THE rising hostilities against Iran and its atomic complex — assassinations and cyberattacks, trade bans and oil embargoes, frozen assets and banking prohibitions, among other acts open and covert — have clearly done much to bring Tehran back to negotiations, which are to resume Monday. But the drama has also tended to overshadow a central fact: the Iranians have managed to steadily increase their enrichment of uranium and are now raising their production of a concentrated form close to bomb grade.

“Of course, Iran suffered at the beginning a little bit,” Hossein Mousavian, a former Iranian official, now a research scholar at Princeton, said in an interview. “But over all, it recovered very fast. The covert war has not been successful.”

The enrichment is a point of enormous pride to Iranians and a high card in an escalating game of brinkmanship that might one day turn deadly.

The quarterly reports of the International Atomic Energy Agency, whose inspectors fly regularly between Vienna and Tehran, detail the surprising progress and help explain the rising urgency as diplomats resume nuclear talks in Moscow, picking up where they left off last month in Baghdad. In theory, the overarching goal is to get Tehran to suspend its enrichment and clear up questions about whether it has pursued a secret program to develop nuclear arms.

But as any Iranian diplomat will tell you, the Nuclear Nonproliferation Treaty sets no limits on enrichment purity. It simply bars nations from turning their civilian efforts to military ends — and Iran insists it is preparing uranium to fuel only reactors, not bombs.
Last month, atomic inspectors gave some credence to that claim, saying Tehran had turned nearly a third of its concentrated uranium into reactor fuel. Doves hailed the finding. Still, Iran now possesses enough enriched uranium that it could, with further processing, make at least four atom bombs.

And its supplies of concentrated uranium are rising fast, a trend that could eventually slash the time needed to produce a small nuclear arsenal.

Western experts sympathetic to Iran’s position say the problem is the treaty’s conspicuous loopholes, not the plucky Iranians.

“It allows nations to get to the red line of weaponization,” said Yousaf M. Butt, a nuclear physicist with the Federation of American Scientists, a policy group in Washington that promotes arms control. “Iran is raising eyebrows. But what it’s doing is a concern — not illegal.”

The standoff with the West began in 2002 as Iran’s secretive atomic effort was exposed publicly. Iranian officials evaded many questions and, in early 2006, ordered the start of uranium enrichment at a desert complex ringed by barbed wire and antiaircraft guns. They said their goal was to fuel reactors that made electric power.

The United Nations Security Council ordered an enrichment halt. Iran refused and, in late 2006, faced the first of four rounds of sanctions. By early 2008, the atomic inspectors began reporting steady buildups of enriched uranium.

Iran’s stockpile might have grown faster but for waves of cyberattacks, which reportedly began around this time.

Abruptly, Iran upped the ante in early 2010 by announcing that it would start re-enriching some of the processed uranium to raise its purity from about 5 percent to 20 percent. Iran said it wanted the concentrated material to make fuel for a research reactor in Tehran.

The White House scoffed. “We do not believe they have the capability,” Robert Gibbs, the press secretary, told reporters.
Iran not only succeeded, but also announced in 2011 that it would triple the amount of uranium enriched to 20 percent and slowly move the operation to a second enrichment plant known as Fordo. The once secret bunker, deep inside a mountain near the holy city of Qum, is considered largely invulnerable to bombing.

Ray Takeyh, an Iran specialist at the Council on Foreign Relations, said a crisis never erupted because the Iranians made their moves so gradually. The international community, he noted, “gets acclimated.”

Today, the immediate goal of negotiators (from China, France, Germany, Russia, Britain and the United States) is to get Iran to halt its 20 percent production — a far cry from the original demand for zero enrichment. Iranians boast that their intransigence has given their atomic manufacturing a sense of inexorability and legitimacy.

As if tensions weren’t high enough, experts say that Tehran might raise the stakes further by re-enriching some of its growing supply of 20 percent uranium to even higher levels of purity.

On June 4, the Institute for Science and International Security, a group in Washington that closely follows the Iranian program, warned in a new report that Iran’s cryptic actions at its Fordo plant suggested possible plans to make uranium that is highly enriched — that is, purified above 20 percent.

If so, the West might cringe. But Iran’s justification could be the same as that of Belgium, France and the Netherlands. The countries, all signers of the nonproliferation treaty and subject to regular atomic inspections, use highly enriched uranium to make the radioactive isotope molybdenum-99, which is widely used in medicine for diagnostic scans and cancer treatments.

A peaceable ending is still possible, said Daniel H. Joyner, author of “Interpreting the Nuclear Non-Proliferation Treaty.” He suggested that Iran could keep its atomic complex but export the enriched uranium to foreigners who would ensure that added processing would result exclusively in peaceful uses.
“If not for pride and saber rattling, we know how the negotiation has to turn out,” he said in an interview. “In the end, the compromise is not going to please everybody — which is how you know it’s the right answer.”

Dr. Mousavian, who was once chairman of the foreign relations committee of Iran’s National Security Council before running afoul of the government, said he, too, saw the potential for peace. His new book, “The Iranian Nuclear Crisis: A Memoir,” offers a detailed plan.

He said that Tehran was willing to come to an agreement but that he feared the Obama administration would be stymied by a desire, in an election year, to avoid Republican charges that the United States had backed down.

“The deal is very much possible,” he said. “Iran is ready. But if you want to keep the sanctions forever, want to keep playing games, there will be consequences.”

His book ends with a stark warning: Absent a compromise, Dr. Mousavian writes, “we can expect a real confrontation.”