Loan/deposit ratios and capital adequacy are dropping, while banks are propping up the government, rather than lending to the private sector.
- High levels of corruption and weak rule of law impair banks' ability to collect non-performing assets from politically connected groups, as well as undermine the environment for smaller, unconnected private corporations, which stand out as vulnerable to cheap imports (agribusiness).
- Iran's economy has become increasingly rigid and less able to support innovation while much of its strong human capital has migrated abroad. Although Iran has relatively good education, including significant tertiary education, the human resource capacity, which is businesses can use has weakened. The increased rigidity coupled with negligible ability to raise capital from local banks suggests that the non-oil economy will find it difficult to adapt, reinforcing the effect of economic sanctions.
- Greater inequality and more dissatisfaction with the quality of services: Iran has particularly low perceived deprivation (the reality-expectations gap concerning the quality of social services) which tends to be a precursor of political shocks or a divided society.

Iran's External Balance: No Longer Supportive

Iran's trade and remittance-related inflows have kept the current account surplus narrowly positive, at an estimated $10 billion in 2013, but we project the surplus will shift to a deficit position this year or next. Iran's non-oil exports have temporarily provided relief as it has sought to export anything that would help it evade the sanctions regime, ranging from pistachios to cement. This also includes exports of petrochemicals, fuel oil and oil products, which likely will be subject to additional U.S. sanctions. When these loopholes are closed, Iranian non-oil exports are likely to at best level off, and likely decline.

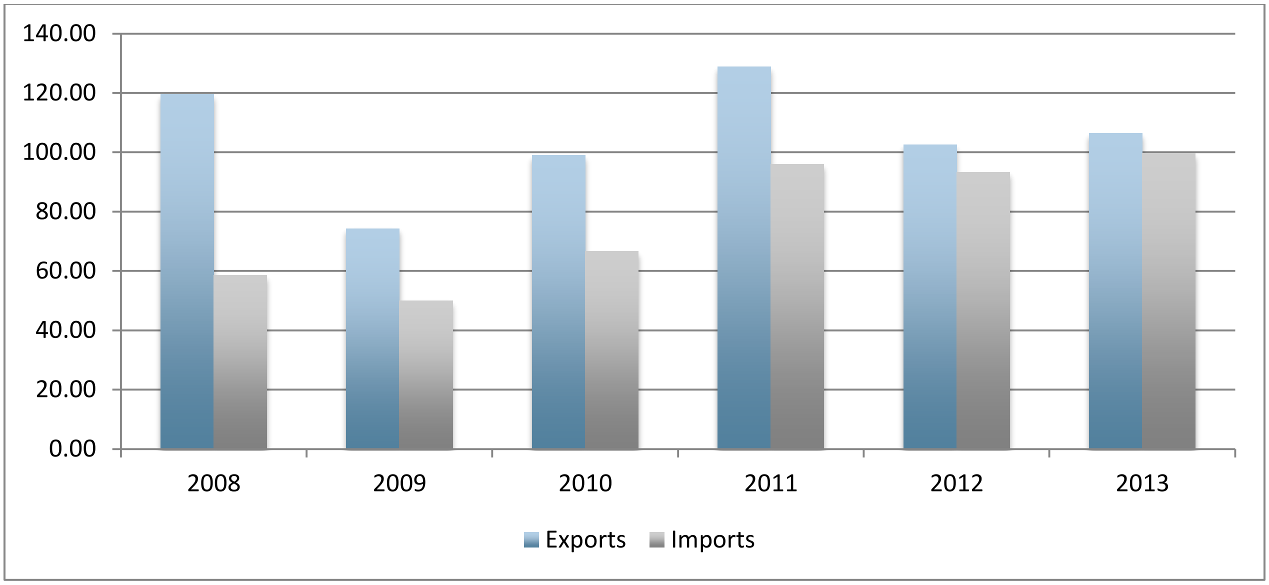
Figure 4: Most of Each Barrel of Oil Finances Imports ($, barrel of oil)



