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New Sentiment Indicator Shows Positive Impact of Sanctions Relief on Iran's Economy

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With P5+1 negotiators back in Vienna trying to hammer out a nuclear deal with Iran, a new quantitative indicator developed by Roubini Global Economics working with the Foundation for Defense of Democracies suggests that the West may have already weakened its negotiating position by shifting the sanctions environment and injecting new life into the Iranian economy. The indicator suggests that the de-escalation of sanctions since mid-2013, the election of Iranian President Hassan Rouhani in June 2013, the optimism fueled by the November 2013 negotiations in Geneva between the P5+1, and the provision of \$7 billion in direct sanctions relief to Iran as part of the Joint Plan of Action (JPOA) in January 2014, may be driving up positive sentiment, both domestically and internationally. This sentiment appears to be directly contributing to Iran's modest economic growth.

The quantitative indicator assesses the direction and magnitude of changes in international sentiment. The data indicates a connection between changes in sentiment and both the value of the Iranian rial (black market) and the Iranian GDP growth (both overall and non-oil). The relationship with the exchange rate (Figure 1 below) appears to be contemporaneous, while turning points in sentiment actually appeared to lead turning points in GDP (Figure 2 below).

Sentiment was tracked using proprietary natural language processing software called RavenPack News Analytics. The software provided real-time sentiment, relevance, and novelty scores to all news articles published in over 22,000 traditional and social media sites globally. RavenPack's algorithm assigned scores to every relevant news article based on positive or negative sentiment. We then used a two-step process to aggregate this data into our overall Iran sentiment indicator. First, we extracted only stories related to Iran sanctions. Second, to avoid spikes, we took the ratio over the preceding 90 days of positive to negative stories. If there was the same number of positive and negative stories, the indicator was 0. If the negative stories outweighed the positive, the indicator was negative, and the extent to which negative news outweighed positive news determined the magnitude of the negative score.

Tracking the de-escalation of sanction relief (since mid-2013), the optimism surrounding the election of President Hassan Rouhani (June 2013), the announcement of the JPOA agreement (November 2013), the announcement of the JPOA implementation agreement (January 2014)

and the subsequent direct sanctions relief, the indicator identified a change in the perceptions of Iran globally and perhaps more importantly in Iran itself, where confidence in the rial's value increased, making Iranians more confident to hold domestic assets rather than hoarding dollars or fuelling domestic asset bubbles. This, in turn, gave breathing space to the Iranian government to put its economy on a stronger foundation by tightening fiscal and monetary policy to restrain inflation.

Looking forward, the sentiment indicator suggests that Iran will continue to experience modest growth if sanctions relief, along with positive news about economic conditions in Iran, continues. It also indicates that improved sentiment towards Iran as a result of the changing sanctions environment may have inadvertently inflated the total value of sanctions relief to the Iranian economy to a figure far greater than the direct sanctions relief provided to Tehran under the JPOA.

Put another way, the \$7 billion in direct sanctions relief provided to Tehran as part of the JPOA does not account for the psychological impact on markets, consumers, businesses and investors. This should not come as a surprise. The impact of sanctions has always been as much psychological as it has been legal. Sanctions were intended to convey a perception of high and rising risk, where an ever-expanding web of restrictions effectively spooked foreign business from investing in, or trading with, Iran.

The decision by the White House to de-escalate sanctions against Tehran, including by blocking new congressional sanctions legislation, has contributed to the optimism that has helped to foster modest economic growth and stabilization in Iran. Indeed, Iran has been on a modest recovery path since its *annus horribilis* of 2012 and the first half of 2013, when the Iranian economy was hit with an asymmetric shock from sanctions targeting the Central Bank of Iran, Iranian oil exports, access to the SWIFT international banking system, the National Iranian Oil Company, shipping and insurance, key sectors of the Iranian economy, and precious metals, amongst others. The poor economic management of the Iranian economy by the Mahmoud Ahmadinejad government further exacerbated these sanctions-induced shocks.

We are continuing to study the relationship between sentiment and economic growth. But as the P5+1 meets in Vienna this week, we remain concerned that policymakers may not fully appreciate the scale of sanctions relief that Iran has already received: The weakened sanctions environment and subsequent positive sentiment regarding Iran has strengthened Tehran's negotiating position and lessened the pressure on its leaders to come to a long-term and enforceable deal that effectively addresses its illicit military-nuclear program.

