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The Risks of Iran Rebuilding Its Nuclear Capabilities

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Since July 2019, Iran has increased the production of uranium and level of enrichment previously constrained by the 2015 nuclear deal (JCPOA). In parallel, Iran is demanding the EU fulfil its economic obligations under the deal. So far, Iran has also rejected direct talks with the U.S., which withdrew from the deal in the spring of 2018 and implemented its "maximum pressure" policy. Iran's actions were declared and could have been carried out regardless of the crisis spurred by the killing of Gen. Qasem Soleimani in a U.S. drone strike in Iraq. Nevertheless, the changing regional context could increase the risk of a scenario in which Iran again moves closer to the technological threshold that would allow it to build its first nuclear warhead.

The JCPOA limited Iran's capabilities to produce highly-enriched uranium (90%) and plutonium, fissile materials necessary for nuclear warhead cores. The deal's limits and close monitoring by the International Atomic Energy Agency (IAEA) meant Iran was not capable of producing these materials in facilities declared to the agency within a timeframe of 9-12 months. However, Iran gradually surpassed various limits outlined in the deal but—even after Soleimani's killing—has not formally withdrawn from the JCPOA, so its nuclear programme is still under constant IAEA supervision.

Iran's Official Rationale. In May 2019, which is the year after the U.S. withdrew from the JCPOA, Iran gave the other signatories an ultimatum, announcing that the country could depart within 60 days from the deal's restrictions. Although it was in response to the decision by President Donald Trump to pull the U.S. out of the arrangement, the economic demands Iran declared were directed primarily at EU countries. It also questioned the future of the agreement, which had lifted or suspended severe economic sanctions by the U.S., EU and UN in exchange for Iran reducing its ability to produce uranium and plutonium. Iran links further honouring of the JCPOA dependent on the Union not complying with the U.S. sanctions and compensating for lost profits from blocked oil exports. Attempts to resume bilateral talks between the U.S. and Iran have failed and its position has not been softened by the offer of help from France, Germany and the UK to assist in oil sales or a $15 billion credit line.

From July to November 2019, Iran completed four stages in its gradual departure from the JCPOA limits. In the first, it slightly exceeded the limit of 300 kg of low-enriched uranium to the 3.67% level; in the second stage, it reached the 4.5% level; and, in the third, it started a small number of advanced gas centrifuges for faster uranium enrichment. These steps were confirmed in IAEA reports from September and November 2019, which also noted an increase in low-enriched uranium stocks to 372.3 kg. Iran's fourth step, in November 2019, included the resumption of work in an underground enrichment plant in Fordow that is well-protected from air attacks where, in 2010-2013, it produced and accumulated uranium enriched to the 20% level. According to the JCPOA, Fordow was to stop work on uranium enrichment for 15 years and this process limited to the Natanz facility and only to the low level of 3.67% as fuel for research reactors. On 5 January this year, Iran declared that, in a fifth step, it was suspending all of the JCPOA limits on

centrifuges but without formally withdrawing from or terminating the agreement. These actions suggest the possibility Iran will restart uranium enrichment even to the 20% level with newer-generation centrifuges in Fordow and the resumption of uranium enrichment in Natanz, as well as the renewal of work on the heavy water reactor in Arak (according to the deal, the reactor was to be reconfigured in a way not useful for plutonium production). With all five subsequent announcements about departing from the nuclear deal's limits, Iran emphasized that the moves would be gradual and still reversible, which indicated both the potential for and flexibility in future actions.

Iran's Potentially Riskiest Steps. The signing of the JCPOA did not contribute to the IAEA's efforts to clarify and monitor all potential military dimensions of the Iranian nuclear programme, especially its covert work on a nuclear warhead for the Shahab-3 ballistic missile. These issues were raised by critics of the JCPOA as an untapped opportunity to investigate and finally confirm the existence of Iran's military nuclear programme. Another reason for concern about Iran's nuclear intentions also has been the systematic obstruction of IAEA inspections, as demonstrated by the withdrawal of one agency inspector accreditation in November 2019. Such difficulties may be just a one-off or isolated case, intended as a means of pressure on the U.S. and EU, but, on the other hand, the complete break of all cooperation with IAEA may be seen as a likely indicator that Iran has resumed its nuclear programme in a form that could lead to the development of a nuclear warhead. It should be stressed that the probability of this scenario might increase with further U.S. military actions that might be perceived by the government of Iran as an existential threat to the country and calibrated as "regime change".

