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Iran's Golden Loophole

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Summary: This paper, co-authored by Mark Dubowitz of the Foundation for Defense of Democracies and Gary Clark and Rachel Ziemba from Roubini Global Economics, discusses how Iran is exploiting loopholes in U.S. sanctions laws to obtain gold to replenish its FX reserves. These are its principal hedge against a severe balance of payments crisis, and thereby help the country withstand international pressure over its nuclear program. Since July 30, 2012, Iran has received over \$6 billion in payment in gold for energy exports—the value of the lack of enforcement of the golden loophole—mainly as gold payments to the Central Bank of Iran, which is a sanctionable activity under existing U.S. law. This report estimates that, unless gold sanctions are enforced, Iran could receive

up to \$20 billion a year, representing around thirty percent of Iran's projected 2013 energy exports.

- U.S. law prohibits gold exports to Iran but there are loopholes: Executive Order 13622 issued by the Obama administration on July 30, 2012 prohibits the export of gold to Iranian government entities; and the Iran Freedom and Counter-Proliferation Act (IFCPA), passed by the U.S. Congress and signed into law by President Obama in January 2013, expands on this, placing sanctions on gold exports to any entity in Iran, amounting to a comprehensive blacklisting of the gold trade. However, at the request of the Obama administration, which may have viewed gold-sanctions relief as a potential concession during recent negotiations with Iran, the IFCPA only becomes effective on July 1, 2013.
- At negotiations with Iran in Almaty, Kazakhstan, on April 5, 2013, the P5+1 countries reportedly offered Iran concessions, including the ability to trade in gold, in exchange for reciprocal concessions on Iran's nuclear program. Although Iran did not accept the proposal, President Obama's U.S. administration has not placed sanctions on gold exports to Iran, even though it has asserted explicit authority to do so since July 2012 through Executive Order 13622. This amounts to providing sanctions relief to Iran through the non-enforcement of existing sanctions, and appears to have led to a pickup in gold sales, providing Iran with an economic lifeline to earn hard currency through the sale of gold.
- Iran has exploited this lack of enforcement: In Q1 2013, direct and indirect gold exports to Iran amounted to \$1.33 billion (or 23.1 metric tons), similar to \$1.47 billion (or 24.3 metric tons) in Q4 2012. In Q1 2013, direct exports alone from Turkey to Iran totaled \$499 million (8.67 metric tons), picking up to \$381 million in March from \$118 million in February. Some of the Iranian gold trade is payment for Iran's natural gas exports to Turkey, which amount to around \$289 million per month (July 2011-June 2012).
- As tighter U.S. sanctions were being implemented in mid-2012, gold imports from Turkey to Iran (directly and indirectly from the UAE) peaked at a record \$1.6 billion (28 metric tons) per month in June and July 2012. Iran received the gold likely as payment from both Turkey and other Iranian energy importers, in particular India. Some of this may also have reflected repatriation of Iran's foreign holdings ahead of sanctions and a rise in private demand to hedge the risk of a concurrent collapse in the value of the Iranian rial.
- If Iran is able to maintain or even increase its gold reserves, this could significantly boost its access to hard currency and buttress its ability to control inflation, diminishing the impact of other





financial and energy sanctions designed to halt its nuclear program. Should gold exports to Iran remain at the Q1 pace (i.e., assuming that supply-chain and purchasing agreements have adjusted to the current sanctions regime), gold could provide Iran with \$5.3 billion in revenue in 2013 (at the $\,^{\text{Page}}\mid 2$ current gold price of \$1,450 per troy oz), iv representing 8% of Iran's total projected 2013 energy revenue of \$64 billion (if energy exports decline, then gold could constitute an even larger proportion of revenue).

