

What Good Is a Nuclear Threshold Capability? Lessons from Iran's Nuclear Program and Recent Regional Conflict

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The 2023–25 conflict in the Middle East was the first regional conflagration in which Iran was a nuclear threshold state. In theory, nuclear latency can confer strategic benefits, as Iran’s adversaries could be deterred from escalation or pressure by the risk that Tehran would quickly build nuclear weapons in response. Nuclear latency also comes with risks, however, including the risk of inviting a preventive military attack. Iran’s experience from 2023 until mid-2025 offers important insights into how nuclear hedgers perceive and try to manipulate the benefits and risks of nuclear latency, and whether latent nuclear deterrence is likely to succeed or fail. Initially, Iran saw its nuclear program as a capability to leverage—but as its security environment deteriorated in 2024, the nuclear program became not an asset to brandish, but a vulnerability to protect. Iran’s program invited, rather than deterred, strategic attack, and ultimately undermined Iranian security, offering important lessons for both scholars and policymakers working on the challenge of nuclear proliferation.

The slow-boil conflict in the Middle East that followed Hamas’s attack against Israel on October 7, 2023, differed from past wars in the region in several important ways. Among other factors, it was the first regional conflagration in which Iran, a direct participant in the conflict, was a nuclear threshold state: Tehran could produce a bomb in relatively short order following a decision to do so.¹

In theory, that ability could confer strategic benefits. Iran’s adversaries knew Tehran could quickly cross the proverbial nuclear threshold, and had to factor that risk into their policy deliberations. Indeed, Iran likely developed its nuclear program in part to have a nuclear weapons option—a proliferation strategy known as hedging. But that approach also comes with risks. Because Iran did not yet possess a bomb, its nuclear program was vulnerable to disruption; the international community could impose costs on Iran, including a military strike, to try and prevent its nuclear capabilities from moving forward.²

The trade-offs between the benefits and risks of Iran’s nuclear hedging strategy were more acute for Tehran from 2023 to 2025, when Iran found itself engaged in a prolonged crisis that featured persistent indirect, and occasionally direct, conflict with two conventionally superior, nuclear-armed adversaries. Presumably, if there was a time for Iran to draw on that nuclear insurance policy by threatening to build nuclear weapons or actually building them, it would have been during a conflict that potentially threatened Iran’s vital interests. The high stakes of the crisis and Iran’s advanced nuclear capability would have made such threats credible. Combined with the operational challenges of a military attack aimed at eliminating Iran’s nuclear program, and the high priority that the US and Israel attached to preventing an Iranian bomb, such threats ostensibly had a reasonable chance of success.

Yet playing the nuclear card ran a risk of triggering the very military attack Iran hoped to avoid—and in fact, that was the result. The Israeli and US strikes on

1 Jennifer Hansler and Kylie Atwood, “Blinken Says Iran’s Nuclear Weapon Breakout Time Is Probably Down to 1–2 Weeks,” CNN, July 19, 2024, <https://www.cnn.com/2024/07/19/politics/blinden-nuclear-weapon-breakout-time>.

2 For an overview of the dueling benefits and risks of nuclear latency, see Matthew Fuhrmann, *Influence Without Arms: The New Logic of Nuclear Deterrence* (Cambridge University Press, 2024), 2–3, 115–24; Rupal N. Mehta and Rachel Elizabeth Whitlark, “The Benefits and Burdens of Nuclear Latency,” *International Studies Quarterly* 61, no. 3 (September 2017): 517; Tristan Volpe, *Leveraging Latency: How the Weak Compel the Strong with Nuclear Technology* (Oxford University Press, 2023), 6–8, 10–11.

Iran in June of 2025 have proven Tehran's strategy a failure. But the outcome was not a forgone conclusion. There is, as yet, scant analysis as to why this failure occurred and whether and how Iran tried to leverage its nuclear capabilities to serve its wartime goals.³

This article seeks to fill this analytic gap and address broader questions about the role Iran's nuclear threshold capability played in the conflict. Did Iran try to leverage its nuclear program to advance its goals during the crisis? If so, how? Did Iranian leaders see their ability to build nuclear weapons as an asset they could use, or a liability—a proverbial or even literal target on their backs? Did Iran's nuclear threshold status objectively enhance Iranian deterrence, or degrade it?

The answers to these questions are relevant not only for unfolding events in the Middle East today, but also for other nuclear threshold states that exist or may emerge in the future. Renewed global interest in nuclear energy, for example, could lead to more countries with greater nuclear latency.⁴ Understanding how countries view and use nuclear latency can shed light on levers policymakers can use to influence those perceptions and decisions. The answers also have implications for the broader scholarly debate over the benefits and risks of nuclear latency. Indeed, Iran's nuclear program and the regional war from 2023 to 2025 present a powerful test case for theories about how latent nuclear states leverage their nuclear capabilities, whether more latency is better or worse for coercion, and the conditions under which latent nuclear deterrence is likely to succeed or fail.

Iran tried to leverage its threshold capability in service of strategic goals during the war—but ultimately, its nuclear program undermined rather than enhanced Iranian security. From October 2023 until roughly April 2024, Iran's leaders likely believed that the country's nuclear threshold provided a net strategic advantage and helped them advance their crisis goals. Tehran took visible steps to enhance its ability to produce weapons-grade uranium, and officials publicly lauded the power of Iran's threshold capability. Iran's ability to advance its nuclear program or build a nuclear weapon appears to have initially helped dissuade a more muscular US re-

sponse to Iranian proxy attacks and more aggressive efforts to pressure Iran in international fora.

As Iran's fortunes in the conflict began to change, however, that perception of successful latent nuclear deterrence changed also. Throughout the remainder of 2024, as Iran's conventional and unconventional capabilities eroded and their limits became exposed, Iranian leaders likely increasingly saw their ability to build a bomb as a more important guarantor to Iran's security *and* a significant vulnerability. They concluded that continuing to brandish the program could invite, rather than deter, an attack. Rather than trying to dash for a bomb, Iran chose to quietly advance its weaponization work to inch closer to a nuclear weapon while working to lower regional and international tensions. In the end, Iran's threshold capability failed to deter major conventional attacks against strategic targets within Iran by Israel (and later, the United States). Overall, *more* nuclear capability correlated with *less* security for Iran from 2023 to 2025.

Below, I focus on the period from the Hamas attacks in October 2023 until President Donald Trump's inauguration in January 2025. The conclusion discusses the implication of this period for events after January 2025, including the significance of US and Israeli strikes on Iran's program in June of that year and the broader campaign against Iran that began in 2026.

Nuclear Latency, Hedging, and Deterrence Without Nuclear Weapons

Nuclear latency is a country's underlying capacity to build nuclear weapons. Although there is no consensus on what constitutes latency, it is best thought of as a spectrum, inclusive of both technologies and skills, rather than a specific set of capabilities.⁵ On the lower end of the spectrum, for example, a country might have a uranium mining capability and a low-enriched uranium-fueled research reactor. On the higher end of the spectrum, a country might have large-scale enrichment or reprocessing capabilities, nuclear weapons—relevant explosives expertise, and missiles suited for nuclear weapons delivery.

Iran had a high degree of nuclear latency during the time frame examined here, and was considered

3 For example, see Pranay Vaddi, "Tehran's No Good, Very Bad Options, and Why Only Diplomacy Can Head Off an Iranian Bomb," *Bulletin of the Atomic Scientists*, July 3, 2025, <https://thebulletin.org/2025/07/tehrans-no-good-very-bad-options-and-why-only-diplomacy-can-head-off-an-iranian-bomb/#post-heading>.

4 Task Force on Nuclear Proliferation and US National Security, "Preventing an Era of Nuclear Anarchy: Nuclear Proliferation and American Security," Belfer Center for Science and International Affairs, Harvard Kennedy School; Carnegie Endowment for International Peace; Nuclear Threat Initiative, September 2025, <https://www.belfercenter.org/sites/default/files/2025-09/Preventing%20an%20Era%20of%20Nuclear%20Anarchy.pdf>.

5 For an example of different perspectives on nuclear latency, see Joseph F. Pilat, ed., *Nuclear Latency and Hedging: Concepts, History, and Issues* (Woodrow Wilson International Center for Scholars, 2019), https://www.wilsoncenter.org/sites/default/files/media/documents/book/nuclear_latency_and_hedging_-_concepts_history_and_issues.pdf.

a nuclear threshold state. Latency is a measurement of capability, not intent. Many countries possess some degree of nuclear latency, but there are no indications they plan to convert those capabilities into a bomb. (There is no agreed-upon definition of what constitutes a “threshold,” and the term is used in this article as a shorthand way to characterize Iran’s high level of nuclear latency and ability to quickly turn its capability into a nuclear weapon.)

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But Iran did not accidentally arrive at the threshold of a nuclear weapon. Indeed, Iran pursued what is known as a hedging strategy: developing or maintaining a suite of nuclear capabilities to have an ability to build a nuclear bomb, without actually producing a nuclear weapon.⁶ Hedging is the intentional development of a nuclear weapons “option” or, as Wyn Bowen and Matthew Moran put it, “latency with intent.”⁷ Countries pursue hedging strategies in large part to get closer to nuclear weapons—and therefore potentially acquire some of the security benefits of nuclear weapons possession—without the risks that come with a full-fledged nuclear weapons program. Additionally, nuclear hedging often reflects a lack of domestic political consensus to go for the bomb.⁸ Hedging can be either a matter of forward progress or a feature of nuclear rollback, as it arguably was for Iran under the 2015 nuclear deal.⁹

Iran meets the criteria for what Vipin Narang calls “hard hedgers”—countries that “attempt to become threshold nuclear states with many of the

pieces in place for a functional weapons program.”¹⁰ These criteria include the capability to produce weapons-grade material, theoretical work on nuclear weapons, work on nuclear delivery vehicles, and mainstream debates about whether to seek the bomb—all of which apply to Iran from 2023 to 2025.¹¹ Narang’s model reminds us that Iran was primed and ready to build the bomb, but still required a political decision to do so.

The Promises and Perils of Nuclear Latency

Scholars and policy practitioners have long debated how nuclear weapons shape actors’ perceptions in crises, and whether and under what circumstances nuclear weapons deter conflict. The potential value of nuclear weapons as a deterrent is intuitive. For example, a country might threaten to use nuclear weapons to dissuade an adversary from invading its territory.¹² But how countries might leverage a “short-of-a-bomb” capability, the relative value its leaders might ascribe to that latency, and whether nuclear latency can act as a deterrent has received significantly less attention.

Nuclear latency, and in particular nuclear hedging, can be a double-edged sword. It can potentially provide some benefits, including international prestige (e.g., through the possession of the fuel cycle), deterrence (e.g., by the explicit or implicit threat of crossing the nuclear threshold), and leverage in negotiations (e.g., by being willing to offer credible assurances not to build the bomb in exchange for concessions). Yet it can also bring risk and negative consequences, as other countries worry that latency might become an actual nuclear arsenal and take actions to avoid that outcome—such as international political pressure, economic sanctions, or even a military strike.¹³ Indeed, as a country nudges closer to a bomb, threat perceptions of its adversaries are likely to spike, raising the risks of military intervention. Latent nuclear countries must navigate this “window of vulnerability” carefully.¹⁴

6 For an early and thorough treatment of hedging, see Ariel E. Levite, “Never Say Never Again: Nuclear Reversal Revisited,” *International Security* 27, no. 3 (2003): 59–88.

7 Wyn Bowen and Matthew Moran, “Living with Nuclear Hedging: The Implications of Iran’s Nuclear Strategy,” *International Affairs* 91, no. 4 (2015): 689.

8 Vipin Narang, *Seeking the Bomb: Strategies of Nuclear Proliferation* (Princeton University Press, 2022), 9, 15.

9 Levite, “Never Say Never Again,” 69.

10 Narang, *Seeking the Bomb*, 19.

11 Narang, *Seeking the Bomb*, 20.

12 For an examination of this “asymmetric escalation” strategy and other nuclear postures, see Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton University Press, 2014).

13 Fuhrmann, *Influence Without Arms*, 115–24; Volpe, *Leveraging Latency*, 6–8; Narang, *Seeking the Bomb*, 9–11, 31–41.

14 On this dynamic, see Stephen Herzog, “The Nuclear Fuel Cycle and the Proliferation ‘Danger Zone,’” *Journal for Peace and Nuclear Disarmament* 3, no. 1 (2020): 60–86; Henrik Stålhane Hiim, “Revisiting Nuclear Hedging: Ballistic Missiles and the Iranian Example,” *International Affairs* 98, no. 4 (2022): 1367–84; Narang, *Seeking the Bomb*, 10–11.

Studies have tried to shed light on whether nuclear latency correlates with greater security benefits or greater risks, and some have developed theories about how countries try to use nuclear latency to their advantage, as well as the conditions under which those tactics succeed or fail. Although there is no consensus on the answers to these questions, scholars generally fall into two camps.

The first group is skeptical, and holds that latency yields more risks than benefits, or only finds benefits under certain strict conditions.¹⁵ Rupal Mehta and Rachel Elizabeth Whitlark argue that latency brings greater risks, including greater likelihood of preventative pressures or coercion. Kenneth Waltz argues that virtual nuclear arsenals are “at best a shaky deterrent,” lack the key benefits of deployed nuclear forces, and may introduce destabilizing security dynamics.¹⁶ Scholars and policy experts have also argued that current potential proliferators, such as South Korea, have struggled to use latency for coercion.¹⁷

Others argue that it is difficult for latent nuclear states to leverage their capabilities to force concessions. Tristan Volpe argues that there is a latency “sweet spot”—the ability to produce fissile material—where compellence can work; outside of that zone, coercion becomes problematic. Countries with less latency find it harder to make proliferation threats believable, and countries with more latency struggle to credibly assure targets that they will not build the bomb.¹⁸ Although Volpe focuses on compellence, he suggests that this tension between making threats and assurances credible “may still bedevil latent nuclear deterrence.”¹⁹ A nuclear threshold state like Iran (out of Volpe’s “Goldilocks zone” of latency) might find it easy to issue credible threats of proliferation, but harder to convince the United States and Israel that it will hold those threats in reserve should they comply with Iranian demands. This would be doubly so, as

Iran is believed to be not just a highly latent nuclear state, but a hard hedger with the explicit intent of maintaining a bomb option.