Source: RGE

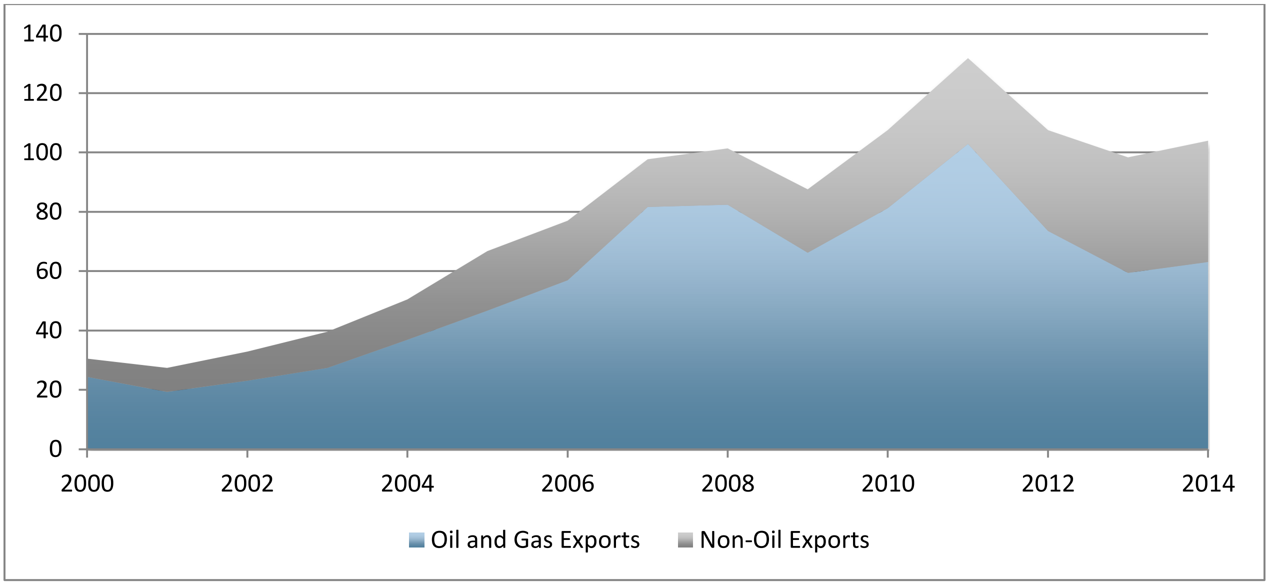
Although goods imports have held up relatively well -- in part because of barter agreements -- service imports, including tourism, have fallen off sharply, maintaining Iran's current account surplus temporarily. By contrast, the fiscal balance is in deficit and we concur with consensus views that fiscal spending will take around a $140 per barrel oil price to finance. The reduction in fuel subsidies beginning in 2009 and increase in domestic refining has helped cushion the blow of sanctions as it removed the need for Iran to import refined fuel, though triggering a short-term inflationary shock. In 2008, Iran imported over 30% of its refined petroleum needs.

Figure 5: Iran's Trade Surplus Will Shift to Deficit Soon ($, billions)



Source: IMF DOTS, RGE

Figure 6: Iranian Non-Oil Exports Have Been Climbing Temporarily ($, billions)