- If Iran fully exploits this "golden loophole," it could earn \$20 billion per year in revenue from gold, based on payments for energy exports from Turkey, India and China. This would have a significant effect on gold markets, driving up gold prices. \$20 billion in gold sales is equivalent to 429 metric tons, approaching the total level of net central bank gold purchases in 2012 of 535 metric tons.
- India and China are also using gold to pay Iran for energy: India, for example, is said to be paying for Iranian oil in broken or scrap gold, which is then melted down in Iraqi Kurdistan and transported to Dubai, before making its way to Iran. Kurdistan is a well-established smuggling route into Iran (previously used for manufactured goods). Bartered goods are also being used as payment for energy exports, particularly by China. However, it is likely that Iran will seek greater payment in gold, given it often receives a poor deal through bartering, receiving non-essential goods and some that undermine its domestic industries.
- We estimate that Iran's revenues from energy exports (crude oil, natural gas, natural gas condensates and fuel oil) total up to \$5.3 billion per month in 2013 (although the figure could be lower, given discounting, lax payment terms, bartering and transaction costs)—gold appears to account for around 8% of this revenue (and 12% of crude oil revenue only), but is likely to account for more, given the emergence of gold-trading hubs and the black market not captured in official statistics.
- Who is taking delivery of the gold? We suspect that the Central Bank of Iran (CBI) is taking the gold payments which, as an Iranian government entity would be a sanctionable activity. In February 2012, the CBI governor at the time, said that Iran's trading partners could pay in gold instead of U.S. dollars, echoing previous attempts to accept payment in local currency. Meanwhile, a deputy from Turkey's Republican People's Party (CHP) believes that gold is being sent to Iran in exchange for oil. Minimal official data exists for CBI gold holdings: The IMF stated holdings of 168 tons in 1996 and estimated around 300 tons in 2007, while Iranian sources put bullion reserves at 500-907 tons by 2012 or \$21 billion-38 billion. The CBI is using the sale of gold coins and gold futures contracts in an attempt to rein in liquidity, control inflation and transfer wealth to segments of the population.
- Iranian sources put proven underground minable deposits of gold at 320 tons, but domestic production is negligible, at 0.2 tons per month. Iran has a large private gold market, with demand estimated at some 11.6 tons per month in 2004 (the latest data), making it the sixth-largest gold jewelry-consuming country in the world at the time. Given high inflation and the rial's collapse, private demand for gold is rising as Iranians liquidate domestic and foreign assets for gold and USD.

Introduction: Sanctions Concessions Could Diminish Pressure to Stop Iran's Nuclear Program

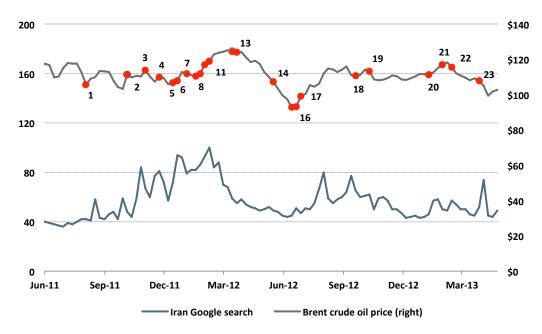
Iran has been receiving payment for energy exports in gold or in the importer's local currency (e.g., Turkish lira), which it uses to buy gold, which is then repatriated back to Iran. There are efforts to combat this trade: Obama administration's Executive Order 13622 banned exports of gold and other precious metals to the government of Iran from July 2012, and the U.S. Congress passed the IFCPA in January 2013, imposing blanket gold and precious metals sanctions on those who transfer precious metals to any entity in Iran; effective July 1, 2013. However,



despite these sanctions, a material amount of Iran's energy revenue continues to be received in precious metals (8% in 2013; and possibly more, given the black market).