The second group emphasizes the benefits of latency, or argues that more nuclear latency is often better for the latent nuclear power.²⁰ Michael Mazarr suggests that “virtual nuclear arsenals” still allow for nuclear coercion, including “virtual deterrence” through the threat to arm.²¹ Matthew Fuhrmann and Benjamin Tkach find evidence that possessing nuclear latency reduces the likelihood of being targeted in a dispute.²² Fuhrmann explicitly tackles the question of when latent nuclear deterrence works, and when it does not. He argues that three main criteria shape whether a country can leverage latency for deterrence: the ability to produce fissile material, high stakes for the latent state, and a program that is not unambiguously intended to produce nuclear weapons.²³ He also specifies three ways in which a latent state may try to leverage its status for deterrence: deterrence by proliferation (threatening to build nuclear weapons), deterrence by delayed attack (not just building nuclear weapons, but using them against the aggressor), and deterrence by doubt (uncertainty about whether a latent nuclear state might already have nuclear weapons, which could then be used against an aggressor).²⁴

The Iran case presents a good test for Fuhrmann’s framework. All three criteria for successful latent deterrence were arguably present for Iran from 2023 to 2025, and as such Iran should have succeeded in leveraging its threshold as a deterrent. This article demonstrates that Iran tried to employ deterrence by proliferation, but ultimately failed to do so. Examining Iran during this period, therefore, presents a geopolitically critical test case for whether nuclear latency benefits or creates risks to the latent state, and allows us to analyze how countries might try to leverage that latency for national security gains.

15 For those more skeptical, see Volpe, *Leveraging Latency*; Narang, *Nuclear Strategy in the Modern Era*; Mehta and Whitlark, “The Benefits and Burdens of Nuclear Latency”; Kenneth Waltz, “Thoughts About Virtual Nuclear Arsenals,” *The Washington Quarterly* 20, no. 3 (1997): 153–61.

16 Waltz, “Thoughts About Virtual Nuclear Arsenals.”

17 For example, see Eric Brewer, Toby Dalton, and Kylie Jones, “Mind the Gaps: Reading South Korea’s Emergent Proliferation Strategy,” *The Washington Quarterly* 46, no. 2 (2023): 141–60; Ankit Panda and Tristan A. Volpe, “Limited Leverage: Nuclear Latency in South Korea’s Alliance Bargaining,” *The Washington Quarterly* 47, no. 1 (2024): 147–66.

18 Tristan A. Volpe, “Atomic Leverage: Compellence with Nuclear Latency,” *Security Studies* 26, no. 3 (2017): 517–44; Volpe, *Leveraging Latency*.

19 Volpe, *Leveraging Latency*, 179.

20 For those generally favorable toward latency, see Mitchell Reiss, *Without the Bomb: The Politics of Nuclear Nonproliferation* (Columbia University Press, 1988); William Spaniel, *Bargaining over the Bomb: The Successes and Failures of Nuclear Negotiations* (Cambridge University Press, 2019); Fuhrmann, *Influence Without Arms*; Michael Mazarr, “Virtual Nuclear Arsenals,” *Survival* 37, no. 3 (Autumn 1995): 7–26.

21 Mazarr, “Virtual Nuclear Arsenals,” 22.

22 Matthew Fuhrmann and Benjamin Tkach, “Almost Nuclear,” *Conflict Management and Peace Science* 32, no. 4 (September 2015): 443–61.

23 Fuhrmann, *Influence Without Arms*, 52–65; Matthew Fuhrmann, “US Allies and Adversaries Are Attempting Nuclear Deterrence Without Weapons—Will It Work?,” *War on the Rocks*, April 4, 2025, <https://warontherocks.com/2025/04/u-s-allies-and-adversaries-are-attempting-nuclear-deterrence-without-weapons-will-it-work/>.

24 Fuhrmann, *Influence Without Arms*, 10–13.



Iran's Deterrent, the Nuclear Program, and Crisis Goals

Iran's long-term strategic goals, including from 2023 to 2025, can be characterized as follows: the survival of the Islamic Republic, defense against internal and external threats, and regional dominance.²⁵ These are not trivial objectives for Iran, which is beset by internal challenges to its rule, faces two nuclear-armed and conventionally superior adversaries (the United States and Israel), and has other neighbors that are strong security partners of the United States.²⁶ Recognizing these vulnerabilities, Tehran has traditionally relied on a strategy of keeping any fight away from its borders ("forward defense") and maintaining an ability to inflict unacceptable pain on its adversaries in ways that are hard for them to defend against ("asymmetric deterrence").²⁷

This strategy is based on three pillars—Iran's own "triad" of deterrence.²⁸ The first pillar is Iran's support—military, intelligence, economic, and political—to an extensive network of non-state groups across the region that, to varying degrees, share Iran's interests and goals. These groups allow Iran to project power well beyond its borders, and to attack its foes while allowing Tehran to deny involvement and therefore limit the risks of blowback.²⁹

The second pillar is Iran's large and increasingly sophisticated arsenal of ballistic missiles and, in recent years, cruise missiles and suicide drones.³⁰ For decades, Iran has leveraged these capabilities to deter a US or Israeli strike against Iranian nuclear sites, threatening to unleash both its proxy forces and a wave of devastating missile attacks against Israeli, American, and potentially Gulf state interests in response.³¹

25 Defense Intelligence Agency, "Iran Military Power: Ensuring Regime Survival and Securing Dominance," 2019, 12–13, https://www.dia.mil/Portals/110/Images/News/Military_Powers_Publications/Iran_Military_Power_LR.pdf.

26 While Israel has not officially acknowledged that it possesses nuclear weapons, it is widely believed to have them.

27 Defense Intelligence Agency, "Iran Military Power," 22–23.

28 For a good overview of these, and other key elements of Iran's defense strategy, see Michael Eisenstadt, "The Strategic Culture of the Islamic Republic of Iran: Religion, Expediency, and Soft Power in an Era of Disruptive Change," Middle East Studies at the Marine Corps University Monograph Series, no. 7, November 2015, 8–9, <https://www.washingtoninstitute.org/media/2293>; Raz Zimmt, "Toward Possible Changes in Iran's Security Concept," Institute for National Security Studies, November 18, 2024, <https://www.inss.org.il/publication/iran-changes/>.

29 Office of the Director of National Intelligence, "Annual Threat Assessment of the US Intelligence Community, 2024," ODNI, 2024, 19, <https://www.dni.gov/files/ODNI/documents/assessments/ATA-2024-Unclassified-Report.pdf>.

30 Missile Defense Project, "Missiles of Iran," Missile Threat, Center for Strategic and International Studies, June 14, 2018, last modified August 10, 2021, <https://missilethreat.csis.org/country/iran/>; "Roster of Iran's Drones," The Iran Primer, US Institute for Peace, April 12, 2024, <https://iranprimer.usip.org/blog/2024/feb/02/roster-iran%E2%80%99s-drones>.

31 Eisenstadt, "The Strategic Culture of the Islamic Republic of Iran," 8.

The third pillar is Iran's ability to build a nuclear weapon. Iran's nuclear program has other goals, including enhancing Tehran's international prestige, acting as leverage in negotiations, and providing nuclear energy. But an important, perhaps central, goal of the nuclear program is to provide Iran with a measure of security by having a nuclear weapons option.³² Since 2003, when Iran halted its covert, dedicated nuclear weapons program due to international pressure and the risk of a military attack, Tehran has pursued a nuclear hedging strategy. Since then, it has focused mainly on improving its enrichment program—critical to its ability to produce the fuel for a bomb.

By the time the conflict erupted in October 2023, Iran had an advanced enrichment program and a sprawling fuel cycle. Tehran could produce enough weapons-grade uranium for its first bomb within weeks, and multiple bombs shortly thereafter. Some of that material was enriched to 60 percent, which Iran could use directly to build a crude nuclear device. Iran also reportedly sought to preserve elements of its past weaponization effort and since 2003 had engaged in some “weaponization-relevant dual-use technical activities.”³³ Yet those efforts had limits: Until mid-2024, the US intelligence community judged, Iran was “not currently undertaking the key nuclear weapons—development activities necessary to produce a testable nuclear device.”³⁴

While Iran's leaders often threatened to continue and expand the nuclear program in response to international pressure, the notion that Iran might use its capabilities to actually build nuclear weapons had been an implicit rather than an explicit threat—until the 2023–25 conflict.³⁵ The US intelligence community has long assessed that Iran has the inherent

capacity to eventually produce a nuclear weapon; the question is whether it will make the political decision to do so.³⁶ Indeed, prior to the war, the Iranian regime had tended to play down interest in nuclear weapons, and officials frequently cited Supreme Leader Ali Khamenei's religious decree, or *fatwa*, banning the development and use of nuclear weapons in their denials.³⁷

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The October 7th Hamas attacks—which evidence suggests Iran did not direct, but that select senior officials may have had some general awareness of beforehand—and the subsequent Israeli invasion of Gaza imposed a national security crisis on Iran.³⁸ Those events directly implicated an important Iranian ally and node of one of its deterrent pillars: Hamas. At the outset, the war provided an opportunity for Tehran, but also risked pulling in other allies (for example, Hezbollah) and potentially even Iran itself. Risk of a direct conflict with Israel or the United States loomed large.

Against this backdrop, Iran had two primary goals. First, it sought to raise the costs on Israel for its war, and the United States for its support for that war, while ultimately ensuring that both emerged weakened, if not defeated.³⁹ Second, Iran wanted to avoid

32 “US Intel Head James Clapper on Greatest Threats in 2012,” ABC News, February 1, 2012, <https://abcnews.go.com/Blotter/us-intel-head-james-clapper-worldwide-threats-2012/story?id=15479381>.

33 US Department of State, “Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments,” US Department of State, June 2020, 37, <https://2021-2025.state.gov/wp-content/uploads/2020/06/2020-Adherence-to-and-Compliance-with-Arms-Control-Nonproliferation-and-Disarmament-Agreements-and-Commitments-Compliance-Report-1.pdf>.

34 This phrase appeared repeatedly in US government assessments and statements until July 2024. For example, see Office of the Director of National Intelligence, “Annual Threat Assessment of the US Intelligence Community, 2024,” 19.

35 For example, see Ewen MacAskill, “Tehran to Expand Uranium Enrichment on Industrial Scale,” *The Guardian*, April 13, 2006, <https://www.theguardian.com/world/2006/apr/13/iran.unitednations>; “Factbox: Iran Approves Plan to Build 10 New Enrichment Plants,” Reuters, November 29, 2009, <https://www.reuters.com/article/instant-article/idUKTRE5AS1PU20091129/>.

36 Office of the Director of National Intelligence, “February 2008 Intelligence Community Annual Threat Assessment Unclassified Statement for the Record,” ODNI, February 27, 2008, 12, https://www.intelligence.gov/assets/documents/archive/20080227_testimony.pdf.

37 AFP, “Supreme Leader Denies Tehran Is Seeking Nuclear Weapons,” France 24, February 19, 2010, <https://www.france24.com/en/20100219-supreme-leader-denies-tehran-seeking-nuclear-weapons>.

38 Office of the Director of National Intelligence, “Annual Threat Assessment of the US Intelligence Community, 2024,” 24; Ronen Bergman, Adam Rasgon, and Patrick Kingsley, “Secret Documents Show Hamas Tried to Persuade Iran to Join Its Oct. 7 Attack,” *The New York Times*, October 12, 2024, <https://www.nytimes.com/2024/10/12/world/middleeast/hamas-israel-war.html>.

39 Militarily, this focused principally on attacks via proxies. For example, see Natasha Bertrand, Katie Bo Lillis, Zachary Cohen, and Jennifer Hansler, “Intelligence Shows Iranian-Backed Militias Are Ready to Ramp Up Their Attacks Against US Forces in the Middle East,” CNN, October 23, 2023, <https://www.cnn.com/2023/10/23/politics/iranian-militias-israel-hamas>; Farnaz Fassihi, Ronen Bergman, and Eric Schmitt, “Iran Looks to Houthi Proxies to Escalate Fight with Israel,” *The New York Times*, December 8, 2023, <https://www.nytimes.com/2023/12/08/world/middleeast/iran-israel-houthi.html>. Diplomatically, Iranian officials went on a whirlwind tour in the region to take advantage of the backlash against Israel, as described in Najmeh Bozorgmehr, “Iran Told the US It Did Not Want the Israel-Hamas War to Escalate,” *Financial Times*, November 17, 2023, <https://www.ft.com/content/e296eb62-cd36-4945-80c2-1ca3a6b79259>.

escalation into a conflict that could threaten core Iranian interests.⁴⁰ These included regime survival and avoiding strikes into Iranian territory, particularly against strategic targets (including Iran's military and nuclear program). Tehran's goal of preventing the war from turning back to Iran was central to its early efforts to keep Lebanese Hezbollah out of the fight and to avoid directly entering the fray to defend its proxies. In addition to damage from the attacks themselves, leaders in Tehran also worried that they could force Iran into having to respond in ways that would risk counter-escalation and ultimately threaten the regime, or to not respond at all, look weak, and invite more aggression.⁴¹

Leveraging Nuclear Latency: Strategy and Tactics

To advance these goals of raising costs and avoiding escalation, Iran used its nuclear threshold capability for three distinct but related purposes. All are rooted in Iran's pre-October 7th approach to leveraging its nuclear program for national security benefits, but the second and third represent new twists on its past nuclear strategy.

First, Tehran sought to use its nuclear capabilities—and the ability to expand them—to prevent diplomatic pressure, namely, censure by the International Atomic Energy Agency (IAEA) Board of Governors and UN sanctions snapback.⁴² In general, this was a continuation of a strategy Iran employed prior to October 7th.⁴³ While separate from the regional crisis, evidence suggests that the nuclear issue and broader dynamics in the Middle East were linked in the minds of Western, particularly US, officials—something Iran tried to exploit.⁴⁴

Second, Iran saw its nuclear program as a backstop to its regional campaign of proxy attacks. Early in

the crisis, Iran tried to use its threshold status as a subtle reminder that retaliation or escalation in the region by the United States or Israel could lead Iran to expand its nuclear program in worrying ways; on one occasion Iran also limited part of its program in an apparent attempt to dial down tensions.⁴⁵ This was the first time Iran sought to clearly link its nuclear strategy and its regional strategy.

While Iran had long threatened expansion of its nuclear capabilities in response to pressure, this conflict was the first time Iranian officials threatened to build nuclear weapons if certain redlines were crossed.

Finally, Iran sought to leverage its ability to build a nuclear weapon to deter strikes by Israel against key strategic targets in Iran—in particular, the nuclear program. While Iran had long threatened expansion of its nuclear capabilities in response to pressure, this conflict was the first time Iranian officials threatened to build nuclear weapons if certain redlines were crossed.⁴⁶ This was a deliberate attempt to use its threshold as a deterrent against military action—so-called deterrence by proliferation—similar to how countries with nuclear weapons use their arsenals and threats of nuclear use to deter aggression, and it represented an adaptation of past Iranian strategy.⁴⁷

40 As described by the head of the US National Counterterrorism Center, in Alex Horton, Dan Lamothe, and Abigail Hauslohner, "A Split Emerges as Biden Struggles to Deter Attacks on US Troops," *The Washington Post*, November 19, 2023, <https://www.washingtonpost.com/national-security/2023/11/19/iranian-proxy-attacks-us-troops/>.

41 Farnaz Fassihi, "After Years of Vowing to Destroy Israel, Iran Faces a Dilemma," *The New York Times*, November 1, 2023, <https://www.nytimes.com/2023/11/01/world/middleeast/iran-israel-hamas.html>.