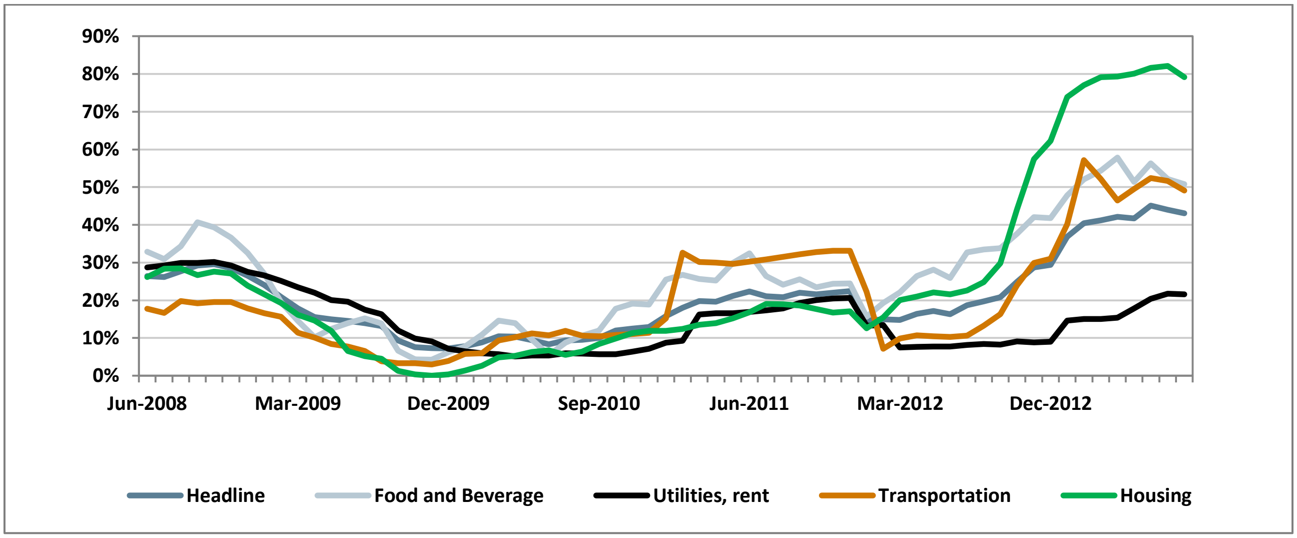


Source: IMF, RGE

Other Weaknesses in Iran's Economy: Rising Inflation, Economic Recession

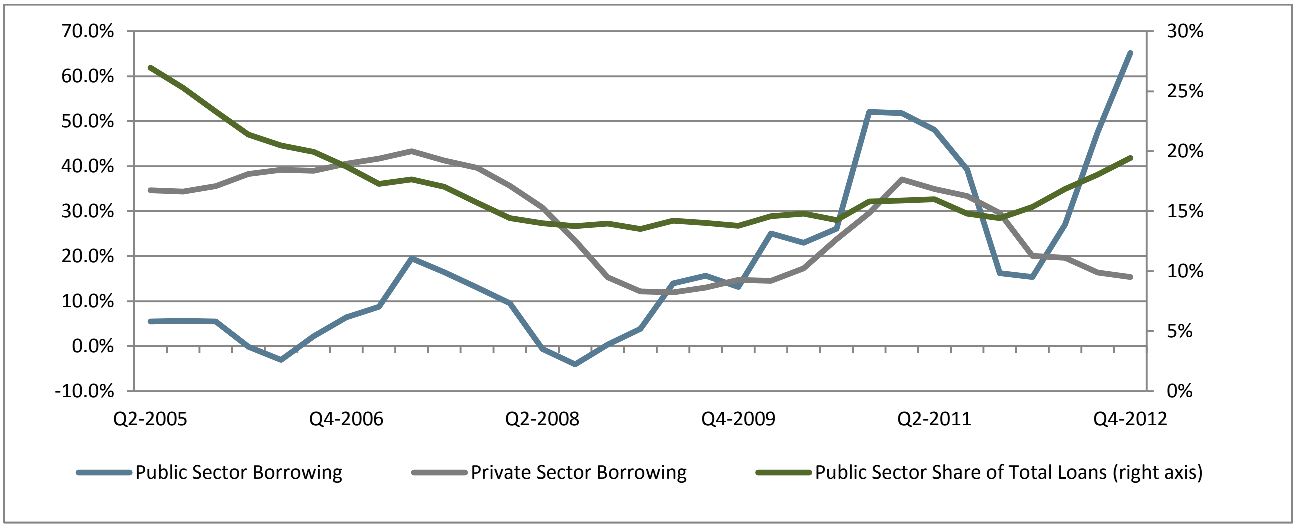
The Iranian rial has stabilized and gradually depreciated since President Hassan Rouhani's election in June 2013, putting less pressure on household purchasing power, but inflation continues to rise, driven by the cost of housing, as well as food. In times of inflation, asset bubbles develop and housing costs tend to soar, putting particular pressure on the middle class, who are more likely to rent, and less likely to have access to appreciating equity and housing stock. Meanwhile, the fiscal gap is widening, as pre-election spending has exacerbated the already weak fiscal position. We doubt that the government is willing to bear the political burden of fiscal consolidation and spending cuts. We expect that the Iranian government will continue to increase its reliance on local debt (via the banking system) and eventually have to make fiscal cuts, which, in turn, could exacerbate the current economic recession.

Figure 7: Official Data Likely Understate Inflation (y/y)



Source: Haver Analytics

Figure 8: Government Borrowing Needs Crowding Out Private Sector in 2012 (%, y/y)



Source: Central Bank of Iran

Still, it is the fiscal vulnerabilities that are most concerning for the Iranian government and will require adjustment in the coming year as it struggles to continue an expansionary policy involving an increase in wages and other social transfers. Current economic and government spending policy is unsustainable. We assume that Iran's current budget for fiscal-year 2013 would require an oil price of over $140 per barrel meaning Iran will need to issue debt or make other fiscal adjustments, which could perpetuate its economic recession. We anticipate that the government will find it difficult to cut spending or raise revenues, particularly given the strain that the private sector is facing. The primary way to boost revenue would be to create loopholes or receive sanctions relief that would boost oil revenue and increase non-oil trade by reducing transactions costs.