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- 1- GCC and Iran fail to agree on output increases at the OPEC meeting
- 2- Iran accused of plot to kill Saudi ambassador
- 3- Damning IAEA report on Iran's nuclear ambitions
- 4- U.S. announces sanctions against financial institutions that do business with Iran
- 5- Iran threatens blockage of the Strait of Hormuz if sanctions against the regime are widened
- 6- Iranian naval exercises in Strait of Hormuz
- 7- Iranian nuclear scientist killed in a car bomb
- 8- EU announces ban on Iranian crude oil imports from July 1
- 9- Rumors of an Israeli plan to attack Iran
- 10- Iran military exercises, threats against Israel
- 11- U.S. tightens financial sanctions to include Iran's central bank from July 1
- 12- Malaysia stops Iranian-bound ship containing weapons equipment
- 13- Israel threatens "military action" if Iran refuses to stop nuclear program
- 14- Baghdad P5+1 nuclear talks fail
- 15- Moscow P5+1 nuclear talks fail
- 16- EU embargo and U.S. financial sanctions come into force
- 17- Istanbul "technical" talks (fail)
- 18- Benjamin Netanyahu UN "red line" speech
- 19- EU announces new financial sanctions on transactions with Iranian banks and financial institutions
- 20- Vienna Iran-IAEA nuclear talks fail
- 21- U.S. broadens financial sanctions to energy and shipping sectors
- 22- Almaty P5+1 nuclear talks fail
- 23- Almaty P5+1 nuclear talks fail

Source: RGE, Google, Bloomberg

Meanwhile, at the latest round of P5+1 nuclear talks in Almaty (between Iran and the five permanent members of the UN Security Council—the U.S., Russia, China, UK and France, and Germany), precious metals concessions were offered as a form of sanctions relief (Figure 1). Such concessions (even if they only consist of the non-enforcement





of existing sanctions) could constitute a considerable easing of economic pressure on Iran, should it seek payment for more of its energy revenue in gold. Although Iran did not accept the P5+1's proposal, the Obama administration has still not imposed sanctions on gold exports to Iranian government entities and their agents $^{\mathsf{Page}}\mid 4$ even though it has had the explicit authority to do so since July 30, 2012, when the U.S. President signed Executive Order 13622 into law. This non-enforcement of existing sanctions and offer of sanctions relief through gold appear to have led to an uptick in gold sales in early 2013. This has provided Iran with an economic lifeline to earn hard currency through the sale of gold and additional FX reserves to support the Iranian rial.

While Iran looks for sanctions loopholes to recover proceeds from its hydrocarbon exports, replenish its FX reserves and forestall a more severe balance of payments crisis than it is currently experiencing, its nuclear program continues to progress. According to the IAEA, Iran has in the past year installed some 5,000 additional IR-1 centrifuges, the biggest increase in years. It has also begun installing IR-2m centrifuges, which are reportedly three-to-five times as productive in enriching uranium as the standard IR-1 models. Iran's centrifuge installationand uranium enrichment-related activity violates multiple UN Security Council resolutions which, since 2006, have required that "Iran shall without further delay suspend...all enrichment-related and reprocessing activities."

This nuclear progress has raised fears that by mid-2014 Tehran may reach "critical capability"—the point at which Iran could produce enough weapons-grade uranium or separated plutonium for one bomb so quickly that the IAEA or a Western intelligence service would be unable to detect the increase in activity until it is over (i.e. an undetectable breakout). If the number or efficiency of Iran's centrifuges unexpectedly increases, or if Tehran has a secret operational enrichment site, Tehran could reach critical capability before mid-2014. However, the date could be delayed if Iran encounters unexpected difficulties in centrifuge operation or can no longer import centrifuge equipment and materials from China (an important source of these illicit nuclear goods) and elsewhere.

Although Obama has implicitly threatened to use force, if necessary, to prevent Iran from obtaining nuclear weapons, Iran (once it attains critical capability) could use the threat of an undetectable breakout to enjoy many of the strategic benefits of having a bomb without crossing Obama's "red line." Once Iran has produced sufficient fissile material—weapons-grade uranium or separated plutonium—it will be much more difficult for the West to stop Iran from completing the process of actually building nuclear weapons. VI The U.S. has thus far adopted a strategy of increasing pressure on Tehran through the use of sanctions, while simultaneously pursuing a diplomatic solution in talks with Iran through the P5+1. Five rounds of talks (Baghdad, Moscow, Istanbul and two rounds at Almaty) have failed to persuade Iran to meet its nuclear obligations under international law.