Figure 1: Sentiment Indicator is Highly Correlated with IRR/USD Exchange Rate

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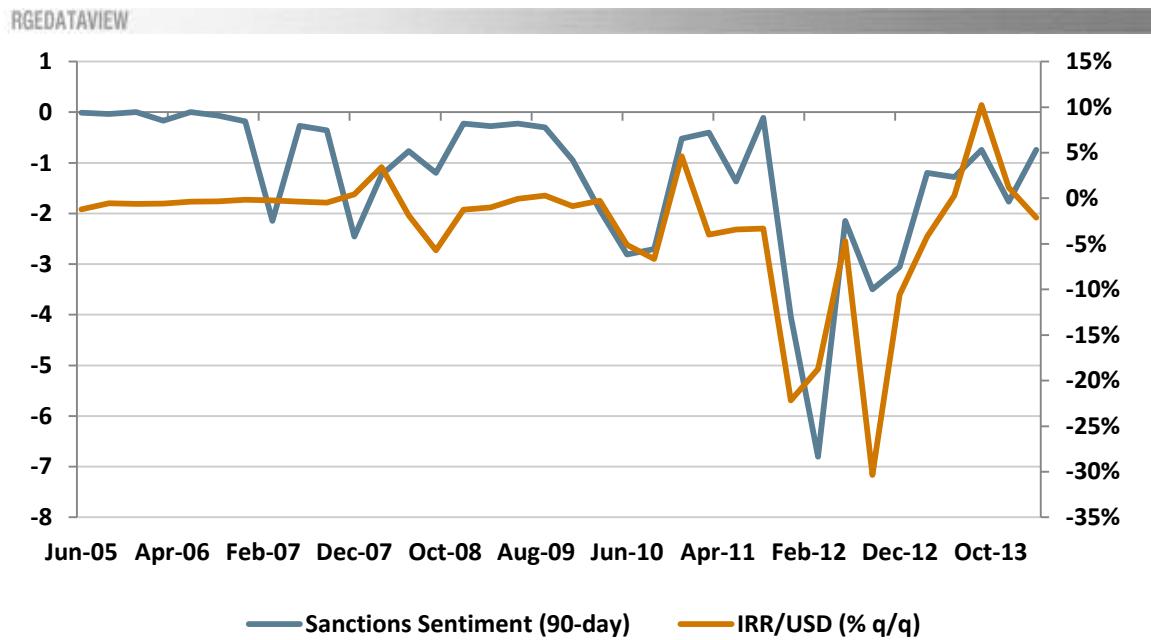
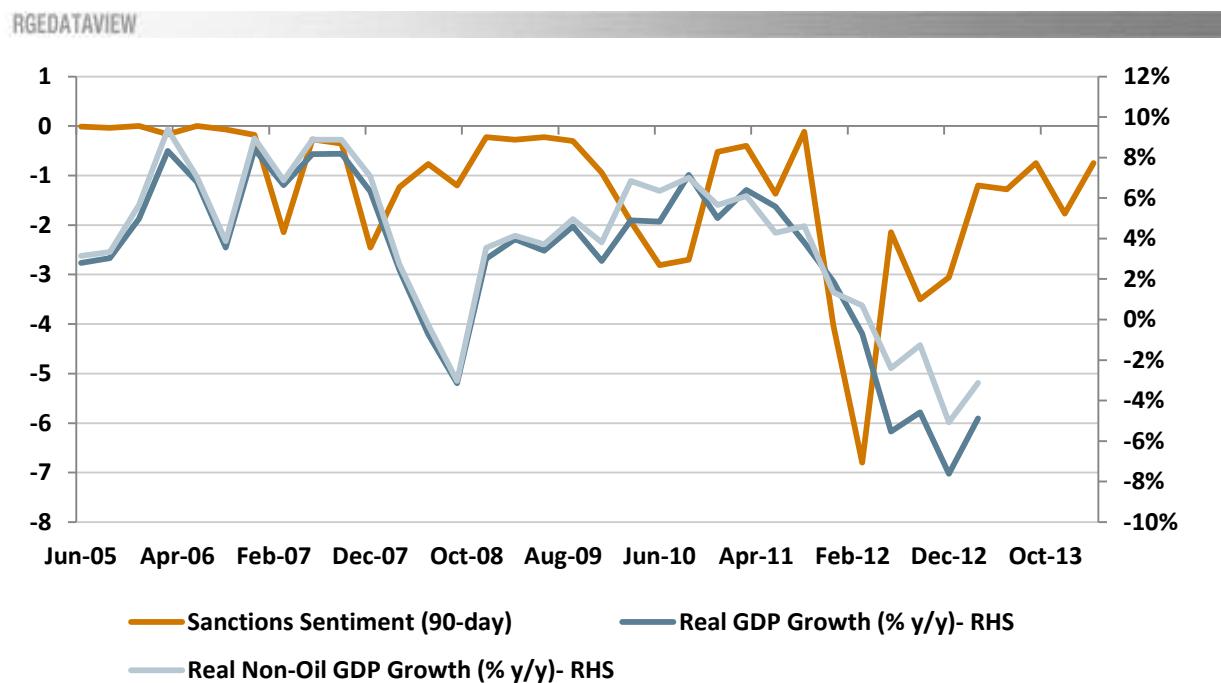


Figure 2: Economic Growth Inflection Points Tend to Lag Sentiment Indicator



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