Reality Check: Iran May Have Sizable Off-Books FX Assets

Beyond its FX reserves, Iran may have extensive "off-books" funds sitting within Iran's bonyads, investment funds and entities that are owned and or controlled by the IRGC, the Quds Force, and the Supreme Leader. These bonyads include, for example, the Islamic Revolution's Foundation of the Oppressed [Bonyad-e Mostazafan-e Enqelab-e Eslami], the Foundation of the Martyrs and Veterans Affairs [Bonyad-e Shahid Va Omour-e Isargaran] and the IRGC Cooperative Foundation [Bonyad-e Taavon-e Sepah].

Assets from these entities, combined with revenue from businesses privatized through the Tehran Stock Exchange and income from the IRGC's illicit trading and smuggling networks, likely provide Iran with sizable funds from which to draw in the event of a severe economic crisis. It remains unclear however whether the IRGC and other regime elements will be willing to part with these funds to help address Iran's balance of payments and fiscal problems or whether they might see an opportunity to increase their role in the economy.

The Bonyads

Iran's bonyads are closely linked to the IRGC, have extensive business interests across Iran's economy, and also act as influential stakeholders in Iran's economy. According to analyst Fred Kagan, "a large proportion of Iran's wealth—possibly as much as 35% of its gross domestic product—is tied up in a number of [these] large religious-charitable foundations... The Supreme Leader chooses the heads of these foundations, and they are not responsible to the parliament, the ministries, or the president."[8] Kagan notes that, "the foundations play an important role in the Iranian economy, running large-scale business enterprises of various sorts and employing perhaps 5 million Iranians."[9]

According to analyst Emanuele Ottolenghi, "the IRGC indirectly controls two economic conglomerates that are unique to Iran's revolutionary structures: the Foundation of the Oppressed of the Earth [Bonyad-e Mostazafan] and the Foundation of Martyrs and Veterans Affairs [Bonyad-e Shahidiva-Omur-Janbazan]."[10] According to analyst Ali Alfoneh, in addition to these IRGC-controlled bonyads, "[t]he IRGC Cooperative Foundation, established August 23, 1986, has developed into one of Iran's major financial players."[11, 12]

Alfoneh notes that, the Foundation of the Oppressed [Bonyad-e Mostazafan Enqelab-e Eslami] is an "independent financial body traditionally run by a retired IRGC commander and used by the state as a proxy to fund off-the-

[8] Frederick W. Kagan, "Political Structures of Iran," AEI, n.d. http://www.irantracker.org/node/97. Accessed on September 17, 2013.
[9] Data from Statement of Kenneth Katzman, Specialist in Middle Eastern Affairs, Congressional Research Service before the Joint Economic Committee Hearing on Iran, July 25, 2006. Quoted in Frederick W. Kagan. "Political Structures of Iran," AEI, n.d. http://www.irantracker.org/node/97. Accessed on September 17, 2013.
[10] Emanuele Ottolenghi. *"The Pasdaran: Inside Iran's Revolutionary Guard Corps."* FDD Press, 2011, Washington, D.C., p. 43.
[11] Ali Alfoneh. "*Iran Unveiled: How the Revolutionary Guards is Turning Theocracy into Military Dictatorship,"* AEI Press, 2013, Washington, D.C., p. 186.
[12] "Asasnameh-ye Bonyad-e Taavon-e Sepah Pasdaran-e Enqelab-e Eslami" [Statute of the Islamic Revolutionary Guard Corps Cooperative] n.d. Available in Persian at http: www.tooba-ir.org/_book/defa/ghavanin/ghavan12.htm Accessed on June 2, 2010.

books IRGC operations…"[13] According to Alfoneh, in describing the major bonyads, "the Foundations were established by confiscating real estate, funds, and production units of exiled Iranians connected with the Pahlavi regime, which enabled the foundations to dominate the Iranian economy during the first two decades of the Islamic Republic. Since Ahmadinejad's election, the Guards have used funds accumulated since the 1980's to purchase state enterprises and businesses privatized through the Tehran Stock Exchange."[14,15]