42 Stephen Erlanger, "UN Watchdog Censures Iran over Nuclear Program Secrecy," *The New York Times*, November 21, 2024, <https://www.nytimes.com/2024/11/21/world/europe/iaea-censure-iran-nuclear.html>.

43 Arshad Mohammed, John Irish, Jonathan Landy, and Parisa Hafezi, "Smoldering Iran Nuclear Crisis Risks Catching Fire," Reuters, May 5, 2023, <https://www.reuters.com/world/middle-east/smoldering-iran-nuclear-crisis-risks-catching-fire-2023-05-05/>.

44 AFP and TOI Staff, "Fear of Israel-Hamas War Spreading Said to Restrain West from Iran Nuclear Crackdown," *The Times of Israel*, November 23, 2023, <https://www.timesofisrael.com/fear-of-israel-hamas-war-spreading-restrains-west-from-major-iran-nuclear-crackdown/>; Francois Murphy and John Irish, "West Avoids Seriously Confronting Iran as IAEA Meet Begins," Reuters, March 4, 2024, <https://www.reuters.com/world/europe/iaea-meet-begins-2024-03-04/>; Francois Murphy and John Irish, "US, European Powers Divided over Confronting Iran at IAEA, Diplomats Say," Reuters, May 24, 2024, <https://www.reuters.com/world/us-european-powers-divided-over-confronting-iran-iaea-diplomats-say-2024-05-24/>.

45 Laurence Norman, "Iran Reduces Near-Weapons-Grade Stockpile, Defying Expectations," *The Wall Street Journal*, February 26, 2024, <https://www.wsj.com/world/middle-east/iran-reduces-near-weapons-grade-stockpile-defying-expectations-ba384777>; Laurence Norman, "Iran Warns European Powers IAEA Censure Will 'Complicate' Nuclear Talks," *The Wall Street Journal*, December 26, 2023, <https://www.wsj.com/world/middle-east/iran-adds-to-pressure-on-u-s-with-nuclear-program-acceleration-9ce226c5>.

46 Eric Brewer, "Iran's New Nuclear Threat: How Tehran Has Weaponized Its Threshold Status," *Foreign Affairs*, June 25, 2024, <https://www.foreignaffairs.com/iran/irans-new-nuclear-threat>.

47 Fuhrmann, *Influence Without Arms*.

Nuclear Threshold as Asset or Liability: The View from Tehran

What did Iran's actions during the conflict suggest about whether Tehran viewed its nuclear threshold status as an asset or a liability? This is admittedly a challenging question to answer based on open-source information, and there is no monolithic "Iranian viewpoint"; Iran's leaders likely perceived both strength and weakness throughout the crisis. But Iranian government actions and statements, press reports, and author conversations with US, European, and Middle Eastern government officials can stitch together a plausible picture, allowing us to assess the general trajectory or "net" perception.

Evidence suggests that from the beginning of the conflict in October 2023 through roughly the spring of 2024, Iran saw its threshold capability as bringing a net advantage. In the summer and fall of 2024, however, this perception changed, as Tehran detected a gap between the perceived and actual value of its nuclear latency. Within roughly six months, two of the three pillars of Iran's deterrent (its proxies and conventional missiles) were degraded, and key limitations of those capabilities became exposed.

As a result, the remaining third pillar—the nuclear threshold capability—gradually became more important to Iran's security in the minds of its leaders, but was also perceived as more vulnerable. As the US intelligence community bluntly assessed in early 2025: "Iranian leaders recognize the country is at one of its most fragile points since the Iran-Iraq war, which probably weighs on their strategic calculus and confidence in their approach toward the region, the United States, and US partners."⁴⁸ Evidence suggests that as Iran's security environment worsened, doubts emerged among Iranian officials about whether their suite of nuclear capabilities

gave them enough of a deterrent, and whether Iran could convert that capability into a bomb quickly enough during a crisis. These doubts drove Tehran to try to rectify that problem by quietly advancing its weaponization capabilities, while publicly increasing diplomatic overtures and reducing its nuclear rhetoric to lower the temperature to avoid a worsening of the crisis.

Phase 1: Nuclear Threshold as an Asset

From October 2023 through roughly the spring of 2024, Iran generally believed it was riding high in the conflict. It was imposing military costs on Israel, the United States, and the international community by enabling and encouraging a campaign of persistent regional attacks by its proxy forces, including groups in Iraq, Syria, Yemen, Gaza, and Lebanon.⁴⁹ That it was doing so despite a large and growing US military presence in the Middle East and repeated high-level public and private warnings from the United States to cease these attacks speaks to Iran's early confidence.⁵⁰ That campaign and complementary regional diplomacy by Tehran also aimed to impose diplomatic costs by isolating Israel, as well as the United States for its support of Israel's war, and reinforcing Iran's self-perceived image as the only country willing to support the Palestinians and take on the West.⁵¹ Finally, Iran likely saw a coordinated but still restrained campaign by its "axis of resistance" as highlighting to the United States, Israel, and the region its potential to escalate further should events warrant.⁵²

At the time, Iran had reason to believe it was achieving these goals with relatively few costs. Although Washington moved additional forces into the region—including two carrier strike groups and a nuclear-powered, conventionally armed, ballistic-missile submarine—the initial US response was

48 Office of the Director of National Intelligence, "Annual Threat Assessment of the US Intelligence Community, 2025," ODNI, 2025, 26, <https://www.dni.gov/files/ODNI/documents/assessments/ATA-2025-Unclassified-Report.pdf>.

49 Office of the Director of National Intelligence, "Annual Threat Assessment of the US Intelligence Community, 2025," 26; Liz Sly, Mustafa Salim, and Suzan Haidamous, "Iran Showcases Its Reach with Militia Attacks Across Middle East," *The Washington Post*, April 18, 2024, <https://www.washingtonpost.com/world/2024/01/01/iran-militias-gaza-israel/>; Nick Schiffrin (@Nickschiffrin), "On whether the IRGC is directing Houthi attacks: 'We believe that they are involved in the conduct of these attacks, the planning of them, the execution of them, the authorization of them, and that ultimately they support them,'" X (formerly Twitter), December 11, 2023, 12:31 am, <https://x.com/nickschiffrin/status/1734083507188629680>.

50 Steve Holland and Susan Heavey, "Biden Warns Iran Against Targeting US Troops in Middle East," Reuters, October 26, 2023, <https://www.reuters.com/world/middle-east/biden-sent-message-irans-khamenei-against-targeting-us-troops-white-house-2023-10-26/>; US Department of War, "Statement from Secretary of Defense Lloyd J. Austin III on Steps to Increase Force Posture," October 21, 2023, <https://www.war.gov/News/Releases/Release/Article/3564874/statement-from-secretary-of-defense-loyd-j-austin-iii-on-steps-to-increase-for/>.

51 Bozorgmehr, "Iran Told the US It Did Not Want the Israel-Hamas War to Escalate."

52 Parisa Hafezi, Laila Bassam, and Arshad Mohammed, "Insight: Iran's 'Axis of Resistance' Against Israel Faces Trial by Fire," Reuters, November 15, 2023, <https://www.reuters.com/world/middle-east/irans-axis-resistance-against-israel-faces-trial-by-fire-2023-11-15/?tk>; Barak Ravid, "Scoop: Iran Warns Israel Through UN Against Ground Offensive in Gaza," *Axios*, October 14, 2023, <https://www.axios.com/2023/10/14/iran-warning-israel-hezbollah-hamas-war-gaza>.

relatively muted.⁵³ US officials publicly and privately urged de-escalation and warned Iran not to allow its proxies to hit US forces, but were slow to retaliate for fear that doing so would exacerbate the conflict.⁵⁴ US officials also routinely described attacks by Shi'a militias in Iraq and the Houthis in Yemen as unrelated to the war in Gaza—a portrayal that avoided awkward questions about whether the United States was failing in its objective of containing the conflict, but that also reduced pressure for an American military response.⁵⁵ Iran also successfully managed to limit Hezbollah's involvement—an important step for the goal of holding a close and capable Iranian ally in reserve to deter any attack on Iran itself.

The United States weathered 19 attacks against US forces over the course of ten days before responding in late October 2023.⁵⁶ Initial US reprisals focused mostly on low-level targets: facilities used by the Islamic Revolutionary Guard Corps (IRGC) and Iran-backed groups in Syria (a less politically sensitive target than Iraq).⁵⁷ Attacks by Iranian proxies continued, and by November 19, there had been more than 60 attacks against US forces in Iraq and Syria.⁵⁸ On November 22, the United States targeted Iran-backed groups in Iraq for the first time.⁵⁹ This failed to stop further attacks by Iran's proxies; by December 11, the number of attacks had increased to 90.⁶⁰ Later that month, a drone attack injured three US service members, one critically, prompting an

immediate US response that targeted multiple sites affiliated with Iran-linked proxy groups in Iraq.⁶¹

That pattern of increasingly bold attacks against US forces and US retaliation against militia facilities in Iraq continued through January, culminating in a Shi'a militia attack that killed three US service members on January 28.⁶² Those deaths, and the US retaliation that followed on February 2—which struck 85 targets in Iraq and Syria affiliated with the IRGC and proxy groups, and featured long-range bombers flown from the United States—finally spooked the Iranians into forcing its militia allies in Iraq and Syria to pause strikes. By the time attacks by Iran-backed Shi'a militias ended on February 4, there had been more than 170 attacks on US forces.⁶³

The United States initially acted with similar restraint toward Houthi attacks against international shipping in Yemen, the Red Sea, and the Gulf of Aden. While US ships routinely took defensive action to shoot down Houthi-launched drones and missiles, the United States waited nearly two months—and weathered over two dozen Houthi missile and drone launches on its own forces and international commerce—before carrying out retaliatory strikes against Houthi forces in January 2024.⁶⁴

Iran also had some success holding off diplomatic pressure. In November 2023 and March 2024, the United States refrained from formally censuring Iran over its nuclear program at the quarterly meetings of the IAEA Board of Governors, and discouraged its

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- 53 US Department of War, "Statement from Secretary of Defense Lloyd J. Austin III on Deployment of USS Eisenhower Carrier Strike Group to the Eastern Mediterranean," October 14, 2023, <https://www.war.gov/News/Releases/Release/Article/3557560/statement-from-secretary-of-defense-loyd-j-austin-iii-on-deployment-of-uss-eis/>; US Central Command (@CENTCOM), "On November 5, 2023, an Ohio-class submarine arrived in the US Central Command area of responsibility," X (formerly Twitter), November 25, 2023, 4:00 pm, <https://x.com/CENTCOM/status/1721271207260033230>.
- 54 Michael R. Gordon, Nancy Youssef, and Gordon Lubold, "Iranian-Backed Militias Mount New Wave of Attacks as US Supports Israel," *The Wall Street Journal*, October 25, 2023, <https://www.wsj.com/world/middle-east/iranian-backed-militias-mount-new-wave-of-attacks-as-u-s-supports-israel-d51364d4>; Alexander Ward and Lara Seligman, "With Precision Strikes in Syria, Biden Tries to Avoid Lighting a Powder Keg," *Politico*, October 28, 2023, <https://www.politico.com/news/2023/10/27/precision-strikes-syria-biden-middle-east-iran-00124000>.
- 55 US Department of Defense, "Transcript: Deputy Pentagon Press Secretary Ms. Sabrina Singh Holds an Off-Camera, On-the-Record Press Briefing," December 4, 2023, <https://www.war.gov/News/Transcripts/Transcript/Article/3606323/deputy-pentagon-press-secretary-ms-sabrina-singh-holds-an-off-camera-on-the-rec/>.
- 56 Ward and Seligman, "With Precision Strikes in Syria, Biden Tries to Avoid Lighting a Powder Keg."
- 57 US Department of War, "Secretary of Defense Lloyd J. Austin III Statement on US Military Strike in Eastern Syria," November 8, 2023, <https://www.war.gov/News/Releases/Release/Article/3584458/secretary-of-defense-loyd-j-austin-iii-statement-on-us-military-strike-in-east/>.
- 58 Alex Horton, Dan Lamothe, and Abigail Hauslohner, "A Split Emerges as Biden Struggles to Deter Attacks on US Troops," *The Washington Post*, February 14, 2025, <https://www.washingtonpost.com/national-security/2023/11/19/iranian-proxy-attacks-us-troops/>.
- 59 US Central Command, "USCENTCOM Conducts Airstrikes," November 22, 2023, <https://www.centcom.mil/MEDIA/PRESS-RELEASES/Press-Release-View/Article/3599991/uscentcom-conducts-airstrikes/>.
- 60 Bradford Betz, "US Military Bases in Iraq, Syria Attacked Again, Bringing Total to At Least 90 Since Oct. 17," Fox News, December 11, 2023, <https://www.foxnews.com/world/us-military-bases-iraq-syria-attacked-again-bringing-total-least-90-since-oct-17>.
- 61 US Department of War, "Statement from Secretary of Defense Lloyd J. Austin III on US Strikes in Iraq," December 25, 2023, <https://www.war.gov/News/Releases/Release/Article/3626180/statement-from-secretary-of-defense-loyd-j-austin-iii-on-us-strikes-in-iraq/>.
- 62 US Central Command, "Announcement of US Casualties in Northeast Jordan, near Syria Border," January 28, 2023, <https://www.centcom.mil/MEDIA/PRESS-RELEASES/Press-Release-View/Article/3658484/announcement-of-us-casualties-in-northeast-jordan-near-syria-border/>.
- 63 Farnaz Fassihi, Eric Schmitt, and Julian E. Barnes, "Iran's Proxies Curtail Attacks on American Bases in Iraq and Syria After US Strikes," *The New York Times*, February 28, 2024, <https://www.nytimes.com/2024/02/27/world/middleeast/us-iran-militias.html?smid=tw-share>.
- 64 Alex Horton, Dan Lamothe, Missy Ryan, and Abigail Hauslohner, "US-Led Coalition Strikes Iran-Aligned Houthi Militants in Yemen," *The Washington Post*, January 20, 2024, https://www.washingtonpost.com/national-security/2024/01/11/us-strike-yemen-houthis-red-sea/?utm_medium=social&utm_source=twitter&utm_campaign=wp_main.

European partners from doing the same. According to Western diplomats, Washington did so because it feared censure would lead Iran to respond by expanding its nuclear program as well as escalating within the region.⁶⁵ American officials privately acknowledged concerns about fueling escalation, but also argued that pressure at the IAEA would be ineffective in walking back Iran's program.⁶⁶ Finally, Washington waited to resume sanctions against Iranian oil exports, which had been paused as part of the de-escalatory understanding reached with Iran in mid-2023. It did so despite Iran abandoning the most critical steps it had taken as part of that understanding—limiting its accumulation of 60-percent-enriched uranium and halting proxy attacks against US forces in the region.