Sanctions on Iran—A Brief History

U.S. sanctions on Iran have been in place since 1979, but were ramped up significantly in December 2011 with new sanctions on banks involved in processing Iranian crude oil transactions with the CBI (although countries importing Iranian crude can receive exceptions if they can demonstrate their ability to significantly reduce 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. The aim of all this is to reduce Iranian revenues from crude oil (around 80% of Iran's hard-currency export earnings) and pressure the regime to change its nuclear stance. The measures have worked in reducing Iranian exports: Iran's crude oil and lease condensate exports fell from an average of 2.5 million barrels per day (bpd) in 2011 (\$101 billion, assuming an average Brent spot price of \$110 per barrel) to 1.5 million bpd in 2012 (\$61.3 billion). However, even with an estimated 40% drop in oil revenues from 2011-12, Iran's crude and condensate earnings in 2012 were still the fourth-highest ever recorded, because of high global oil prices.

EU financial sanctions toward end-2012 also had a particularly damaging effect on the tanker insurance market for Iranian crude oil. In addition, the U.S. broadened sanctions in January 2013 to include trade in precious metals, a





blanket ban on 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. U.S. policy makers are also pressing the European Council and ECB to block Iran's access to its $\frac{1}{2}$ euro-denominated assets through the Target2 electronic clearing and settlement system, and to persuade foreign banks to block Iran's access to any currency that is not the primary currency of the foreign bank (for example, to block Iran's access to Indian rupees held in Russian banks).

Economic sanctions on Iran have impacted Iran's FX reserves, contributed to rial devaluation and increased inflation. In 2012, the rial officially depreciated by 15% against international currencies (with some estimating depreciation based on the black market exchange rate as high as 80%), while official inflation rose to 37% as of December (with some estimating inflation to be as high as 70%). Due to the size of Iran's reserves (by some local estimates, Iran has \$120 billion, with \$38 billion in gold; the CIA put Iran's reserves at \$69.9 billion as of December 31, 2012; the IMF estimated a more realistic \$89 billion by end-2012, which may exclude gold holdings), Iran can subsidize important goods, grains and medical supplies, etc., by offering importers favorable exchange rates, and provide social welfare (literally cash in the bank), partially insulating the poor from the impact of sanctions and increasing their dependence on the regime. Wealthier Iranians, who consume more manufactured goods, are being hurt more by rising inflation than the poor.

To persuade the Iranian regime to meet its nuclear obligations under international law, a key economic goal of sanctions is to reduce Iran's hard-currency export revenue, disrupt its ability to control inflation and limit its ability to pay for necessary imports (except for humanitarian goods) by reducing its foreign reserves. To this aim, the U.S. Iran Threat Reduction & Syria Human Rights Act of 2012, relying on a provision effective as of February 6, 2013, limited the payment for Iranian crude to escrow accounts held on Iran's behalf in banks based in oil-importing countries. This sanctions law prohibited the repatriation of those funds or their use for third-country trade, and forced Iran to spend the escrowed monies on non-sanctioned goods from local exporters only. It permits Iran to buy all the humanitarian goods it needs, including both locally-produced and imported Western medicine, medical devices and food from countries such as Japan, South Korea, India, China and Turkey. In fact, discussions with local financiers and officials suggest that the hurdles for any Iranian national operating banks abroad in countries including the UAE, Turkey and India have gotten much greater.

However, as noted, Iran continues to find ways to circumvent the sanctions, with gold now a key asset enabling Iran to receive payment for energy exports.

Iran's Energy-for-Gold Trade

Turkey has been the most significant conduit for gold-for-energy payments to Iran and has by far the most granular and timely data on the bilateral trade. Tighter economic sanctions do not appear to have choked off the Turkey-Iran gold trade. In March, direct gold exports from Turkey to Iran rebounded to \$380 million (6.8 metric tons), a far cry from the mid-2012 records of \$1.6 billion (28 metric tons) per month in June and July, but nonetheless a sharp increase from the November-February pace (Figure 2). The rebound may be due to the perceived nonenforcement of existing precious metals sanctions.