According to analyst Michael Rubin, the Foundation of the Oppressed in 2008, "manage[d] over 400 companies and factories, worth perhaps $12 billion, and is the largest economic entity in Iran after the government."[16] A complete list of companies controlled by the Foundation of the Oppressed can be found on its website.[17]

- The Foundation for Martyrs and Veterans Affairs is another major bonyad, now headed by Mohammad Ali-Shahidi[18] and sanctioned by the U.S. Treasury Department on July 24, 2007 under Executive Order 13224.[19] Until recently, former IRGC Air Force commander Hossein Dehghan, who is currently Iran's Defense Minister, headed the foundation. According to Ottolenghi, "[t]he Foundation acts as a mortgage lender to Basijis' and martyrs' families, and as an influential stakeholder in Iran's economy."[20]

The Execution of Imam Khomeini's Order (EIKO)

The Execution of Imam Khomeini's Order (EIKO) oversees a network of private businesses and front companies that generate and control massive, off-the-books investments through two main subsidiaries, of which one controls and manages international front companies and the other manages investments. Both operate on behalf of the Iranian government and generate billions of dollars of profits for the regime each year.

- The U.S. Department of the Treasury placed sanctions on EIKO pursuant to Executive Order 13599, which blocks the property of the Government of Iran.[21]

- According to a June 4, 2013, press release from the Department of the Treasury: "The Execution of Imam Khomeini's Order (EIKO), through two main subsidiaries, oversees a labyrinth of 37 ostensibly private businesses, many of which are front companies. The purpose of this network is to generate and control massive, off-the-books investments, shielded from the view of the Iranian people and international regulators."[22]

- The Treasury also notes, "EIKO and its subsidiaries—one that manages and controls EIKO's international front companies, and another that manages billions of dollars in investments—work on behalf of the

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[13] Ali Alfoneh. *"Iran Unveiled: How the Revolutionary Guards is Turning Theocracy into Military Dictatorship,"* AEI Press, 2013, Washington, D.C., p. 175.
[14] Ali Alfoneh. *"Iran Unveiled: How the Revolutionary Guards is Turning Theocracy into Military Dictatorship,"* AEI Press, 2013, Washington, D.C., p. 178.
[15] Suzanne Maloney, "Agents or Obstacles? Parastatal Foundations and Challenges for Iranian Development," in Parvin Alizadeh (ed.), *The Economy of Iran: Dilemmas of an Islamic State* (London: I.B. Tauris, 2000), pp. 145-176.
[16] Michael Rubin, ""Meeting The Challenge: U.S. Policy toward Iranian Nuclear Development," AEI, originally published in Bipartisan Policy Center, September 1, 2008. http://www.irantracker.org/full-publication/meeting-challenge-us-policy-toward-iranian-nuclear-development-page-3
[17] A complete list of companies controlled by the Foundation of the Oppressed can be found on its website: www.irmf.ir/en/EN-RelatedCompanies.aspx
[18] "New Vice President for Martyrs and Veterans Affairs Foundation appointed in Iran," *Trend.az,* September 7, 2013. http://en.trend.az/regions/iran/2187296.html. Accessed on September 17, 2013.
[19] "Twin Treasury Actions Take Aim at Hizballah's Support Network," *Press Release*, U.S. Department of the Treasury, July 24, 2007. http://www.treasury.gov/press-center/press-releases/Pages/hp503.aspx
[20] Emanuele Ottolenghi. *"The Pasdaran: Inside Iran's Revolutionary Guard Corps."* FDD Press, 2011. Washington, D.C. p. 43
[21] "Treasury Targets Assets of Iranian Leadership," *Press Release*, U.S. Department of the Treasury, June 4, 2013. http://www.treasury.gov/press-center/press-releases/Pages/jl1968.aspx
[22] "Treasury Targets Assets of Iranian Leadership," *Press Release*, U.S. Department of the Treasury, June 4, 2013. http://www.treasury.gov/press-center/press-releases/Pages/jl1968.aspx

Iranian Government and operate in various sectors of the Iranian economy and around the world, generating billions of dollars in profits for the Iranian regime each year."[23]

- The June 4, 2013, Treasury press release notes, "EIKO has made tens of billions of dollars in profit for the Iranian regime each year through the exploitation of favorable loan rates from Iranian banks and the sale and management of real estate holdings, including selling property donated to EIKO. EIKO has also confiscated properties in Iran that were owned by Iranians not living in Iran full-time. In addition to generating revenue for the Iranian leadership, EIKO has been tasked with assisting the Iranian Government's circumvention of U.S. and international sanctions."[24]

Privatization

The purchase of state-run enterprises that were privatized through the Tehran Stock Exchange is an important source of revenue for the regime. For example, on September 27, 2009, the IRGC purchased 50% plus one of the shares of Iran Telecommunications Company, the largest trade in the history of the Tehran Stock Exchange, valued around $8 billion.[25] This is but one of the over 1,500 companies that the regime has privatized since 2005.