US restraint during this period followed a certain logic. Responding militarily before adequate forces were in place to manage any Iranian escalation would have come with risks. Waiting to assemble an international coalition before hitting back at the Houthis signaled that it was not just a US problem, but an international one. However, Iranian officials appear to have interpreted US restraint as a sign that their strategy was working.⁶⁷

Comments from Iranian elites that highlighted the country's bomb-making ability provide further evidence that Iran saw its threshold as a net asset that carried the same deterrent benefits as having nuclear weapons.

Iran's regional strategy was complemented by a series of technical steps that improved its ability to quickly produce enough material for a bomb, and by public statements from Iranian officials about Teh-

ran's inherent capacity to build a nuclear weapon. It is unclear whether these measures were coordinated, but the data collectively point to a perception of Iranian confidence in its nuclear status.

In November—immediately after the IAEA Board of Governors meeting concluded without a formal censure against Iran—Tehran resumed a faster output rate of 60-percent-enriched uranium, allowing it to more quickly accumulate material that could be used to make nuclear weapons.⁶⁸ While not a technical game changer, the move grabbed headlines for its political significance: Iran was walking away from the most visible aspect of the so-called de-escalatory arrangement reached with the United States before the war. Tehran also reverted to a method for connecting its IR-6 centrifuges that could more easily allow it to enrich to weapons grade.⁶⁹ This mode of operation had likely contributed to Iran's production of very small amounts of 84-percent-enriched material in January 2023, and reengaging in it signaled, amid rising tensions, that the potential production of weapons-grade uranium was now back on the table.

Comments from Iranian elites that highlighted the country's bomb-making ability provide further evidence that Iran saw its threshold as a net asset that carried the same deterrent benefits as having nuclear weapons. On January 13, in response to a question in a TV interview about whether it was time for Iran to produce nuclear weapons, the head of the Atomic Energy Organization of Iran, Mohammad Eslami, responded:

Having WMDs has never been part of the security and defensive doctrine of the Islamic Republic of Iran. . . . It is not about the lack of capability. . . . I think we have achieved such deterrence. In other words, we should not under-rate our current achievements, thinking that we are not there yet. This deterrence has been achieved with the help of God, without having to violate any rules and regulations.⁷⁰

During a TV interview the following month, the former head of Iran's nuclear organization and a lead negotiator of the Iran nuclear deal, Ali Akbar Salehi,

65 AFP and TOI Staff, "Fear of Israel-Hamas War Spreading Said to Restrain West from Iran Nuclear Crackdown"; Murphy and Irish, "West Avoids Seriously Confronting Iran as IAEA Meet Begins"; Murphy and Irish, "US, European Powers Divided over Confronting Iran at IAEA, Diplomats Say."

66 Author conversation with a US official.

67 For an example of Iranian confidence, see David E. Sanger and Steven Erlanger, "From Lebanon to the Red Sea, a Broader Conflict with Iran Looms," *The New York Times*, January 7, 2024, <https://www.nytimes.com/2024/01/07/us/politics/iran-us-israel-conflict.html>; Sly et al., "Iran Showcases Its Reach with Militia Attacks Across Middle East."

68 Laurence Norman, "Iran Adds to Pressure on US with Nuclear Program Acceleration," *The Wall Street Journal*, December 26, 2023, <https://www.wsj.com/world/middle-east/iran-adds-to-pressure-on-u-s-with-nuclear-program-acceleration-9ce226c5>.

69 Norman, "Iran Adds to Pressure on US with Nuclear Program Acceleration."

70 See "Iran's Nuclear Chief Mohammad Eslami: 'Khamenei's Fatwa Forbids the Use of Nuclear Weapons; We Do Not Want Them,'" IRIB Ofogh TV, <https://www.memri.org/tv/iran-nuclear-chief-mohammad-eslami-khamenei-fatwa-forbid-use-nukes>.

implied Iran had all the key components to assemble a bomb: “We have [crossed] all the thresholds of nuclear science and technology. I will give an example: What does a car require? It needs a chassis, an engine, a steering wheel, a gearbox. You’re asking if we have made the gearbox, I say yes. Have we made the engine? Yes, but each one serves its own purpose.”⁷¹ These comments by Eslami and Salehi were widely covered in the Iranian and Western press, and noticed by Western officials, as well as the head of the IAEA.⁷²

Iran’s strategic environment was not perfect. Events as early as January likely checked Iran’s optimism about the strength of its strategy and adequacy of its deterrent. For example, on January 3, an ISIS-K (Islamic State of Iraq and Syria–Khorasan Province) suicide attack during a ceremony honoring former IRGC Qods Force Commander Qassem Soleimani killed over ninety people, the deadliest terrorist attack on Iranian territory since the 1979 Islamic Revolution.⁷³ Later that month, Iran and Pakistan exchanged a volley of missile attacks against separatist groups in each other’s territory.⁷⁴ Moreover, Iran likely recognized that its threshold capability had not deterred Israeli attacks against its proxies. Israel had begun an aggressive campaign to kill IRGC officials in Syria (which would culminate in the April 1, 2024, attack on the Iranian consulate).⁷⁵ The fact that Iran requested an indirect meeting with US officials in January 2024 to discuss regional tensions suggests Tehran was concerned about its actions leading to a clash with the United States.⁷⁶

These challenges and a more muscular US response to Iranian proxy attacks in the region in January and February 2024 may have contributed to Iran’s decision to slightly reduce its 60-percent-uranium stockpile between January and March.⁷⁷ Although

those dilutions were minor and did not affect Iran’s breakout time, they marked the first instance in which Iran had reduced that stockpile—a capability to which it knows the West attaches significant political importance. According to US, European, and Middle Eastern officials, Western officials had warned Iran behind closed doors that its growing stockpile was a source of serious concern.⁷⁸ Iran may also have sought to avoid adverse action at the March IAEA Board of Governors meeting. These challenges notwithstanding, Iran likely saw its strategy during the first six months of the crisis as one of success, and believed its three-pronged deterrent—including the nuclear component—was working as intended: raising the costs on the United States and Israel, showcasing Iranian strength, and perhaps most importantly, doing so while keeping the fight away from Iran.

That confidence began to shift in April 2024. On April 1, Israel struck Iran’s consulate in Syria, killing seven IRGC officials.⁷⁹ As an official government building, the attack raised the prospect that Iran’s successful track record of keeping the war away from Iranian territory—one of Iran’s central conflict goals—could be at risk. In a bid to impose costs on Israel and deter further encroachment on a core interest, on April 13 Iran launched more than 300 ballistic missiles and drones against Israel—a massive response, and the first time Iran had directly attacked Israel. The goal of the strike, laid out by Iran’s top general, was to establish a “new equation” in the region, whereby any targeting of Iranian interests would be met with a counterresponse.⁸⁰

Iran likely knew that this attack—which Iran dubbed Operation True Promise—risked a larger Israeli response, including against its nuclear sites. Israeli officials had warned Iran after the April 1 strike on the consulate that any retaliation would be

71 “Iran’s Nuclear Weapon Option Emerges from the Shadows During the April Crisis,” Iran Wonk, May 7, 2024, <https://iranwonk.substack.com/p/irans-nuclear-weapon-option-emerges>.

72 Jon Gambrell, “The Head of UN’s Nuclear Watchdog Warns Iran Is ‘Not Entirely Transparent’ on Its Atomic Program,” AP News, February 13, 2024, <https://apnews.com/article/iran-nuclear-program-iaea-gross-israel-hamas-gaza-war-ee164aefb63a533548a54179c952b5e1>.

73 Parisa Hafezi, Elwely Elwely, and Claudia Tanios, “Islamic State Claims Responsibility for Deadly Iran Attack, Tehran Vows Revenge,” Reuters, January 4, 2024, <https://www.reuters.com/world/middle-east/iran-vows-revenge-after-biggest-attack-since-1979-revolution-2024-01-04/>.

74 Frances Mao Caroline Davies and Paul Adams, “Pakistan Launches Retaliatory Strikes into Iran, Killing Nine People,” BBC, January 18, 2024, <https://www.bbc.com/news/world-asia-68014882>.

75 Laila Bassam, “Israeli Airstrike in Syria Kills Senior Iranian Revolutionary Guards Member,” Reuters, December 25, 2023, <https://www.reuters.com/world/middle-east/israeli-air-strike-syria-kills-senior-iranian-revolutionary-guards-member-2023-12-25/>.

76 Farnaz Fassihi and Eric Schmitt, “Iran and US Held Secret Talks on Proxy Attacks and Cease-Fire,” *The New York Times*, March 15, 2024, <https://www.nytimes.com/2024/03/15/world/middleeast/iran-us-secret-talks.html>.

77 Laurence Norman, “Iran Reduces Near-Weapons-Grade Stockpile, Defying Expectations,” *The Wall Street Journal*, February 26, 2024, <https://www.wsj.com/world/middle-east/iran-reduces-near-weapons-grade-stockpile-defying-expectations-ba384777>.

78 Author conversation with US and European officials.

79 Parisa Hafezi, Laila Bassam, Suleiman Al-Khalidi, and Dan Williams, “Iran Embassy Strike Shows Israel’s Growing Reach as Mideast Boils,” Reuters, April 4, 2024, <https://www.reuters.com/world/middle-east/iran-embassy-strike-shows-israels-growing-reach-mideast-boils-2024-04-04/>.

80 Yaghoob Fazeli, “IRGC Chief Spells ‘New Equation’ After First-Ever Iranian Strikes on Israel,” *Al Arabiya English*, April 14, 2024, <https://english.alarabiya.net/News/middle-east/2024/04/14/irgc-chief-says-israeli-attacks-will-prompt-direct-iranian-retaliation-moving-forward>.

met with a stronger Israeli reprisal.⁸¹ Iranian officials shuttered their nuclear facilities to inspectors for a day following Operation True Promise, reinforcing the claim that Tehran perceived a risk of Israeli strikes or sabotage.⁸² This decision to bar inspectors was risky, as it could have been interpreted as an attempt to break out or divert material in the context of a high-stakes event that had already raised the risk of attack on Iran's nuclear program.

In the days that followed Operation True Promise, as Iran awaited an Israeli response, Iranian rhetoric about its nuclear program underwent a significant shift. Whereas Iranian officials had earlier suggested Iran had no need for a bomb, because its latent nuclear capabilities provided an adequate deterrent, they now publicly ruminated that threats might lead them to actually build nuclear weapons. Previously implicit threats to proliferate became explicit.

The most notable and widely covered threat came from the senior IRGC official in charge of defending Iran's nuclear sites, who warned that if Israel attacked Iran's nuclear program, then Iran would rethink its nuclear doctrine—a clear nod to abandoning the *fatwa* and producing nuclear weapons.⁸³ This quote was retweeted by Iranian news agencies and covered in the Iranian press, suggesting that it was either a deliberate and planned statement or one viewed retroactively by the government as beneficial and worth reinforcing.⁸⁴ Throughout April and May 2024, and periodically thereafter, similar comments came from a range of media outlets and mid- and senior-level Iranian officials, including parliamentarians and other public personalities. For example, a senior advisor to Supreme Leader Khamenei, Kamal Kharrazi, said in May, “We have no decision to build a nuclear bomb but should Iran's existence be threatened, there will be no choice but to change our military doctrine.”⁸⁵ Iran, a hard hedger producing large quantities of highly enriched uranium and facing down a potential attack on its

soil, was attempting deterrence by proliferation.

At least some of these comments were likely deliberate attempts to forestall Israeli action. This strongly suggests Iran saw value in using its threshold capability as a deterrent, and did so despite—or perhaps because of—the moment of peril that program faced in April. Tehran may have considered those few weeks in April between Iran's Operation True Promise and the Israeli response on April 19 a “use it or lose it” scenario. Yet at least some of the nuclear rhetoric was also likely organic and uncoordinated: a scramble to deal with new security dynamics that reflected debate within the regime about whether and under what circumstances Iran should produce nuclear weapons. Calls for potentially revising Iran's nuclear doctrine were not limited to hardliners—moderate conservative outlets and even some reformists voiced sympathetic positions regarding Iran's production of nuclear weapons.⁸⁶ A US intelligence assessment released later that year concluded that this commentary reflected “both the erosion of a decades-long taboo of such discussions in public and a perception that Iran needs to rectify a strategic imbalance with its adversaries.”⁸⁷

Iranian officials may have concluded in April that those nuclear threats had succeeded. Israel responded to Operation True Promise by striking and destroying air-defense equipment charged with protecting a key Iranian nuclear site.⁸⁸ Although this was a strike on Iranian territory, it was done with little public fanfare and was not the larger, harsher punishment that Israel had promised prior to Operation True Promise. Israel tiptoed closer to the IRGC's stated redline of strikes on the nuclear program, but did not cross it. At the time, Iranian officials may also have convinced themselves that Tehran had showcased its military might against Israel and, backed by the threat of going nuclear, lived to fight another day. IAEA Director General Rafael Grossi said after traveling to Iran in May, “Iranian

81 Doug Cunningham, “Israel Threatens Iran Attack If It Retaliates for Bombing of Damascus Consulate,” UPI, April 10, 2024, https://www.upi.com/Top_News/World-News/2024/04/10/Israel-Iran-threatened-attacks-consulate-bombing/2421712756618/.

82 “IAEA Chief Worried Israel Could Hit Iranian Nuclear Sites, Kept Inspectors Home Monday,” *The Times of Israel*, April 15, 2024, https://www.timesofisrael.com/liveblog_entry/iaea-chief-worried-israel-could-hit-iranian-nuclear-sites-kept-inspectors-home-monday/.

83 See A. Savyon, “Senior Iranian Regime Officials Warn of Iran's Coming Nuclear Breakout,” MEMRI TV, https://www.memri.org/reports/senior-iranian-regime-officials-warn-irans-coming-nuclear-breakout#_ednref3.

84 Nournews English (@nournewsen): “Brigadier General Haghtalab: The use of threats against #Iranian nuclear facilities by #Israel as a tool to exert pressure on Iran could lead to a reassessment of the country's previous nuclear doctrine and policies, resulting in a departure from previously declared concerns,” X (formerly Twitter), April 18, 2024, 11:08 am, https://x.com/nournews_ir/status/1780976489833329093.

85 “Iran to Change Nuclear Doctrine If Existence Threatened, Adviser to Supreme Leader Says,” Reuters, May 9, 2024, <https://www.reuters.com/world/middle-east/iran-change-nuclear-doctrine-if-existence-threatened-adviser-supreme-leader-says-2024-05-09/>.

86 Savyon, “Senior Iranian Regime Officials Warn of Iran's Coming Nuclear Breakout.”

87 Office of the Director of National Intelligence, “Iran's Nuclear Weapons Capability and Terrorism Monitoring Act of 2022—Assessment Regarding the Nuclear Activity of the Islamic Republic of Iran,” ODNI, November 2024, 2, <https://www.dni.gov/files/ODNI/documents/assessments/ODNI-Unclassified-Irans-Nuclear-Weapons-Capability-and-Terrorism-Monitoring-Act-of-2022-202411.pdf>.