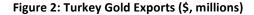
In Q1 2013, Iran received an estimated \$1.33 billion (or 23.1 metric tons) in gold payments through Turkey and the UAE alone. Direct exports alone from Turkey to Iran totaled \$499 million (8.67 metric tons), rising in March. Even as gold exports to Iran fell in late 2012 and early 2013 from their record levels, Turkey continued to export gold to the UAE, a major gold trading center, and likely source of gold for Iran. Although not all Turkish exports of gold to the UAE are necessarily bound for Iran, Turkey has historically exported only minimal amounts of gold to the UAE

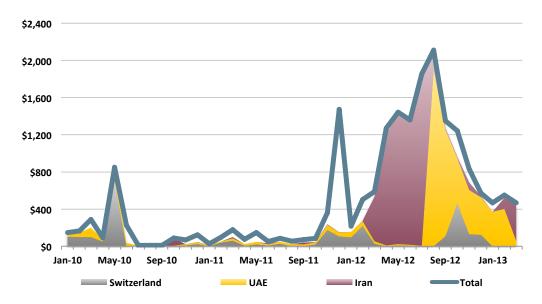




and, as Figure 2 shows, direct exports from Turkey to Iran appear to have shifted suddenly to the UAE when the Obama administration introduced precious metal sanctions in July 2012.

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Source: Turkstat

Some of the gold trade, which is currently prohibited if it is made to government of Iran entities, reflects payment for otherwise permitted natural gas exports from Iran to Turkey, which amounted to some \$289 million per month in July 2011-June 2012 and still continues. VIII Turkey continues to import over 100,000 bpd or \$350 million (assuming Brent spot market prices) of Iranian crude per month. Dubai is also used as a gold export center for Iranian crude oil payments, in particular from India, which pays for gold in broken and scrap gold that is then melted into bars in Iraqi Kurdistan, a well-known smugglers' route, before being routed through Dubai and onto Turkey/Iran. Dubai is the central hub of the Middle Eastern gold trade and has long-standing trade linkages with Iran as only 100 miles of water separate Dubai from Iran at the Strait of Hormuz's narrowest point.

Sizing the Golden Loophole

We estimate that the non-enforcement of precious metals sanctions leaves a "golden loophole" of \$20 billion per year in revenue that Iran could exploit. Both Turkey and India already pay for Iranian energy exports at least partly in gold. China, however, prefers to pay for its imports of Iranian energy in Chinese renminbi. Turkish and Indian oil and natural gas imports amount to \$15 billion per year, similar to the value of gold exports (direct and indirect) to Iran in mid-2012 (annualized), equivalent to \$19 billion (34 metric tons per month). Were China also to pay for all of its Iranian energy imports in gold, this would increase the total loophole to \$30 billion. It is unlikely to reach this level as Indian and Chinese interests prefer to make payments to Iran in rupees and renminbi, especially as China has a strategic objective to settle a larger part of its trade in its own currency to reduce its exporters' exchange rate risk. In addition, Iran has import needs and will want payment for some of its energy exports in goods. In 2010-12, Iranian imports from China averaged \$10 billion per year.

As a result, we think around \$20 billion in potential gold revenue is a reasonable estimate of the total possible size of the "golden loophole." Theoretically, if Iran was to receive payment in gold for all of its energy exports, it could receive up to \$60 billion (assuming no discounts or transaction/processing costs), but it would still need to use a





large part of this gold to pay for its imports. Should Iran fully exploit the loophole, this would have a significant effect on gold markets, driving up prices. \$20 billion in gold sales is equivalent to 429 metric tons, approaching the total level of net central bank gold purchases in 2012 of 535 metric tons.

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Turkish statistics, which are based on customs data on declared gold exports, likely only capture part of the Iranian gold trade; the size of the black market is unknown. The head of the Iranian Gold Producers and Exporters Association reportedly told Fars News Agency (controlled by the Iranian state) that 70% of gold imported into the country is contraband and amounted to 100 tons in March 2010-February 2011; \$370 million per month. For example, a plane grounded in January by Turkish authorities en route from the UAE to Iran was believed to be carrying 1.5 metric tons (\$70 million) of gold from Ghana.

