

# A Nuclear Economy

## Proliferation Financing and the Fight to Stop Bad Actors

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### Abstract

Recent nuclear threats from the Russian Federation and North Korea, amid rising tensions on the Korean Peninsula and in the Ukraine–Russia conflict, remind the international community that nuclear, chemical, biological, and radiological weapons remain serious threats in the hands of hostile state actors. Proliferation financing, a subset of illicit finance, plays a critical role in modern threats, with North Korea, Iran, and Syria among its most active practitioners. To counter this challenge, the international community, national governments, and the private sector—including financial institutions and nonprofits—must modernize their technological systems, enhance information sharing on adversarial strategies, and adopt a proactive stance to disrupt proliferation financing. Strengthening these efforts will help prevent hostile actors from expanding their nuclear stockpiles.

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In 2025, the threat of nuclear war has reached its highest level in the twenty-first century. Russia’s invasion of Ukraine, now in its third year, has placed President Vladimir Putin’s government in a precarious position.<sup>1</sup> As Russia faces continued military setbacks, it has turned to more unconventional methods of warfare. Putin has declared that Russia stands ready to use its nuclear arsenal to defend what it considers its territory, asserting that its nuclear umbrella extends over occupied regions of Ukraine.<sup>2</sup> President Joe Biden and other world leaders have warned that Russia’s nuclear rhetoric poses a serious danger, with Biden emphasizing the need to prevent escalation into nuclear conflict.<sup>3</sup> Under the second Trump administration, the United States’ commitment to countering Russian aggression appears increasingly uncertain. At a mid-February 2025 conference, Secretary of Defense Pete Hegseth stated, “The United States does not believe that NATO membership for Ukraine is a realistic outcome of a negotiated settlement adding that any security

<sup>1</sup> Mary Louise Kelly, Michael Levitt, and Sarah Handel, “Russia is losing the edge in Ukraine, but Putin still seems ready to double down,” *NPR*, 3 October 2022, <https://www.npr.org/>.

<sup>2</sup> Zachary B Wolf, “Russia says it has expanded its nuclear sphere. What to make of its latest threats,” *CNN*, 18 October 2022, <https://www.cnn.com/>.

<sup>3</sup> Jeremy Shapiro, “We Are On a Path to Nuclear War,” *War on the Rocks*, 12 October 2022, <https://warontherocks.com/>.

guarantees should exclude US troops and that “[a return to Ukraine’s pre-2014 borders] is an unrealistic objective.”<sup>4</sup> His remarks sparked considerable domestic and international criticism. These statements, coupled with the administration’s overt efforts to cultivate a friendly relationship with Vladimir Putin, suggest that a seismic shift in the Russia–Ukraine conflict is imminent.<sup>5</sup>

Meanwhile, North Korea has escalated tensions by launching seven missile salvos in response to joint US–South Korea military drills.<sup>6</sup> Kim Jong-un described the launches as a simulation of a potential North Korean attack on the South and reaffirmed that North Korea considers itself a nuclear-armed state with no intention of relinquishing its weapons program.<sup>7</sup>

The global risk of nuclear war has not been this severe since the 1962 Cuban Missile crisis. While today’s geopolitical situation has yet to reach that crisis’s intensity, the proliferation of nuclear weapons and related technology remains a pressing concern. Aspiring nuclear states often rely on illicit financing to acquire the necessary materials, making the disruption of proliferation financing a critical component of global nonproliferation efforts.

### Illicit Financing and Nuclear Terrorism

State and nonstate actors, including terrorist organizations, have long relied on illicit financing to fund their operations. They generate revenue through shell companies, the misuse of nonprofit organizations, human smuggling, and drug trafficking.<sup>8</sup> While these tactics have remained largely unchanged, many nonstate actors have recently adopted technologies that obscure financial activities, according to the *2022 National Terrorist Financing Risk Assessment* published by the US

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<sup>4</sup> Natasha Bertrand, Clare Sebastian, & Haley Britzky, “Hegseth rules out NATO membership for Ukraine and says Europe must be responsible for country’s security,” *CNN*, Warner Bros. Discovery, published and updated 12 February 2025, <https://edition.cnn.com/2025/02/12/politics/hegseth-ukraine-rules-out-nato-membership/index.html>; Zachary Basu, “Hegseth stands by Ukraine comments as GOP senator slams ‘rookie mistake,’” *Axios*, Cox Enterprises, published 14 February 2025, <https://www.axios.com/2025/02/14/hegseth-ukraine-trump-russia-putin-nato>.

<sup>5</sup> Brett Samuels, “Vance says Trump has ‘broad’ range of options in talks with Russia on Ukraine war,” *The Hill*, Nexstar Media Group, published 14 February 2025, <https://thehill.com/homenews/administration/5145182-jd-vance-donald-trump-russia-ukraine-war/>.

<sup>6</sup> Frances Mao, “North Korea says missile launches were nuclear attack simulation on South,” *BBC News*, 11 October 2022, <https://www.bbc.com/>.

<sup>7</sup> “North Korea declares itself a nuclear weapons state,” *NPR*, 10 September 2022, <https://www.npr.org/>.

<sup>8</sup> “Tracing Terrorist Finances,” *INTERPOL*, International Criminal Police Organization, 2022, <https://www.interpol.int/>; and Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism, “Financing of Terrorism,” *Council of Europe*, Council of Europe, 2022, <https://www.coe.int/>.