88 “Israelis Fired 3 Missiles in Limited Strike,” ABC News, April 19, 2024, https://abcnews.go.com/International/live-updates/israel-gaza-hamas-war/israeli-missiles-have-hit-a-site-in-iran-109405880?id=108860743&entryId=109428614&userab=news_search_page_design_unification-429*variant_a_control_search-1786.

officials seemed pleased that they were being taken seriously as a nuclear and a missile power in the region, increasingly on par with Israel.”⁸⁹

That narrative, however, would not last—and belied a more troubling picture beneath the surface. In fact, Tehran’s tit-for-tat with Israel in April exposed key technical and strategic limitations to the conventional component of Iran’s deterrent. A significant percentage of Iranian missiles failed to launch, for unknown reasons.⁹⁰ Israel and the United States, working in partnership with Arab allies, successfully intercepted most of the systems that did make it off the ground. These successes were enabled, in part, because Iran telegraphed its attack in advance, both in public and privately, giving its adversaries time to prepare, and led the barrage with slower-flying drones.⁹¹ The missiles that landed within Israel also proved less accurate than expected.⁹² While Tehran almost certainly hoped more missiles would make it to their targets, decisions that limited the lethality of its strike almost certainly reflected efforts to balance a central dilemma of its conventional deterrent: Too much caution would result in operational failure, but too much operational “success” risked triggering a larger response that could escalate beyond Iran’s control. As Iran would learn in the next phase, it did not establish a “new equation.” Success would be short-lived.

Phase 2: Nuclear Threshold as a Liability

In the summer of 2024 and into the fall, Iran experienced a series of strategic shocks and setbacks—some by the design of its adversaries, some happenstance. Collectively, these developments undercut Iran’s ability to achieve its objectives and significantly eroded the conventional and asymmetric components of its deterrent. While Iran’s nuclear program advanced and became more central to Iran’s security, that program also became more vulnerable through a series of attritive strikes against

capabilities Iran planned to rely on to defend its nuclear facilities and retaliate in response to attacks on them. Growing talk within Israel about potential military action against the program exacerbated Iran’s risk perception. To mitigate this vulnerability, Tehran chose to covertly improve its ability to produce a bomb while lowering the rhetoric around that capability and doubling down on diplomatic solutions to the regional and nuclear crises.

In May 2024, Iranian President Ebrahim Raisi—who many believed to be Khamenei’s ideological compatriot and preferred successor—was killed along with other senior officials in a helicopter crash, forcing the regime to hold snap presidential elections amid a simmering regional war.⁹³ Elections in Iran have become tricky affairs, as the Supreme Leader must navigate a balancing act that exerts enough control over the process to ensure undesirable candidates do not win (that is, those who are too moderate or out of step with the revolutionary values of the regime), but avoids driving down public participation and signaling a lack of popular support for the Islamic Republic. Elections can also be flash points for public protests—another major concern for the regime.⁹⁴

Amid this presidential vacuum, member states censured Iran at the IAEA Board of Governors meeting for the first time since November 2022, signaling an end to what had otherwise been a successful track record of Iran’s using threats of nuclear expansion to deter a formal board resolution.⁹⁵

By mid-summer, it was becoming clear that, while Israel was paying a political price in the international arena for the war in Gaza, Iran’s goal of forcing an end to that war on Hamas’s terms had failed. Instead, Hamas had been decimated; though not eliminated, it could no longer serve as an arm of Iran’s asymmetric deterrent. More important, Iran’s goals of keeping Hezbollah out of the war with Israel and preventing that war from coming home to Iran were also slipping.

89 David E. Sanger, “To Talk with Putin or Iran, the West Turns to the World’s Nuclear Inspector,” *The New York Times*, May 15, 2024, <https://www.nytimes.com/2024/05/15/us/politics/rafael-grossi-iaea-putin-iran.html>.

90 Jon Gambrell, “As Iran Threatens Israel, the Danger of Tehran’s Long-Vaunted Missile Program Remains in Question,” Associated Press, September 3, 2024, <https://apnews.com/article/iran-ballistic-missiles-israel-retaliation-gaza-war-edccdf7a871b78cd5528e265e1e7317>.

91 Regarding Iran’s telegraphing of the strike, see Parisa Hafezi and Jonathan Landay, “Iran Aims to Contain Fallout in Israel Response, Will Not Be Hasty, Sources Say,” Reuters, April 11, 2024, <https://www.reuters.com/world/middle-east/iran-aims-contain-fallout-israel-response-wont-be-hasty-sources-say-2024-04-11/>.

92 For analysis of Operation True Promise and the performance of Iranian military capabilities, see Gambrell, “As Iran Threatens Israel, the Danger of Tehran’s Long-Vaunted Missile Program Remains in Question”; Susannah George, Samuel Granados, Laris Karklis, and Nilo Tabrizy, “What Iran’s April Attack on Israel Revealed About Its Weapons Arsenal,” *The Washington Post*, October 1, 2024, <https://www.washingtonpost.com/world/2024/04/17/iran-israel-attack-drones-missiles/>.

93 Parisa Hafezi, Yomna Ehab, and Yomna Ehab, “Iranian President Ebrahim Raisi, Hardline Ally of Khamenei, Killed in Helicopter Crash,” Reuters, August 16, 2024, <https://www.reuters.com/world/middle-east/hopes-fade-wreckage-found-helicopter-carrying-iranian-president-raisi-2024-05-20/>.

94 Ian Black and Saeed Kamali Dehghan, “Iran Uprising Turns Bloody,” *The Guardian*, November 26, 2017, <https://www.theguardian.com/world/2009/jun/15/iran-elections-protests-mousavi-attacks>.

95 Rosaleen Carroll, “IAEA Censures Iran over Nuclear Activity,” *Al-Monitor*, November 22, 2024, <https://www.al-monitor.com/originals/2024/11/iaea-censures-iran-over-nuclear-activity>.

On July 30th, Israel killed Hezbollah's top military commander.⁹⁶ That same day, Israel assassinated Hamas's political leader Ismail Haniyeh via a bomb covertly placed in his bedroom while he was in Iran for the new president's inauguration.⁹⁷ This highlighted Israel's deep intelligence penetration in Iran, and its willingness to engage in bold assassinations on Iranian territory. Tehran's efforts to establish a "new equation" were not working.

Tehran's efforts to establish a "new equation" were not working.

In September 2024, Israel launched another major operation, detonating bombs that it had secretly implanted in pagers and walkie-talkies distributed to Hezbollah members. This operation killed more than twenty middle- and lower-ranking Hezbollah officials, resulted in thousands of injuries, and sent a psychological shock wave through Hezbollah and Iran.⁹⁸ Over the subsequent two weeks, an air campaign by Israel eliminated all of Hezbollah's leadership and mid-level commanders and approximately two-thirds of its rocket and missile arsenals (in addition to carrying out a covert raid on an underground Hezbollah missile bunker in Syria).⁹⁹ The campaign culminated in an Israeli air strike that killed Hezbollah leader Hassan Nasrallah and a senior IRGC commander on September 27.¹⁰⁰ In late October, Israeli Defense Minister Yoav Gallant stated that Hamas and Hezbollah were "no longer an

effective tool" for Iran.¹⁰¹ In a matter of weeks, Hezbollah—Iran's closest, most capable non-state ally, and the lynchpin of its asymmetric deterrent—had been rendered militarily irrelevant. When combined with a defunct Hamas, this made the proxy pillar of Iran's deterrent a shell of its former self. Rather than intervene to try and prevent that hollowing out, Tehran chose restraint.

On October 1, Iran responded to Israel's attacks by launching a volley of ballistic missiles at Israel. In a possible attempt to correct the shortcomings of its April predecessor, Operation True Promise 2 was launched with less warning and used only ballistic missiles, rather than a first wave of slower-flying drones.¹⁰² While the October strike used more ballistic-missile systems than April's (around 180 compared to 120), and relied on more advanced missile models, it did not use drones or cruise missiles and therefore launched fewer systems overall. This resulted in more missiles successfully launching and impacting near their targets (Israeli military bases and potentially Mossad headquarters), though the missiles' limited accuracy meant that they did not cause significant damage.¹⁰³

Why did Iran choose to launch a retaliatory attack that resembled its strikes in April, even after such strikes had demonstrably failed to establish a "new equation"? Did Iran believe that an attack that was similar to its October variant would somehow lead to a different result and deter further Israeli action?

The answer appears to be no. According to Iranian officials, the strike was more about saving face with proxy allies than restoring deterrence with Israel.¹⁰⁴ These allies had begun to question Iran's

96 Barak Ravid, "Hezbollah's Top Military Commander Killed in Beirut Airstrike," *Axios*, July 31, 2024, <https://www.axios.com/2024/07/30/israel-airstrike-beirut-hezbollah-commander>.

97 Barak Ravid, "Planted Bomb, Remote Control and AI: How the Mossad Killed Hamas' Leader in Iran," *Axios*, August 1, 2024, <https://www.axios.com/2024/08/01/haniyeh-assassination-mossad>.

98 Wyatt Grantham-Philips, Michael Biesecker, Sarah El Deeb, and Sarah Parvini, "Lebanon Pager and Walkie-Talkie Explosions: What We Know So Far," *Associated Press*, September 19, 2024, <https://apnews.com/article/lebanon-israel-hezbollah-pager-explosion-e9493409a0648b846fdcadffdb02d71e>.

99 Barak Ravid, "One Year After Oct. 7 Attacks, Netanyahu Is on a Winning Streak," *Axios*, October 6, 2024, <https://www.axios.com/2024/10/06/netanyahu-israel-political-strategy>; Israel Defense Forces (@IDF), "DECLASSIFIED: In September 2024, before the fall of the Assad Regime, our soldiers conducted an undercover operation to dismantle an Iranian-funded underground precision missile production site in Syria. Watch exclusive footage from this historic moment," X (formerly Twitter), January 2, 2025, 11:06 am, <https://x.com/IDF/status/1874849694012309593>; Israel Defense Forces (@IDF), "Hezbollah's military chain of command has been almost completely dismantled after a dozen significant terrorists including Ibrahim Aqil were eliminated yesterday. We will continue operating against any terrorist organization that poses a threat to our civilians on all fronts," X (formerly Twitter), September 21, 2024, 8:35 am, <https://x.com/IDF/status/1837470646495768626>.

100 Jon Haworth, Nadine El-Bawab, and Martha Raddatz, "Hezbollah Leader Hassan Nasrallah Killed in Israeli Airstrikes on Beirut," *ABC News*, September 28, 2024, <https://abcnews.go.com/International/hezbollah-leader-hassan-nasrallah-killed-beirut-airstrikes/story?id=114310729>.

101 "Israeli Defence Minister: Hamas, Hezbollah No Longer Effective Proxies for Iran," *Reuters*, October 27, 2024, <https://www.reuters.com/world/middle-east/israeli-defence-minister-hamas-hezbollah-no-longer-effective-proxies-iran-2024-10-27/>.

102 Andrew England and Najmeh Bozorgmehr, "Iran's Hardliners Prevail as Regime Gambles on Israel Attack," *Financial Times*, October 2, 2024, <https://www.ft.com/content/59eefe41-4174-4000-96c5-de5bb9a4937b?sharetype=blocked>.

103 "Iran's Second Missile Attack on Israel," *Iran Watch*, October 3, 2024, <https://www.iranwatch.org/our-publications/articles-reports/irans-second-missile-attack-israel>.

104 Ben Hubbard and Alissa J. Rubin, "As Israel Strikes Hezbollah, Iran-Backed Militias Fail to Provide Aid," *The New York Times*, October 1, 2024, <https://www.nytimes.com/2024/09/30/world/middleeast/iran-axis-of-resistance.html?smid=nytcore-ios-share&referringSource=articleShare&sgrp=c-cb>.

commitment to their survival given Tehran's restraint in the face of an aggressive Israeli campaign against them. For its part, Iran appeared to recognize that going bigger would have risked an even bigger Israeli retaliation. Operation True Promise 2 was thus a codification of the limitations observed in the original Operation True Promise, demonstrating Iran's awareness that it could not credibly enforce its "new equation." In early 2025, the US intelligence community assessed that "the limited damage Iran's strikes in April and October 2024 inflicted on Israel highlights the shortcomings of Iran's conventional military options."¹⁰⁵ It was clear to Iran and outside observers that Tehran could not use its vaunted missile force in a militarily and strategically effective way without risking escalation and a significant retaliation.

Not unexpectedly then, Israel pressed on—this time, with a focus on weakening the second pillar of Iran's deterrent: its missile program. On October 26, in response to Operation True Promise 2, Israel carried out extensive retaliatory strikes against Iran, targeting Iran's missile-production, satellite-launch, and air-defense capabilities.¹⁰⁶ Open-source analysis and comments from Israeli and US officials suggest that these strikes significantly set back Iran's ability to make fuel for its missile program.¹⁰⁷ The strikes destroyed twelve "planetary mixers" used to make solid fuel for Iran's ballistic missiles—severely impacting Iran's ability to produce more missiles.¹⁰⁸ The elimination of all of its most capable S-300 air defense systems also made Iranian nuclear and petrochemical sites more vulnerable.¹⁰⁹ Additionally, Israel struck a building that had been used for high-explosives testing during Iran's past nuclear weapons program, and that some Israeli officials alleged had been involved in manufacturing those explosives under a renewed effort.¹¹⁰

The end result was a more constrained Iranian missile program and a more exposed and vulnerable nuclear enterprise. These strikes reportedly "raised deep alarm" among Iranian officials.¹¹¹ Israel's willingness to strike those targets likely drove home to Iran that it had no good way to respond without incurring significant risk. As one US official put it, as a result of the strikes, "Iran is essentially naked."¹¹²

Throughout the remainder of the year, Iran's security environment continued to worsen. President Trump's reelection in November—widely perceived at the time as portending more economic and political pressure on Iran and greater US support for Israel's military campaign—dimmed the regime's prospects of relief. Iran had good reason to believe that the chances of an Israeli or US strike in the coming months would increase. In December, the swift fall of the Assad regime in Syria—Iran's only state ally and a critical conduit for its support to terrorist and militia groups—ended a year of almost-unrelenting Iranian strategic failure.

Unclassified US assessments strongly support the claim that Iranian officials recognized the hole they were in.

These events in the second half of 2024 represented a series of significant setbacks for Iran, hollowing out one pillar of its deterrent (proxies), degrading and revealing the limits of a second (missiles), and leaving the third—the nuclear program—more vulnerable. Major press outlets and experts routinely speculated that the loss of Iran's proxies and conventional capabilities could push it to rely

105 Office of the Director of National Intelligence, "Annual Threat Assessment of the US Intelligence Community, 2025," 24.