Prior to tougher financial sanctions against Iran coming into force, in 2010-11 Turkey was exporting only \$199 million per month (4.0 metric tons per month) of gold, none to Iran and absorbing most of its imported gold at home. Exports started rising as Iran looked for ways to earn hard currency following the imposition of tougher sanctions in mid-2012, when European and U.S. sanctions on Iran came into force, putting pressure on major buyers of Iranian crude to reduce their purchases and on Iran to secure hard assets. Financial sanctions restricted Iran's ability to trade in USD and, to some extent, also in euros, but allowed Tehran to earn oil revenue from countries granted exceptions to U.S. sanctions if those countries were significantly reducing crude oil purchases every 180 days. Iran's own currency crisis in mid-2012 added to demand for gold. Turkish banks not only financed domestic energy trade, but also served as transfer points for some Asian counterparts (most notably India).

Not all of the gold exports to Iran have gone to the regime; some have gone into private holdings directly or through exports to the CBI, which mints coins and resells the gold to the private secondary market. High inflation and the depreciation of the rial are prompting Iranians to liquidate domestic and foreign assets to buy gold and USD, exacerbating pressure on the exchange rate. As a result, demand for central bank gold coins and paper future gold sales have been high, with the regime using sales as a way to soak up liquidity in an attempt to control inflation. Moreover, the government has also used the gold sales as a way to transfer funds to loyalists. There is very little data actually available on Iranian gold demand, but it is telling that domestic gold prices in USD terms ran far ahead of global gold prices in 2008-11 (the most recently available data). The World Gold Council published a study of the Iranian gold market in 2004 (the first since the Iranian revolution) showing demand of 11.6 tons per month (or \$460 million).

New Laws Will Close Some Precious Metals and Financial Loopholes

From July 30, 2012, Executive Order 13622 penalized those that helped the government of Iran (for example, National Iranian Oil Company (NICC), Naftiran Intertrade Company (NICO) or the CBI) to acquire gold or other precious metals. Any that did so would have their assets under U.S. jurisdiction frozen and be denied access to the U.S. financial system. Congress expanded these gold sanctions in January 2013 with the IFCPA, tightening sanctions on the sale, supply or transfer (direct or indirect) to or from Iran of a precious metal to *any entity* in Iran 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 CBI or other Iranian government entities. However, at the request of the Obama administration, the IFCPA was only made effective as of July 1, 2013.

The new laws also prohibited any business between foreigners and the Iranian energy, shipping, shipbuilding and ports management sectors (subject to exceptions granted for permitted oil and natural gas exports), and any business with designated Iranian entities owned or controlled by the Iranian government. Sanctions passed as part of the Iran Threat Reduction and Syria Human Rights Act of 2012, and effective as of February 6, 2013, also forced





payments for Iranian crude to be made into escrow accounts held in banks located in countries importing the Iranian crude, and prohibited these escrowed funds from being repatriated.

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The introduction of new sanctions laws have disrupted Turkey's gold-for-gas trade with Iran and prevented Halkbank (a Turkish state-owned bank) from processing energy payments from other countries to Iran. As a result, gold exports directly out of Turkey and into Iran have dropped off and instead pass through the UAE. Dubai's Emirates NBD bank said in November 2012 that it would stop buying and selling all gold bars from Turkish refineries, but exports to the UAE appear to have continued after this time. RGE sources report that Turkey is now a difficult place to trade gold if you are associated with Iran; Iranian citizens and even non-Iranian nationals who were born in Iran cannot open a bank account in Turkey and similar restrictions are now in place in the UAE. This suggests the Turkish government may be taking sanctions enforcement more seriously, even if it is not fully clamping down on black market exports of gold.

Switzerland, the UAE and Sub-Saharan African producers (namely South Africa and Ghana) are major exporters of gold to Turkey (Figure 3) with gold sales made through Switzerland and Abu Dhabi. These represent other sources of gold for Iran. There are also possible new gold routes opening up through the Caucasus, Georgia and the Democratic Republic of the Congo.