According to Ottolenghi, "Given the frequent opaque nature of IRGC involvement in business, it is hard to quantify the combined value of all contracts for which IRGC companies successfully bid. Still, credible estimates suggest the IRGC controls anywhere between 25 and 40 percent of Iran's GDP—the equivalent of tens of billions of dollars."[26] Alfoneh cites an April 2010 interview with Mahmoud Ahmadinejad noting that, "The total sum of [privatizations prior to 2005] was 30 trillion rial [$3 billion], but since then, there has been more than 600 trillion rial [$60 billion] worth of transfers, most of which has been through the [Tehran] Stock Exchange."[27]

Analysts Elliot Hen-Tov and Nathan Gonzalez estimate that, "based on the available data, it is reasonable to estimate that the Guards controlled less than five percent of GDP shortly after the end of the Iran-Iraq War in 1989. Now, [in 2011], they directly or indirectly oversee at least 25 percent of GDP, and more likely about 35 percent and growing."[28]

Illicit Economic Activities

The IRGC is also involved in many illicit economic activities that contribute to the regime's wealth. The control that the IRGC exerts over many of Iran's entry and exit points -- including harbors, borders and airports -- further allows them to grow their wealth through continued smuggling and sanction evasion.[29] "According to the daily newspaper Iran, billions of dollars in 'luxury goods, mobile phones and cosmetics [were] smuggled through Imam

[23] "Treasury Targets Assets of Iranian Leadership," *Press Release*, U.S. Department of the Treasury, June 4, 2013. http://www.treasury.gov/press-center/press-releases/Pages/jl1968.aspx
[24] "Treasury Targets Assets of Iranian Leadership," *Press Release*, U.S. Department of the Treasury, June 4, 2013. http://www.treasury.gov/press-center/press-releases/Pages/jl1968.aspx
[25] "Anjam-e Movafaghiatamiz-e Bozorgtarin Kharid Va Foroush-e Tarikh-e Bours" [Successful Execution of the Largest Trade in the History of the Stock Exchange], Bourse News (Tehran), September 27, 2009 Accessed June 2, 2010. http://www.irbourse.com/NewsDetail.aspx?NewsIdn=10607, as quoted in Ali Alfoneh. "Iran Unveiled: How the Revolutionary Guards is Turning Theocracy into Military Dictatorship," AEI Press, 2013. Washington, D.C. p. 186
[26] Emanuele Ottolenghi. "The Pasdaran: Inside Iran's Revolutionary Guard Corps." FDD Press, 2011. Washington, D.C. P. v, 43
[27] Ali Alfoneh. "Iran Unveiled: How the Revolutionary Guards is Turning Theocracy into Military Dictatorship," AEI Press, 2013. Washington, D.C. P. 179; "Kasi Tavanayi-ye Asib-zadan Be Iran Ra Nadarad" [No One Has the Capacity to Harm Iran] Fars News Agency (Tehran), April 14, 2010, accessed June 2, 2010. www.farsnews.net/newstext.php?nn=8901250001
[28] Elliot Hen-Tov and Nathan Gonzalez, "The Militarization of Post-Khomeini Iran: Praetorianism 2.0," The Washington Quarterly, Vol. 34, No. 1, Winter 2011, pp. 45-59.
[29] Ali Alfoneh. "Iran Unveiled: How the Revolutionary Guards is Turning Theocracy into Military Dictatorship," AEI Press, 2013. Washington, D.C. P. 189; Emanuele Ottolenghi. "The Pasdaran: Inside Iran's Revolutionary Guard Corps." FDD Press, 2011. Washington, D.C. p. 58