Iran may also increase its abilities to obtain highly enriched uranium in a timeframe shorter than 9–12 months. By getting the right amount of uranium to the 20% level, the time needed to reach the 90% level would be reduced to just six months. After this point, Iran might quickly proceed to assemble the core of its first nuclear warhead, assuming it really wants to build one and become a regional nuclear power. In 1989, Iran bought from Pakistan its first generation of IR-1/2 centrifuges technology, a proven model for Chinese nuclear (implosion) warheads along with re-entry vehicle shield designs. Although Iran's work on a warhead was halted with the U.S. invasion of Iraq in 2003, this work could be also easily resumed at any moment. However, it also would be the boldest possible decision of the Iran government, likely only if their calculations of the risk of U.S. and Israeli military actions are outweighed by the expected benefits of withdrawing from the Non-Proliferation Treaty (NPT) and becoming a nuclear power. The predictability of further developments around the JCPOA is complicated by the current tensions in the region, the upcoming U.S. presidential campaign and elections in November 2020, and the rather short-term consolidation of the Iranian public around the government.

Conclusion. The Iranian authorities are determined to withstand U.S. pressure and reject any renegotiation of the JCPOA. So far, this does not equal a strategic decision to rebuild all of the elements and dimensions of Iran's nuclear programme. Iran's most likely tactic seems to be the production and enrichment of uranium below the 20% level without fully terminating the JCPOA, and with other far-reaching strategic decisions. This tactic could enhance maximum flexibility and strengthen its negotiation position towards the U.S. and EU. However the shape of this programme allows Iran to move quickly and directly in a dangerous direction at any time: restarting research and development work on more efficient centrifuges, and quick reconfiguration of the Fordow and Natanz facilities to uranium enrichment to 20%, or potentially even also to the 90% level. On the other hand, a lower risk assessment is associated with the option of obtaining plutonium from the Arak reactor (the core in the reactor was changed and its potential power reduced by half), because this technology is much more complicated and time-consuming than gaseous diffusion uranium enrichment. If Iran turns to uranium enrichment at the 20% level and refuses to allow IAEA inspectors to Fordow and Natanz, that should be considered a warning sign of Iran moving to a military dimension in its nuclear programme. In parallel, Iran could also undertake covert uranium enrichment and restart work on a nuclear warhead in places unknown to the agency, meaning activities that are difficult to detect even using the most advanced methods and means and intelligence sources. But even with the achievement of these points, Iran would be reluctant to move to the next strategic decision—whether to build an operational nuclear device and demonstrate it with a test.

For the last six months, Iran seems to be knowingly manipulating these risks and threats in order to withstand pressure from the U.S. During the same period, Iran has also escalated regional tensions, demonstrating the capability to disrupt oil production and transit in the Persian Gulf and Saudi Arabia through attacks on tankers, pipelines and other oil installations. The high state of the tensions surrounding Iran may persist through 2020, at least until the results of the presidential campaign in the U.S. are clear. In this context and currently, the most urgent need is for a diplomatic de-escalation of the U.S.-Iran crisis, in both its regional and nuclear dimensions, to avoid open conflict between the two countries. Despite the tensions after Soleimani's killing, the dispute resolution mechanism in the JCPOA and a renewal of the European offer of credit to Iran are also needed. On the other hand, and not excluding the likelihood of other extreme scenarios, it is equally necessary to manage transatlantic solidarity within NATO and send a clear message to Iran about not withdrawing from the JCPOA or NPT or building a nuclear arsenal.