\$2,000 \$1,600 \$1,200 \$800 \$400 Jan-10 May-10 Sep-10 Jan-11 May-11 Sep-11 Jan-12 May-12 Sep-12 Jan-13 Switzerland SSA producers UAE Total Imports

Figure 3: Turkey Gold Imports (\$, millions)

Source: Turkstat

Who Receives the Gold?

Iran's government captures most of Turkey's gold exports to Iran, at least as an initial buyer. Sinan Aygün, a CHP deputy, is reported to have told Turkish daily *Today's Zaman* that "gold is being used as an instrument for payment. Under the guise of exportation, gold is being sent to Iran in exchange for oil." This suggests the CBI is accepting gold as payment for oil and gas—Mahmoud Bahmani, the CBI governor, is reported by the state news agency, IRNA, to have said in February 2012 that Iran would allow trade partners to pay in gold instead of USD. Xi

The revival in documented Turkish exports to Iran indeed suggests traders are finding loopholes in the sanctions laws, perhaps encouraged by the lack of enforcement of existing gold-trade sanctions as well as the recent offer by the P5+1 to reduce pressure on the precious metals trade in exchange for concessions by Iran on its nuclear program. Not all of Turkey's gold imports are destined for Iran. However, exports and reserve accumulation far

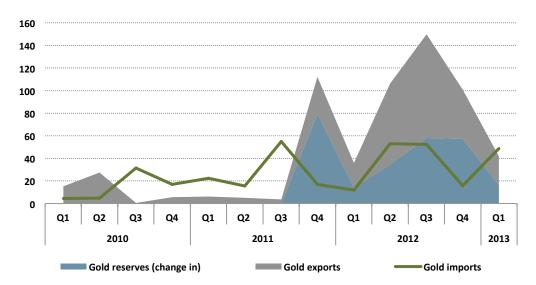




outpaced imports in H2 2011 through 2012 (Figure 4), which suggests that sizeable amounts of gold are entering Turkey illegally or that significant Turkish private holdings have been sold.

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Source: World Gold Council, Turkstat
*Reserves and exports are stacked

Iran Gold Demand Data Sketchy

The size of Iran's central bank gold holding is not reported and so it is not known if gold has been added to CBI reserves. The IMF put Iranian gold holdings at 168 metric tons in 1996, and estimated 300 metric tons in 2007, rising to 500-907 tons by 2012, according to Iranian sources. In January 2012, the head of Tehran's Chamber of Commerce said Iran had 907 tons of gold (\$38 billion), according to the Tehran Times. In February 2012, Bahamani was quoted by an Iranian news agency that Iran's gold reserves were 500 tons (\$21 billion). Unconfirmed reports suggest Iran has repatriated gold holdings from Switzerland and elsewhere.

Iran is also a large private gold-consuming country. A World Gold Council report on Iran's gold economy surveyed from June 2004 through July 2005 (the first since the Iranian Revolution) estimates that total private Iranian gold consumption in the form of jewelry, net bar hoarding and coins, including scrap recycling (35 tons), amounted to 139 tons in 2004, growing from 109 tons in 2002. This made Iran the world's sixth-largest gold-jewelry-consuming country in 2004, after India, the U.S., China, Turkey and Saudi Arabia. We expect that Iranian demand has increased since then, at least in terms of volume.

A large black market for gold developed in Iran as inflation rose in the early 2000s with the rial devaluing by over 80% since 2000 in U.S. dollar terms, according to official data. Private demand is likely to have risen as a hedge against instability in the region, inflation and devaluation of the Iranian rial. Purchases tend to be higher in March (prior to the Persian New Year on 21 March) and during the wedding season (June-September). Jewelry fabrication is concentrated in Tehran, Esfahan, Tabriz, Mashhad and Yazd. The market relies heavily on small units, but wholesalers in Tehran dominate an estimated 70% of the market. Iranian domestic demand has to be met by the domestic market and imports with Iranian gold production negligible at around 0.2 tons per month, according to Vajihollah Jafari, deputy industry, mine and trade minister in October 2012. Proven underground mine reserves amount to 320 tons, according to Iranian sources, but production is negligible. **Vi*



\$0

Sep-12

Jan-13

Copper Exports (right)

May-12

Are Other Precious Metals Being Used For Energy Payments?