106 Jon Gambrell, "Satellite Photos Show Israeli Strike Likely Hit Important Iran Revolutionary Guard Missile Base," Associated Press, October 30, 2024, <https://apnews.com/article/iran-israel-attack-shahroud-guard-base-satellite-photos-b9cdb18b252d6dd9014dc4dcb3dd4b2f>; Jonathan Landay, "Satellite Photos Show Israel Hit Iran Former Nuclear Weapons Test Building, Missile Facilities, Researchers Say," Reuters, October 28, 2024, <https://www.reuters.com/world/middle-east/satellite-photos-show-israel-hit-iran-missile-fuel-mixing-facilities-researchers-2024-10-26/>.

107 Landay, "Satellite Photos Show Israel Hit Iran Former Nuclear Weapons Test Building, Missile Facilities, Researchers Say"; Barak Ravid, "Israel Strike Crippled Iran's Missile Production, Sources Say," Axios, October 26, 2024, <https://www.axios.com/2024/10/26/israel-strike-iran-missile-production>.

108 Landay, "Satellite Photos Show Israel Hit Iran Former Nuclear Weapons Test Building, Missile Facilities, Researchers Say."

109 Farnaz Fassihi and Ronen Bergman, "Israel Struck Air Defenses Around Critical Iranian Energy Sites, Officials Say," *The New York Times*, October 27, 2024, <https://www.nytimes.com/2024/10/26/world/middleeast/israel-air-defenses-iran-energy-sites.html?smid=tw-share>; Jennifer Griffin (@JenGriffinFNC), "NEW DETAILS: Israel's strike on Iran took out all of Iran's S300 air defense systems. A senior US Official tells Fox that the Israeli warplanes took out 3 of Iran's Russian made S300 missile defense systems. At the start of the year Iran only had 4 S300 SAM systems," X (formerly Twitter), October 29, 2024, 6:10 pm, <https://x.com/JenGriffinFNC/status/1851388945718001780>.

110 Barak Ravid, "Scoop: Israel Destroyed Active Nuclear Weapons Research Facility in Iran, Officials Say," Axios, November 15, 2024, <https://www.axios.com/2024/11/15/iran-israel-destroyed-active-nuclear-weapons-research-facility>.

111 Fassihi and Bergman, "Israel Struck Air Defenses Around Critical Iranian Energy Sites, Officials Say."

112 Jennifer Griffin (@JenGriffinFNC), "A senior Israeli official tells Fox: 'The majority of Iran's air defense was taken out.' President Biden's advisor for the Middle East Amos Hochstein described it on an internal call saying, 'Iran is essentially naked,' with no more air defenses," X (formerly Twitter), October 29, 2024, 6:21 pm, <https://x.com/JenGriffinFNC/status/185138894777081466>.

more on nuclear latency, and perhaps even build a bomb.¹¹³ Unclassified US assessments strongly support the claim that Iranian officials recognized the hole they were in. In its 2025 Annual Threat Assessment, the US intelligence community noted that a “degraded Hizballah, the demise of the Assad regime in Syria, and Iran’s own failure to deter Israel have led leaders in Tehran to raise fundamental questions regarding Iran’s approach.”¹¹⁴

Iran’s response offers further evidence that Iran viewed these setbacks as significant, its strategic position as weak, and its nuclear threshold status as a vulnerability rather than a source of leverage. Three themes stand out.

First, Iranian public threats to build nuclear weapons declined from their peak in April and May as things became worse for Iran. This suggests that Tehran saw these threats as inviting an attack rather than deterring one, and risked putting Iran in a position where it would have to make good on such threats or back down. The only notable public comments after Operation True Promise 2 came from Kharrazi in early November that “if Iran faces an existential threat,” it will change its nuclear doctrine.¹¹⁵ On November 2, Khamenei was asked while speaking at a gathering of students if it was time for Iran to develop nuclear weapons; he replied that Iran “would take all necessary actions to prepare the Iranian nation” against the United States—an ambiguous answer that did not endorse the bomb, but also did not rule it out.¹¹⁶

There were very few threats to revise Iran’s nuclear doctrine in the October period between Iran’s strike and Israel’s retaliation, a time when Tehran likely perceived high risk of an attack on its nuclear program.¹¹⁷ The closest was a statement by 39 (out of 290) members of the Iranian Majles, the parliament,

calling on Iran to revise its defense doctrine (code for nuclear weapons), as well as an anonymous Iranian source in a *Russia Today* article warning that if Israel targeted Iranian civilians, Tehran would revise its nuclear doctrine.¹¹⁸ This is a stark contrast to the comments from the IRGC General and others in the spring and summer, especially since Iran likely perceived the risk of an attack on its nuclear facilities as higher than in April.¹¹⁹

Instead, during this crucial window, one senior nuclear official played down the risk of Iran going nuclear. When asked by the Iranian press about Iran’s potential exit from the Non-Proliferation of Nuclear Weapons Treaty ahead of any Israeli attacks, the head of Iran’s nuclear program minimized the risks and emphasized the number of steps and long timeline such a decision would entail, saying that “the first entity to have to make such a decision is the parliament,” and noting that those decisions wouldn’t take effect until they became law and were approved by the Guardian Council.¹²⁰ He further noted that “even if Iran ends up deciding to leave the NPT, there will be a 90-day window for negotiations with the Atomic Energy Agency.”¹²¹

Second, Iran lowered political pressure on itself to retaliate for Israel’s military campaign, and doubled down on diplomacy to reduce escalatory risks. This was likely in part a result of a change in the Iranian presidential administration from Ebrahim Raisi to the more moderate Masoud Pezeshkian. However, it was also likely reflective of a broader recognition in Tehran that further military responses would not serve it well.

Within the region, Iran threw its weight behind US-backed diplomatic efforts to achieve a ceasefire in Gaza from August through October. A common refrain from Iranian officials during this time, as-

113 For example, see Susannah George, “Syria’s Collapse and Israeli Attacks Leave Iran Exposed,” *The Washington Post*, December 17, 2024, <https://www.washingtonpost.com/world/2024/12/17/iran-syria-assad-israel-attacks/>; “The Fall of Bashar al-Assad Is a Blow to Iran,” *The Economist*, December 11, 2024, <https://www.economist.com/middle-east-and-africa/2024/12/11/the-fall-of-bashar-al-assad-is-a-blow-to-iran>.

114 Office of the Director of National Intelligence, “Annual Threat Assessment of the US Intelligence Community, 2025,” 22.

115 Iran Nuances (@IranNuances), “Adviser to Iran’s Leader says that ‘if Iran faces an existential threat,’ it will change its nuclear doctrine. He added, ‘We now have the necessary ability to produce nuclear weapons, and the only obstacle is the fatwa of the Leader, which has banned the production of nukes,’” X (formerly Twitter), November 1, 2024, 11:25 am, <https://x.com/IranNuances/status/1852371334908784674>.

116 “Iran Floats Expanded Missile Range amid Vows of ‘Crushing’ Response to Israel,” Amwaj.media, November 3, 2024, <https://amwaj.media/en/media-monitor/iran-floats-expanded-missile-range-amid-vows-of-crushing-response-to-israel>.

117 “Trump: Israel Must Hit Iran’s Nuclear Sites First,” Middle East Monitor, October 6, 2024, <https://www.middleeastmonitor.com/20241005-trump-israel-must-hit-irans-nuclear-sites-first/>; Naftali Bennett (@NaftaliBennett), “Israel has now its greatest opportunity in 50 years, to change the face of the Middle East. The leadership of Iran, which used to be good at chess, made a terrible mistake this evening. We must act now to destroy Iran’s nuclear program, its central energy facilities,” X (formerly Twitter), October 1, 2024, 5:04 pm, <https://x.com/naftalibennett/status/1841222685638177225>.

118 “Iran MPs Call for Nuclear Deterrence amid Tensions with Israel,” Iran International, October 9, 2024, <https://www.iranintl.com/en/202410096036>; “Iran Will Retaliate Against Israeli Attack on Energy Sector,” RT International, October 11, 2024, <https://www.rt.com/news/605541-iran-israel-retaliation-warning/>.

119 “Iran’s Nuclear Weapon Option Emerges from the Shadows During the April Crisis.”

120 “Nuclear Chief Says No Halt to Iranian Nuclear Work Despite Israeli Threats,” *Tehran Times*, October 23, 2024, <https://www.tehrantimes.com/news/505374/Nuclear-chief-says-no-disruptions-to-Iranian-sites-despite-Israeli>.

121 “Nuclear Chief Says No Halt to Iranian Nuclear Work Despite Israeli Threats.”

sociated with the president's office, was that Iran should avoid falling into Israeli Prime Minister Benjamin Netanyahu's trap—alluding to the idea that Israel sought to goad Iran into a broader war.¹²² In meetings and exchanges of messages with their Iranian counterparts, other countries—at Washington's urging—reinforced the notion that Iranian retaliation and escalation might doom prospects of a ceasefire and an end to the war in Gaza.¹²³

This approach persisted even after Israel's October 26 strikes. Iran downplayed the scope and damage of those strikes, suggesting that only a handful of air-defense sites had been hit and thereby lessening a need to retaliate.¹²⁴ While some Iranian military officials threatened “an unimaginable response,” Khamenei did not vow retaliation, and instead publicly deferred to his subordinates, saying that they would determine what should be done.¹²⁵ One day after the strike, Vice President for Strategic Affairs and former Iranian Foreign Minister Mohammad Zarif instead called on the West to recognize that a “unique moment” had arrived to recognize Iran's “resolve for peace.”¹²⁶

This emphasis on diplomacy extended to nuclear talks. Days after the Israeli strike, Supreme Leader foreign-policy advisor Ali Akbar Velayati said in an interview that Iran was “open to cooperation with any western state . . . provided it respects Iran's sovereignty.”¹²⁷ In September, Iranian Foreign Minister Abbas Araqchi said in a TV interview prior to the UN General Assembly meeting that the 2015 Iran nuclear deal known as the Joint Comprehensive Plan of Action (JCPOA) provided a “framework” for a new deal, mirroring the perspective of the US and the United Kingdom, France, and Germany

(collectively known as the E3) that the JCPOA was now defunct and a new deal would be needed.¹²⁸ Araqchi met with his E3 counterparts on the margins of the General Assembly in New York in December 2024, days after the E3 led a censure of Iran at the IAEA Board of Governors meeting, and then again in January in Geneva.¹²⁹

Third, while engaging in diplomacy, Iran continued to expand its nuclear program—a long-standing Iranian practice. These efforts included installing and operating more advanced centrifuges and increasing the stockpile of highly enriched uranium.¹³⁰ These advances had both a diplomatic and coercive purpose: By demonstrating to the West that pressure would only lead Iran to invest more in its nuclear program, Tehran hoped to deter such pressure and build negotiating leverage.

In addition to enrichment activities, evidence suggests that Iran secretly stepped up research and development that could help it actually build a bomb.

But Tehran also likely viewed these advances as improving its ability to build nuclear weapons. For example, Kharrazi said in August that while Iran had decided so far not to go higher than 60-percent enrichment, “we have been trying to expand our experience by using different machines and different set-ups.”¹³¹ In effect, he admitted that Iran was

122 Arash Azizi, “Iranian Insiders Warn That Attacking Israel Is a Trap,” *The Atlantic*, August 6, 2024, <https://www.theatlantic.com/international/archive/2024/08/iran-israel-war-hamas/679374/>; “Iran's President Accuses Israel of Laying ‘Traps’ and Seeking Wider Mideast War,” PBS News, September 23, 2024, <https://www.pbs.org/newshour/world/irans-president-accuses-israel-of-laying-traps-and-seeking-wider-mideast-war>.

123 Simon Lewis and Humeyra Pamuk, “US Passes Message to Iran Not to Escalate at ‘Critical Moment’ for Middle East,” Reuters, August 5, 2024, <https://www.reuters.com/world/middle-east/us-urged-countries-pass-messages-iran-against-escalation-state-dept-says-2024-08-05/>.

124 Fassihi and Bergman, “Israel Struck Air Defenses Around Critical Iranian Energy Sites, Officials Say.”

125 “Deep Dive: Iran Emphasizes ‘Right to Respond’ After Israeli Attack,” Amwaj.media, October 27, 2024, <https://amwaj.media/en/media-monitor/deep-dive-iran-emphasizes-right-to-respond-after-israeli-attack>.

126 “Iranian Factions Contest Path Forward as Khamenei ‘Delegates’ Response to Israel,” Amwaj.media, October 29, 2024, <https://amwaj.media/en/media-monitor/iranian-factions-contest-path-forward-as-khamenei-delegates-response-to-israel>.

127 “Iranian Factions Contest Path Forward as Khamenei ‘Delegates’ Response to Israel.”

128 Sina Toossi (@SinaToossi), “Iran's Foreign Minister @aragchi gave a noteworthy interview to state TV yesterday, ahead of his and new President Pezeshkian's trip to New York next week for the UN General Assembly. In the interview, Araghchi made it clear that Iran will not ‘wait for the US to negotiate,’” X (formerly Twitter), September 16, 2024, 9:03 am, <https://x.com/SinaToossi/status/1835665698871202083>.

129 Parisa Hafezi and John Irish, “Iran, Europeans Test Diplomacy with Trump Term Looming,” Reuters, November 29, 2024, <https://www.reuters.com/world/iran-europeans-test-diplomacy-with-trump-term-looming-2024-11-29/>.

130 Parisa Hafezi and John Irish, “Iran and E3 to Hold Critical Talks to Avert Sanctions, Odds Remain Slim,” Reuters, September 22, 2025, <https://www.reuters.com/business/media-telecom/irans-aragchi-says-tehran-will-not-respond-language-pressure-over-its-nuclear-2025-09-22/>; Francois Murphy, “IAEA Report: Iran Installs More Centrifuges at Fordow Enrichment Plant,” Reuters, June 13, 2024, <https://www.reuters.com/world/middle-east/iaea-report-iran-installs-more-centrifuges-fordow-enrichment-plant-2024-06-13/>; “Iran, European Powers Hold Third Round of Nuclear Talks in Geneva,” Iran International, January 14, 2025, <https://www.iranintl.com/en/202501134380>.