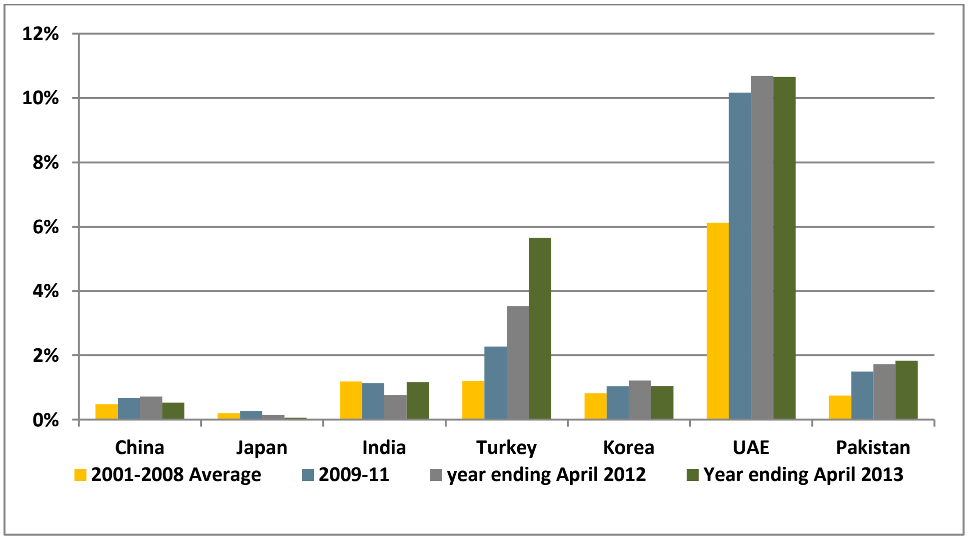
Khomeini International Airport' during the facility's first eighteen months of operation."[30] There may be four smuggling flights each day and as many as twice that number on holidays."[31]

According to a RAND Corporation study, "one Majles [parliament] member recently stated that IRGC black-market activities might account for $12 billion per year." It quotes another parliamentarian suggesting that, "invisible jetties…and the invisible hand of the mafia control 68 percent of Iran's entire exports." The study notes that, "others claim that a high volume of contraband goods enter the country via 'illegal and unofficial channels, such as invisible jetties supervised by strongmen and men of wealth.' There are also claims that the IRGC facilitates the transfer of alcohol, cigarettes, and satellite dishes across portions of the Iran-Iraq border that it controls."[32]

Bottom-Line: Reserves, Off-Books Assets and Inflows Could Be Strong Enough for Iran to Muddle Through for Now

Iran's economy remains under extensive pressure because of sanctions, and its trade surplus is shifting into deficit, while its fiscal gap is widening. We anticipate that Iran's economy will remain in recession in 2013, as the onset of the fiscal drag offsets the increase in non-oil exports, with an estimated decline in GDP of 3-5%. This follows a decline in GDP of at least 5% in 2012. However, even if the economy stabilizes in 2013, unless more Iranian crude oil comes back on to the market, and Iran is able to actually spend the oil revenues that are accumulating in the February 6 escrow accounts, the economy could slip back into an even deeper recession in 2014, as global oil prices and demand ease, inflation cuts into domestic consumer spending, and corporations are unable or refuse to invest.

Figure 9: Exports to Iran are a Small Part of Partners Trade (% of total Trade)



Source: IMF DOTS

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[30] "Ghachagh-e Milliardi az Gomrok-e Foroudgah" [Billions Worth Are Smuggled Through Airport Customs], Iran Newspaper, September 27, 2009. http://iran-newspaper.com/1386/860707/html/special4.htm#s754422; Ali Alfoneh. "Iran Unveiled: How the Revolutionary Guards is Turning Theocracy into Military Dictatorship," AEI Press, 2013. Washington, D.C. p. 190

[31] A. William Samii, "Analysis: Goods Smuggling Highlights Economic Problems in Iran," Radio Free Europe/Radio Liberty, January 7, 2005. Ali Alfoneh, "How Intertwined Are the Revolutionary Guards in Iran's Economy?" AEI Middle East Outlook, No. 3. October 22, 2007. http://www.aei.org/article/foreign-and-defense-policy/regional/middle-east-and-north-africa/how-intertwined-are-the-revolutionary-guards-in-irans-economy/

[32] Frederic Wherly et al., *The Rise of the Pasdaran*, RAND Corporation, 2009, pp. 64-65.

Despite a deteriorating economy under significant pressure, Iran may be able to painfully muddle through with its import and government-financing needs in the next 12 months, helped by non-oil exports. It may also have access to sizable off-books assets from Iran's Bonyads, investment funds, and entities that are owned or controlled by the IRGC, the Quds Force, and the Supreme Leader (assuming that these regime elements are willing to give up their funds to help President Rouhani address the government's economic problems).