Gold appears to be the predominant Turkish precious metals trade with Iran with no unusual pattern in Turkish Page | 10 silver and platinum group metal (PGM) or copper trade flows (Figure 5).

\$2,400 \$100 \$2,000 \$80 \$1,600 \$60 \$1,200 \$40 \$400 \$20

May-11

Sep-11

Silver and PGM Exports (right)

Jan-12

Figure 5: Turkish Metals Exports (\$, millions)

Source: Turkstat

Jan-10

\$0

Iranian Energy Revenue Remains High

May-10

Gold Exports

Sep-10

Jan-11

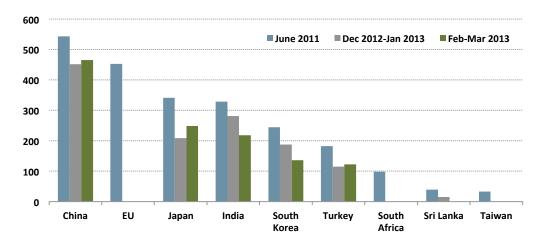
Although Iranian oil exports have declined from an average of 2.5 million bpd (\$101 billion, assuming a Brent spot price and no discounts) in 2011 to 1.5 million bpd (\$61.3 billion) in 2012 and 1.2 million bpd in January-March 2013 (\$3.7 billion per month; Figure 6), energy revenue remains high when natural gas, condensate and oil product exports are included, at around \$5.3 billion per month. Iranian natural gas exports amounted to 733 million cubic feet per day (Mcfd) to Turkey and totaled 77 Mcfd to Armenia and Azerbaijan in July 2011-June 2012, yielding monthly revenues of approximately \$320 million (\$289 million to Turkey alone). Turkey has said that it will continue to import Iranian natural gas, which amounted to 19% of Turkey's total natural gas imports in 2011, but is also supplied by Russia (57%), Bulgaria and Azerbaijan.

Iran is also an exporter of condensates to China, Japan, the UAE, Indonesia, the Netherlands, Belgium, Spain, Turkey, Romania, Taiwan, Malaysia, Vietnam and Afghanistan, viii and earned revenues of \$714 million per month in exports between March 2012 and February 2013, according to Iranian news media. Some condensate exports may be captured in crude oil export data. Fuel sales from Iran also amounted to 300,000 bpd in April, generating \$600 million in revenue—marking a large y/y rise from 240,000 bpd in April 2012. Around one-third of this revenue comes from indirect sales to countries such as the UAE, which is redistributed into international markets. This volume increase suggests that Iranian officials have been trying to increase their value-added exports as sanctions have tightened. Altogether, Iran's energy exports amount to \$4.6 billion-\$5.3 billion per month (excluding discounting, bartering and transaction/processing costs).



Figure 6: Iranian Crude Oil Exports by Destination





Source: RGE, public data (news sources)

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 $[\]frac{1}{2}$ We use "tons" when designated in sources. Tons typically refer to short tons; 1 short ton = 0.907 metric tons.

[&]quot;Turkey's Gold Export to Iran Rises Again;" Reuters; May 1, 2013:

iii Figures in this paragraph are RGE estimates based on Turkstat data.

iv We use this price throughout in our calculations of the value of the trade in gold.

^v UN Security Council, 5612th Meeting, "Resolution 1737 (2006)," December 27, 2006.

vi David Albright, Mark Dubowitz and Orde Kittrie, "Stopping an Undetectable Iranian Bomb," The Wall Street Journal, March 2013.

[&]quot;Sanctions Reduced Iran's Oil Exports and Revenues in 2012," Energy Information Administration, April 26, 2013.

[&]quot;Natural Gas Exports from Iran," Energy Information Administration, October 2012.

ix "Turkey: What is Iran Doing with Turkish Gold?" Eurasianet, January 2013.

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