131 Andrew England, Malcolm Moore, and Ben Hall, “Global Race for Nuclear Weapons at Record High, Warns UN,” *Financial Times*, August 26, 2024, <https://www.ft.com/content/2776c235-592a-44fd-a0cd-e61f69c308bf>.

deliberately configuring its machines to make it easier to produce weapons-grade uranium. As the US intelligence community noted in November, Iranian leaders recognized that their “infrastructure and experience to quickly produce weapons-grade uranium at multiple underground facilities . . . bolsters the credibility of threats to develop nuclear weapons.”¹³²

In addition to enrichment activities, evidence suggests that Iran secretly stepped up research and development that could help it actually build a bomb. Around March, US and Israeli intelligence detected indications that Iranian scientists had quietly begun to carry out work in several areas that could be used to build a nuclear weapon, including computer modeling, work with conventional explosives used in a device, and metallurgical research.¹³³ Iran continued these activities into the summer, moves that US officials said could “shrink the knowledge gap” Iran would face if it were to build a weapon. US officials maintained that these activities were not part of a renewed nuclear weapons program, nor indicative of a decision to build nuclear weapons, but they nevertheless led the American intelligence community, by July, to drop its line featured in prior assessments that Iran was not “undertaking the key nuclear weapons-development activities necessary to produce a testable nuclear device.”¹³⁴

Then, in late 2024 or early 2025, Iran reportedly started exploring pathways to a crude nuclear device, presumably because that offered a faster option for a bomb.¹³⁵ This expanded weaponization would become a key factor in Israel’s decision to launch Operation Rising Lion in June 2025. That campaign targeted Iran’s nuclear sites, scientists allegedly involved in weaponization activities, conventional capabilities, and much of Tehran’s senior military leadership.¹³⁶ Washington later joined the fight, bombing Iran’s Fordow and Natanz underground enrichment sites and targeting tunnels at Esfahan, which likely stored highly enriched uranium and other materials.¹³⁷ While those

strikes significantly set back Iran’s nuclear program, they did not eliminate Iran’s stockpile of 60-percent uranium, which was buried in deep tunnels that US munitions could not reach.¹³⁸

These developments strongly suggest that by early 2025, in contrast to late 2023 and early 2024, Iran was no longer confident that its threshold status could yield the desired deterrence benefits, and that it needed to address this liability by moving closer to a bomb or having the ability to build one quickly. In January 2025, the US intelligence community assessed that pressure was building on Supreme Leader Khamenei to reauthorize the nuclear weapons program he had halted in 2003, and that increases in public discussion about building nuclear weapons had “emboldened nuclear weapons advocates within Iran’s decisionmaking apparatus.”¹³⁹ While the conflict did not lead Iran to abandon hedging, it led Iran to move closer to the bomb.

Did Iran’s Threshold Capability Deter?

Determining with certainty whether deterrence “worked” is challenging. Nonetheless, it is possible to make educated inferences by examining observable outcomes, and the extent to which the risk of Iran building nuclear weapons explains the actions of Iran’s targets (in this case, Israel and the United States). In the context of the conflict, Iran had three goals: (1) deterring international diplomatic pressure and action against Iran, including at the IAEA Board of Governors; (2) deterring a US and Israeli response to Iranian regional aggression in ways that imposed serious costs on Iran; and (3) deterring an Israeli strike against strategic sites inside Iranian territory, including the nuclear program.

Iran achieved some success in deterring international pressure and limiting US responses to Iranian regional aggression, but only temporarily—and it

132 Office of the Director of National Intelligence, “Iran’s Nuclear Weapons Capability and Terrorism Monitoring Act of 2022.”

133 Barak Ravid, “Scoop: US Privately Warned Iran over Suspicious Nuclear Activities,” *Axios*, July 17, 2024, <https://www.axios.com/2024/07/17/iran-nuclear-program-research-warning>; Barak Ravid, “US and Israel Assessing New Intelligence About Iran Nuclear Models,” *Axios*, June 18, 2024, <https://www.axios.com/2024/06/18/iran-nuclear-model-us-israel-assessing-intelligence>.

134 Laurence Norman and Michael R. Gordon, “Iran Is Better Positioned to Launch Nuclear-Weapons Program, New US Intelligence Assessment Says,” *The Wall Street Journal*, August 9, 2024, <https://www.wsj.com/world/middle-east/iran-is-better-positioned-to-launch-nuclear-weapons-program-new-u-s-intelligence-assessment-says-e39b6c78>; Office of the Director of National Intelligence, “Iran’s Nuclear Weapons Capability and Terrorism Monitoring Act of 2022.”

135 David E. Sanger and Julian E. Barnes, “Iran Is Developing Plans for Faster, Cruder Weapon, US Concludes,” *The New York Times*, February 3, 2025, <https://www.nytimes.com/2025/02/03/us/politics/iran-nuclear-weapon.html?smid=nytcore-ios-share&referringSource=articleShare>; Norman and Gordon, “Iran Is Better Positioned to Launch Nuclear-Weapons Program, New US Intelligence Assessment Says.”

136 Peter Beaumont, “What Has Israel Hit in Iran and How Has Iran Responded?,” *The Guardian*, June 16, 2025, <https://www.theguardian.com/world/2025/jun/13/what-has-israel-hit-in-iran-and-who-were-the-generals-and-nuclear-scientists-killed>.

137 Stefan Becket and Kierra Frazier, “Pentagon Reveals How B-2 Bombers Struck Iran Nuclear Sites in Mission Dubbed ‘Operation Midnight Hammer,’” *CBS News*, June 23, 2025, <https://www.cbsnews.com/news/pentagon-briefing-us-strikes-iran-nuclear-sites/>.

138 Forrest Crellin, “Much of Iran’s Near-Bomb-Grade Uranium Likely to Be in Isfahan, IAEA’s Grossi Says,” *Reuters*, March 3, 2026, <https://www.reuters.com/world/middle-east/much-irans-near-bomb-grade-uranium-likely-be-isfahan-iaea-grossi-says-2026-03-09/>.

139 Office of the Director of National Intelligence, “Annual Threat Assessment of the US Intelligence Community, 2025,” 26.

failed outright to deter an Israeli strike on its nuclear program. What explains those outcomes, and what role did Iran's nuclear latency play in causing them?

Regarding the first two goals, US and European officials stated consistently in the initial months of the conflict that Washington worried that increasing pressure on Iran—either at the IAEA Board of Governors or within the region—could lead Tehran to dial up its nuclear program.¹⁴⁰ As a Western diplomat said ahead of the March 2024 board meeting: “If you did do an (IAEA Board) resolution right now . . . it's too dangerous to do anything that could be construed as a wrong signal that could trigger a miscalculation.”¹⁴¹ While Iranian threats to expand the nuclear program in response to regional escalation by the United States during this first phase of the war (Iran's second deterrence goal) were more implicit than explicit, Iran's threats to expand the program in response to pressure at the IAEA were explicit, both in public and in private. That prospect of nuclear expansion, coupled with risks of regional escalation by Iranian proxies and potentially by Iran itself, likely contributed to Washington's restraint in the first phase of the conflict.

Washington's early restraint was also shaped by its overarching approach to managing Iran and the Middle East. That strategy was focused on decreasing tensions that Washington believed could quickly escalate into a regional war. As National Security Advisor Jake Sullivan later put it, the US goal was “to stop the spread of conflict and to create the conditions for de-escalation.”¹⁴² This policy framework had its roots in the pre-October 7th US Middle East strategy, which aimed to achieve a set of limited de-escalatory arrangements with Iran that could pave the way to a new nuclear deal with Iran and ultimately enable Israeli-Saudi normalization. These goals did not change after October 7th, but the administration recognized that, if it had any hope of achieving them, the United States had to first stop the wars in Gaza and Lebanon. Failure to do so would put any new Middle East framework out of reach. Thus, actions that increased the likelihood of such a conflict—to include Iranian nuclear expansion, or US actions that might provoke it—were viewed as

undesirable and to be avoided. US foreign-policy goals in the region thus made Washington an “easy target” for Iranian latent deterrence for Tehran's first two wartime objectives.

Why, then, did Iran later fail to achieve these deterrence objectives? What led the United States to respond more strongly to Iranian proxy attacks toward the beginning of 2024, and then at the Board of Governors in June 2025? On the first, evidence suggests it was because those proxy attacks became increasingly frequent and aggressive, and finally resulted in the loss of American lives.¹⁴³ The United States—including President Joe Biden himself—had repeatedly warned Iran privately and publicly that continued attacks would force the United States to respond; those warnings went unheeded.¹⁴⁴ Officials from the United States, Europe, and the Middle East indicated that Western governments had also become increasingly concerned about Iran's growing 60-percent stockpile, and had signaled to Iran that they were prepared to undertake a more serious (though unspecified) course of action in response; Tehran diluted some of this material as a result.¹⁴⁵ Iran's overreach generated US pushback because the risks of American inaction were greater than the risks of provoking Iranian nuclear expansion or regional escalation.

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In contrast to its partial deterrence of the United States, Iran never succeeded in using its threshold status to deter Israel from imposing costs on Iran for regional aggression. Israel acted swiftly against

140 “Fear of Israel-Hamas War Spreading Said to Restrain West from Iran Nuclear Crackdown”; Murphy and Irish, “West Avoids Seriously Confronting Iran as IAEA Meet Begins”; Murphy and Irish, “US, European Powers Divided over Confronting Iran at IAEA, Diplomats Say”; author conversations with US and European officials.

141 Francois Murphy and John Irish, “West Avoids Seriously Confronting Iran as IAEA Meet Begins.”

142 “US Calls for ‘De-Escalation’ in the Middle East: White House,” Al Arabiya English, January 16, 2024, <https://english.alarabiya.net/News/middle-east/2024/01/16/US-calls-for-de-escalation-in-the-Middle-East-White-House>.

143 Ward and Seligman, “With Precision Strikes in Syria, Biden Tries to Avoid Lighting a Powder Keg.”

144 For an example of these warnings see Gordon, Youssef, and Lubold, “Iranian-Backed Militias Mount New Wave of Attacks as US Supports Israel”; Steve Holland and Susan Heavey, “Biden Warns Iran Against Targeting US Troops in Middle East,” Reuters, October 26, 2023, <https://www.reuters.com/world/middle-east/biden-sent-message-irans-khamenei-against-targeting-us-troops-white-house-2023-10-26/>.

145 Author conversation with US, European, and Middle Eastern officials.

Hamas, later Hezbollah, and, in what was one of the Israeli Air Force's longest-range missions, the Houthis.¹⁴⁶ It also stepped up its targeting of IRGC officials outside of Iran.¹⁴⁷ In contrast to the United States, Israel's risk tolerance became fundamentally different after October 7th. Any restraint early on was likely guided by operational considerations (for example, avoiding a full-blown war with Hezbollah when Israel was not yet prepared) and US entreaties for caution, rather than by fears of Iranian weaponization.

Iran's eventual failure to deter diplomatic pressure on the nuclear program was a result of European persistence rather than US or Iranian action. The E3 never shared the United States' reluctance to censure Iran at the board: In the lead-up to each board meeting, the United States and its European partners feuded over what steps to take, with the E3 favoring a resolution and the United States opposing. Washington successfully persuaded its allies to forgo a resolution in November 2023 amid attempts to jump-start diplomacy, and then did so again in March 2024. By June 2024, however, the E3 intended to move forward with or without Washington's support, and Washington chose to go along with that approach rather than risk a rupture with key allies. Public threats by Iran to build nuclear weapons and Tehran's continued slow-rolling of the IAEA's investigation into potentially undeclared nuclear material and facilities also facilitated Washington's shift. Iran's deterrence failure was thus part overreach, and part Washington choosing cohesion with allies at the Board of Governors.

Iran's third objective, to deter Israel from striking within Iranian territory against strategic sites, failed entirely. Iran had the capability to quickly produce a nuclear bomb and repeatedly brandished that option, yet Israeli attacks into Iran became more extensive as time went on. The relative absence of specific threats to "revise its nuclear doctrine" immediately following Operation True Promise 2—when threats to Iranian security spiked—was tantamount to a recognition by regime leadership that public threats had been counterproductive.

Despite this conclusion, two issues warrant closer examination. First, Iranian threats to revise its nuclear doctrine were sometimes inconsistent regard-

ing which actions would trigger such a decision, raising questions about whether Israeli attacks as of early 2025 had actually crossed Iranian redlines or fallen short of them. One former Iranian official set the bar at an attack "on Iranian soil."¹⁴⁸ Others suggested the redline was a threat to the Islamic Republic's existence.¹⁴⁹ The most widely covered comment by the senior IRGC official in April stated that "actions" or even "threats" by Israel against Iran's nuclear facilities might compel Iran to revise its nuclear doctrine.¹⁵⁰

While it's likely that Iran did not see the April and October attacks as a threat to the regime's existence, nearly all of the other specific redlines had been violated by Israel by early 2025. Israel's April 19, 2024, attack on the air-defense equipment associated with an Iranian nuclear site was an attack on Iranian soil, and it was more than just a "threat" to Iran's nuclear facilities. Israel's more comprehensive strikes in October against Iran's air defense, missile production, and space-launch capabilities, as well as a site involved in Iran's former nuclear weapons program (potentially engaged in dual-use activities at the time) was certainly an extensive attack on Iranian territory and arguably one on "strategic" sites (that is, missile capabilities). The June 2025 Israeli and US strikes explicitly crossed Iran's redline against hitting nuclear facilities, and Israel's assassination of Iran's top military leaders in the opening hours of the attack and Prime Minister Netanyahu's call for the Iranian people to stand up to the regime reasonably could have been viewed by the regime as a threat to its existence.¹⁵¹ Lack of consistency or specificity from voices within Iran about redlines does not mean that Iran did not try to leverage the threat of building the bomb as a deterrent against an Israeli strike. Iran's nuclear advances continued—a fact known to Israeli leaders—even as public threats declined by the fall and winter of 2024.

A second issue is that Israel's extensive military campaign in October did not strike the key elements of Iran's nuclear program, including its enrichment-related sites. Was Israel deterred from striking the heart of the nuclear program by fears of Iranian weaponization? Reports indicate that Israel considered such a strike at the time.¹⁵² In the pre-October 7th environment, threats of Iranian retaliation via Hez-

146 "Furthest Strike Since War Began: Israel Strikes Houthi Targets 1460 Miles Away from Israel," Israeli National News, September 10, 2025, <https://www.israelnationalnews.com/news/414711>.

147 "2 IRGC Forces Martyred in Israeli Attack in Syria."

148 Savyon, "Senior Iranian Regime Officials Warn of Iran's Coming Nuclear Breakout."

149 "Iran to Change Nuclear Doctrine If Existence Threatened, Adviser to Supreme Leader Says."

150 "Iran's Nuclear Weapon Option Emerges from the Shadows During the April Crisis."

151 "WATCH: 'Stand Up and Let Your Voices Be Heard': Netanyahu Urges Iranians to Stand Against Regime," *The Jerusalem Post*, June 14, 2025, <https://www.jpost.com/israel-news/article-857652>.

152 "Israel Said Mulling Attacks on Iran Oil Fields, Nuclear Sites in Response to Missile Attack," *The Times of Israel*, October 13, 2024, <https://www.timesofisrael.com/israel-said-mulling-attacks-on-iran-oil-rigs-nuclear-sites-in-response-to-missile-attack/>.

bolah or its missile arsenal might have deterred an Israeli attack on Iran's nuclear program. By late October, these other elements of the Iranian deterrent "triad" had been hobbled. At first glance, this could support the claim that fears of Iranian weaponization may have led Israel to hold off.