A fall in the oil price, a sharp drop in oil output, further restrictions on Iran's ability to use its oil earnings and a tightening of sanctions on non-oil exports and limits on government access to off-books funds, could prompt a quicker draw-down of assets or a deepening of the recession.

At its current trajectory, unless enhanced sanctions are imposed, Iran may reach the point of undetectable nuclear breakout, which it is expected by mid-2014 before an economic collapse However, with Iranian president Hassan Rouhani under considerable pressure to deliver on his commitment to lift sanctions and stabilize the economy, the Iranian government may fear that further sanctions pressure could tip the economy into an unmanageable economic and political crisis.

Additional sanctions measures that could create a more severe balance of payments crisis, further drain Iran's FX reserves, and precipitate a new run on Iran's currency include: 1) sanctioning any financial institution that provides Iran access to, or use of, its foreign reserves; 2) dramatically reducing permissible imports of Iranian crude products; 3) requiring countries buying Iranian crude to dramatically reduce their exports of non-humanitarian commercial goods to Iran; 4) requiring a specified percentage of Iran's escrow funds be spent only on humanitarian goods; 5) blacklisting additional sectors of the Iranian economy owned or controlled by the government of Iran and/or the IRGC, including the mining, engineering and construction sectors; 6) vigorously enforcing gold sanctions to deny Iran access to gold to replenish its FX reserves; 7) imposing tighter sanctions on non-oil Iranian commercial exports; 8) expanding the definition of crude oil sanctions to include all oil products; and 9) imposing additional sanctions against the holdings of Iran's bonyads and investment funds, and entities owned and or controlled by the IRGC, the Quds Force, the Supreme Leader and other entities.

Appendix: Change in Iran's Country Risk Scores

Figure 9: Iran's Scores Have Deteriorated (change in scores from March 2011 to June 2013)

	MENA Average	Algeria	Egypt	Iran	Iraq	Jordan	Libya	Turkey
Sovereign Risk Index (external capacity and institutions)	0.2	0.2	-0.5	0.2	3.0	-1.1	0.7	-0.6
1. External adjustment capacity	0.3	0.8	-1.2	1.1	2.7	-2.7	1.8	-0.6
Exchange rate mechanism	0.3	0.0	-3.0	2.0	-2.0	0.0	0.0	-3.0
Labor productivity growth	-0.1	-0.2	-2.2	-3.1	2.0	-3.6	7.5	0.7
External indebtedness	-0.3	0.4	-0.8	0.0		-2.4		0.4
Reserve buffer	-0.5	0.0	-3.0	-2.2	N/A	-3.9	N/A	-0.6
Reserve/ imports	-1.4	0.0	-6.0	-4.4		-2.2		-0.7
Current account	0.3	3.3	-0.1	0.0	4.7	-6.3	0.0	-1.0
Trade vulnerability	0.2	0.2	0.2	0.1	0.0	0.5	0.5	-0.1
2. Institutional robustness	0.1	-0.3	0.1	-0.7	3.3	0.4	-0.4	-0.6
Fiscal policy	-0.5	-0.6	-0.7	-3.5	10.0	-2.2	0.0	0.3
Fiscal deficit	-1.1	-1.1	0.0	-6.9	10.0	-2.3	0.0	0.2
Banking sector	-0.6	-2.1	0.2	-1.3	1.8	1.2	-1.0	-1.6
Capital adequacy	0.4	0.0	0.0	-0.9		0.0	0.0	0.0
Loan-to-deposit	-0.6	0.0	0.0	-4.3	0.9	0.0	-0.1	-3.1
Government effectiveness	-0.2	0.0	-0.9	0.0	0.1	-0.3	-0.4	0.0
Control of corruption	-0.3	0.0	-1.2	-0.5	0.4	-0.6	-0.3	0.0
3. Medium term growth potential	0.2	-0.3	0.1	0.0	0.1	0.1	1.1	0.3
Demography	-0.1	-0.4	-0.1	-0.1	0.1	-0.1	0.6	0.0
Labour productivity growth	-0.1	-0.2	-2.2	-3.1	2.0	-3.6	7.5	0.7
Infrastructure	0.7	1.1	1.7	0.8	0.3	0.7	1.2	0.6
Business environment	-0.2	-1.0	-0.8	-0.3	0.2	0.2	0.0	0.3

Source: RGE Country Insights