Other factors, however, provide a better explanation for Israeli restraint¹⁵³—chief among them, the views of the United States. Throughout the conflict, and particularly following Operations True Promise 1 and 2, the United States publicly and privately urged restraint by Israel, counseling it particularly to avoid strikes against Iran's nuclear sites or oil infrastructure.¹⁵⁴ Doing otherwise, US leaders believed, risked further escalation of a war Washington was trying to contain and wind down. Escalation could have included Iranian retaliation against Israel or the United States, but might also have included Iran leaving the NPT or building a nuclear weapon. Israel may have been more willing to accept these risks, but ultimately prioritized avoiding a rupture in its relationship with Washington that could, in turn, have endangered US military assistance. The fact that Israel later struck Iranian nuclear sites under a different US administration that did not counsel the same restraint further implies that Washington's position mattered.

While Iran had some early success using its threshold as a deterrent, and greater success against the United States than Israel, the trend during the 2023–25 crisis was clear: More nuclear capability did not correlate with more security or deterrence success for Iran. Instead, it brought greater insecurity. Over the course of the conflict, the United States became less restrained in responding to proxy attacks and increasingly willing to support diplomatic pressure against Iran. As Iran expanded its program, Israeli actions became more aggressive and more focused on targeting Iran and its core capabilities (for example, valuable proxies and Iran's missile program). Israeli strikes against Iran's air-defense equipment around its nuclear sites and within Syria significantly undermined Iran's ability to defend against an attack on its nuclear program.

By January 2025, Iran's ability to build a bomb was better than in October 2023, but its capabilities were also more vulnerable. The conflict thus produced a vicious cycle: The elimination and weakening of the first two prongs of Iran's deterrent—proxies and conventionally armed missiles—caused Tehran to rely more on the third prong, its nuclear threshold.

At the same time, as that program became more advanced and critical to Iran's security, the United States and particularly Israel recognized that fact, and the risks of Iranian breakout were increasingly on their radar also.

Conclusion

How useful was a nuclear threshold capability for Iran in what was arguably the greatest national security crisis it had faced since the Iran-Iraq War? The answer seems to be: not very. In fact, threshold status and the attempt to leverage it brought far more risks than benefits for Tehran. Aside from some early victories, that threshold ultimately proved incapable of deterring a robust response to Iran's regional campaign of aggression. It could not dissuade resumption of international pressure against Iran. And most importantly, it did not prevent significant strategic attacks on Iranian territory.

This verdict is all the more damning because Iran clearly tried to leverage its nuclear status for strategic goals, most notably by threatening to build the bomb to deter attacks against key targets during the spring and summer of 2024. The absence of such threats in the fall—when threats to Iran were higher—suggests that Tehran concluded they were counterproductive. Those threats put Iran in the bind of having to put up or shut up; unwilling to do the former, it was forced to do the latter.

Iran thus fell victim to a cycle it was unprepared to manage: As threats mounted and its deterrence architecture collapsed, Tehran concluded that it needed to lean into the nuclear program—not by sprinting to a bomb, but by improving its ability to build one on short notice. Israel, seeing both opportunity in a weakened Iran and also a risk in Iran nudging closer to a weapon, had greater incentive to act. Iran's strategy during this phase of the war not only failed to stop more aggressive Israeli strikes, but likely encouraged them. Overall, *more* nuclear capability correlated with *less* security for Iran.

US and Israeli strikes in June of 2025 represented a culmination of the trends that developed from October 2023 through early 2025. Iran's threshold status failed to deter a major, wide-ranging attack against its nuclear program, weapons researchers, conventional military, and senior military leadership, and instead helped bring one about. Iran's strategy of developing a bomb option that it could call

153 The fact that Israel ultimately did strike Iran's program in June 2025 allows us to compare and contrast the absence of a decision to strike at this time. A comprehensive analysis of this question is included in the conclusion section of the article.

154 Barak Ravid, "US Urges Israel to 'Be Careful and Strategic' Regarding Response to Iran Attack," Axios, April 15, 2024, <https://www.axios.com/2024/04/14/us-israel-iran-attack-retaliation>; Matthew Lee, "Israel Assures US It Won't Strike Iranian Nuclear or Oil Site: Middle East," Associated Press, October 15, 2024, <https://apnews.com/article/israel-iran-oil-nuclear-sites-biden-f5dd702de7d990dd1d00f665e1484dee>; Peter Beaumont and Julian Borger, "US Would Not Support Israeli Attack on Iran's Nuclear Sites, Says Biden," *The Guardian*, October 2, 2024, <https://www.theguardian.com/world/2024/oct/02/us-wont-support-israeli-attack-on-irans-nuclear-sites-says-biden>.

on in a moment of crisis—pursued and refined for more than twenty years—failed, spectacularly. By eliminating a near-term nuclear breakout option, Israel and the United States effectively hobbled all three pillars of Iran’s deterrent triad. That Iranian weakness—coupled with the widespread protests in early 2026 and concerns that Iran was working to build back its military capabilities—led to the even larger Israeli and US strikes in February 2026 aimed at toppling the Iranian government and wiping out its conventional forces. Like any hedger, Iran had to walk the line between accumulating enough nuclear capability to deter its enemies while it avoided triggering the very actions it sought to deter. Iran’s costly failure was not the product of one final Iranian nuclear provocation, but many over time.

US and Israeli strikes in June of 2025 represented a culmination of the trends that developed from October 2023 through early 2025.

Israel’s decision to launch such an attack in June 2025 also reinforces the argument that US opposition to an Israeli strike, not Iran’s threshold capability, was an important factor in deterring Israel from targeting Iran’s program during its April and October 2024 attacks. Although a number of factors likely played into Israel’s decision to attack in 2025—including Iranian progress toward a nuclear bomb, fears that Iran was on the cusp of mass-producing a large number of ballistic missiles, and other operational and tactical considerations—the Trump administration’s willingness to green-light an Israeli attack (and Israel’s probable assessment that the United States might be more willing to enter the fray in support) was likely crucial.¹⁵⁵

Why did Iran’s strategy of leveraging its threshold capability as a deterrent fail? Or, put differently, why were Israel (and later, the United States) not deterred by the risk that Iran would cross the nuclear threshold? Iran clearly had the ability to make good on its threats in relatively short order; its nuclear capabilities were no secret, and it brandished that threat throughout the conflict. By the late summer

or early fall, the stakes of the conflict were massive; by June 2025, they were potentially existential.

Israel’s changed security calculus and appetite for risk after October 7th, and its growing fears about Iranian weaponization as conflict dragged on, provide partial explanations. But other factors likely mattered as much if not more. For example, Israel may have doubted (apparently correctly) that Iran would make good on its threats of proliferation. Iran’s failure to meaningfully retaliate following a series of aggressive and bold Israeli attacks against key pillars of the regime’s deterrent may also have led Jerusalem to conclude that Iran was weaker than its rhetoric would suggest. That belief was likely coupled with extremely good intelligence about Iran’s nuclear intentions and capabilities, giving Israel added confidence Iran would not go for nuclear weapons before Israeli bombs could reach their targets, and that Israeli decision-makers would know about it before Iran could put the pieces together. Significant degradation to Iran’s proxy forces, air defense, and missile capability likely also eased Israeli and perhaps American anxieties and led them to conclude that they would not risk the sort of retaliation that Iran could have wrought in the pre-October 7th world, independent of their calculations about Tehran’s nuclear ambitions. In the United States, President Trump also had a fundamentally different risk calculus than President Biden, and viewed the US use of force as a complement to, rather than a replacement for, nuclear diplomacy. In the end, Iran’s latent deterrent failed because Tehran faced a toxic combination: conventional weakness and a nuclear program that was sufficiently advanced to worry its adversaries and sufficiently vulnerable to entice them to strike.

Implications for Scholarship

The preceding analysis has important implications for scholarly debates over whether and under what conditions nuclear latency provides security benefits. It supports the argument that more nuclear latency is not inherently better, and in fact brings greater risks than benefits for the possessor.¹⁵⁶ As Iran nudged closer to a nuclear weapon, those dangers increased, and the “valley of vulnerability” was real.¹⁵⁷ Achieving deterrence with nuclear latency is hard.

The Iranian case also supports the claim that latency beyond the “Goldilocks zone” makes it harder

155 “‘The Stars Aligned’: Why Israel Set Out for a War Against Iran, and What It Achieved,” *The Times of Israel*, June 27, 2025, <https://www.timesofisrael.com/the-stars-aligned-why-israel-set-out-for-a-war-against-iran-and-what-it-achieved/>.

156 For examples of experts who argue that latency does not yield many benefits or does so only under certain conditions, see Volpe, *Leveraging Latency*; Narang, *Nuclear Strategy in the Modern Era*; Mehta and Whitlark, “The Benefits and Burdens of Nuclear Latency”; Waltz, “Thoughts About Virtual Nuclear Arsenals,” 153–61.

157 Hiim, “Revisiting Nuclear Hedging”; Narang, *Seeking the Bomb*, 10–11.

for countries to assure others that they won't proliferate.¹⁵⁸ Even though Tehran's explicit threats to build nuclear weapons had declined and it was pursuing diplomacy, its advanced nuclear status and the fact that it was covertly (though known to US and Israeli intelligence organizations) expanding its weaponization work made Iranian assurances increasingly thin. These same developments also made it harder for Iran to leverage those gains to force a deal, as they resulted in commensurately greater US demands on nuclear restrictions and transparency, which were politically infeasible for Tehran.

Iran's experience also provides insights for Fuhrmann's "deterrence by proliferation" strategy.¹⁵⁹ Iranian officials implicitly, and later explicitly, threatened to develop nuclear weapons in response to certain provocations. Iran clearly met the first two conditions outlined by Fuhrmann for successful latent nuclear deterrence: the ability to produce fissile material, and facing high stakes. On balance, evidence suggests Iran also met the third condition, which Fuhrmann describes as "essential"—it lacked a dedicated nuclear weapons program backed by a decision by political leadership to produce nuclear weapons—but with a caveat.¹⁶⁰ Both US and Israeli intelligence communities agreed that Iran was closing the technical gaps needed to produce a bomb, but they also assessed that Khamenei had not yet given a green light to produce one.¹⁶¹ Although Netanyahu often publicly portrayed Iran as sprinting toward nuclear weapons, his public statements in defense of Operation Rising Lion suggested a more nuanced, less urgent timeline: "It could be a year. It could be within a few months, less than a year."¹⁶² Thus, Iran's program was not "unambiguously" intended for nuclear weapons, making Iran still a "hard hedger" that should have succeeded in deterring attack.

But the case also illustrates the challenges of characterizing intent: For decision-makers, Iran reached a level of latency where the level of ambiguity around weaponization could seem like a distinction without a difference.¹⁶³ This suggests that further examina-

tion of the relationship between nuclear intent and capability at high levels of nuclear latency, from the standpoint of both the latency possessor and its adversaries, is warranted. Iran's overconfidence in the utility of its threshold status for advancing its goals in the first phase of the conflict suggests that additional research on how countries perceive nuclear latency could be useful.

Implications for Policy

What can American and international policymakers learn from this experience? First, a credible capability to detect and disrupt proliferation remains a powerful tool. That capability was critical to giving Iran pause and instilling doubt in Iranian leaders about whether it could pull off a dash to a nuclear weapon before Israel and the United States intervened. This emphasizes the importance of intelligence capabilities and a credible record, in the eyes of the proliferator, of successfully detecting activities intended to remain covert, as well as subsequently being willing to impose consequences.

These conditions were met in the case of Iran, but are not guaranteed for future proliferation challenges. Future proliferators may not be so-called "rogue states," but instead US allies and partners, which offers both more choke points for American detection and pressure efforts, but also more challenges and risks in employing that leverage.¹⁶⁴

Second, in dealing with an adversarial threshold state during a crisis, conventional escalation dominance matters.¹⁶⁵ A key reason Israel and the United States could credibly threaten to act against the nuclear program, and why Iran responded in a calibrated way to their attacks in 2024 and 2025 is because all parties believed that the United States and Israel (with US backing) could impose regime-threatening costs and ultimately win a conventional war against Iran. This recognition also explains why Israel felt it could mount attacks against Iran in 2024, and Iran's decision to tone down the rhetoric on revising its nuclear doctrine later that year. Yet this also required that Iran view US

158 Volpe, *Leveraging Latency*.

159 Fuhrmann, *Influence Without Arms*, 10–13.

160 Fuhrmann, *Influence Without Arms*, 52; Fuhrmann, "US Allies and Adversaries Are Attempting Nuclear Deterrence Without Weapons."

161 Julian E. Barnes, "US Spy Agencies Assess Iran Remains Undecided on Building a Bomb," *The New York Times*, June 19, 2025, <https://www.nytimes.com/2025/06/19/us/politics/iran-nuclear-weapons-assessment.html>; Norman and Gordon, "Iran Is Better Positioned to Launch Nuclear-Weapons Program, New US Intelligence Assessment Says."

162 Quoted in Barnes, "US Spy Agencies Assess Iran Remains Undecided on Building a Bomb."

163 For example, Trump publicly dismissed his director of national intelligence's testimony that Iran was not actively building nuclear weapons, saying: "I don't care what she said. I think they were very close to having them." See Jonathan Swan, Maggie Haberman, Mark Mazzetti, and Ronen Bergman, "How Trump Shifted on Iran Under Pressure from Israel," *The New York Times*, June 17, 2025, <https://www.nytimes.com/2025/06/17/us/politics/trump-iran-israel-nuclear-talks.html>.

164 For more on these and other challenges associated with managing allied proliferation, see Eric Brewer, "The Nuclear Proliferation Landscape: Is Past Prologue?," *The Washington Quarterly* 44, no. 2 (2021): 181–97.

165 Tyler Bowen, "Threading the Needle: The Logic of Conventional Coercion in Nuclear Crises," *Texas National Security Review* 9, no. 1 (Winter 2026): 28–51, <https://doi.org/10.1353/tns.00022>.

and Israeli war aims as limited. As Iran's expansive strikes against US bases and Gulf energy infrastructure, and its ability to control the Strait of Hormuz, demonstrate during the 2026 war, Tehran is far less restrained in a fight for its own survival. US and Israeli conventional dominance, however, also likely had the perverse effect of driving Iran to advance its nuclear program, exacerbating the cycle that ultimately led to Israeli and US strikes in June 2025.

Third, Iran's experience reminds observers that hedging strategies function as part of larger national security strategies. Tehran's attempts to leverage latency as a deterrent, and its subsequent decisions to quietly advance weaponization work, were both driven by changes to Iran's larger security environment. For Iran, those decisions proved disastrous. For the United States, developments led, paradoxically, to outcomes that were objectively good for US interests—the weakening of Iran's conventional military and its proxy forces—triggering additional consequences that were bad for US interests, including greater Iranian reliance on the nuclear program and advancements to a bomb. While each future hedger will combine conventional, unconventional,

and nuclear capabilities in their national strategy differently, it will be important to understand how these goals interact, and how they can be used for coercive leverage.

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Image: BOG Meeting, March 8, 2004, by Dean Calma / IAEA.¹⁶⁶

¹⁶⁶ For the image, see https://www.flickr.com/photos/iaea_imagebank/49801349502/.