Department of the Treasury.<sup>9</sup> These advancements, combined with traditional methods, have significantly aided hostile state and nonstate actors in acquiring chemical, biological, radiological, and nuclear (CBRN) weapons.

This financial activity, known as *proliferation financing*, involves funding the development, acquisition, and transfer of weapons of mass destruction (WMD) and related materials. The Financial Intelligence Unit of the Bailiwick of Guernsey—a British Crown Dependency and known tax haven frequently used for illicit financial transactions<sup>10</sup>—defines proliferation financing as the provision of funds or financial services for the manufacture, acquisition, possession, development, export, transshipment, brokering, transport, stockpiling, or use of nuclear, chemical, or biological weapons. This definition, based on the Financial Action Task Force (FATF), includes dual-use technologies repurposed for illicit ends.<sup>11</sup> In essence, proliferation financing serves two primary purposes: to procure WMD-related goods and to raise, launder, and transfer money linked to proliferation activities, as described by Togzhan Kassenova, a nonresident fellow in the Nuclear Policy Program at the Carnegie Endowment for International Peace.<sup>12</sup>

Although the mechanics of proliferation financing may seem complex, the process itself is relatively straightforward. The Gibraltar Financial Services Commission, the regulatory body for the British Overseas Territory of Gibraltar, has extensively examined nuclear proliferation. According to its findings, a proliferating state first raises financial resources for domestic costs—often through illicit financing methods—before laundering the funds through conventional banking and financial channels. These resources are then used to procure the necessary materials for weapons development.<sup>13</sup>

Like terrorist financing, proliferation financing is embedded within standard commercial transactions and structured in moderate amounts to evade detection by regulators and law enforcement. However, unlike terrorist groups, proliferating states often engage in the sale and purchase of weapons-grade materials. They rely

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<sup>9</sup> *2022 National Terrorist Financing Risk Assessment* (Washington: US Department of the Treasury, 2022), 5, <https://home.treasury.gov/>.

<sup>10</sup> Rob Byrne, “Guernsey: Search for truth in a tax haven election,” *openDemocracy*, 6 January 2021, <https://www.opendemocracy.net/>.

<sup>11</sup> “What is Proliferation Financing?,” *Financial Intelligence Unit of the Bailiwick of Guernsey*, 2 November 2022, <https://guernseyfui.gov.gg/>.

<sup>12</sup> Togzhan Kassenova, “The Exploitation of the Global Financial Systems for Weapons of Mass Destruction (WMD) Proliferation,” *Carnegie Endowment for International Peace*, 4 March 2020, <https://carnegieendowment.org/>.

<sup>13</sup> *Counter Proliferation Financing* (Gibraltar: Government of Gibraltar, May 2022), 5, <https://www.fsc.gi/>.

on front companies, intermediaries, and covert agents to obscure transactions and avoid scrutiny.<sup>14</sup>

The term *proliferation financing* entered the counterterrorism and international security lexicon in the early 2000s, following revelations about Abdul Qadeer Khan (AQ Khan), Pakistan's former director of uranium enrichment, research, and development. Khan helped several nations develop nuclear capabilities by sharing sensitive information and technology, prompting the establishment of stricter international controls.<sup>15</sup>

Despite the clear threat posed by proliferation financing, the role of nonstate actors in such activities remains a subject of debate. Some speculate that terrorist organizations such as the Islamic State of Iraq and the Levant (ISIS), al-Qaeda, or Hezbollah seek to acquire CBRN weapons to gain an advantage over their enemies. However, publicly available information suggests otherwise.

Al-Qaeda has attempted—but consistently failed—to acquire weapons of mass destruction (WMD) since the 1990s.<sup>16</sup> A *Nonproliferation Review* article from 2005 noted that while “all evidence from Western sources and al-Qaeda’s own websites and publications indicate that the movement itself and its various affiliates are aggressively pursuing such a capability,” the group remains far from achieving a true WMD capability. Most CBRN agents acquired by al-Qaeda and its affiliates have been crude, suitable only for “small-scale assassinations, contaminations, and poisonings.”<sup>17</sup>

Although this assessment dates back to 2005, the prospect of terrorist groups acquiring WMDs or other CBRN materials remains distant. In May 2021, United Nations investigators determined that ISIS had used poison gas and chemical weapons on Iraqi prisoners to test its capabilities. This suggests that while groups like ISIS continue to explore CBRN weapons, they remain incapable of executing large-scale attacks. Nonetheless, credible intelligence indicates that nonstate terrorist actors are actively planning such operations.<sup>18</sup>

Terrorist groups and other nonstate actors engage in proliferation financing differently from state actors. According to Ian J. Stewart, a senior researcher in the

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<sup>14</sup> Gibraltar Financial Intelligence Unit, *Counter Proliferation Financing*, 6–7.

<sup>15</sup> Joshua Tjeransen, “How weapons of mass destruction are supported through proliferation financing,” *New Voices in Global Security* (blog), Kings College London, 12 July 2022, <https://www.kcl.ac.uk/>.

<sup>16</sup> Rolf Mowatt-Larssen, “Al Qaeda’s Pursuit of Weapons of Mass Destruction,” *Foreign Policy*, 25 January 2010, <https://foreignpolicy.com/>.

<sup>17</sup> Sammy Salama and Lydia Hansell, “Does Intent Equal Capability? Al-Qaeda and Weapons of Mass Destruction,” *Nonproliferation Review* 12, no. 3 (November 2005): 643–44, <https://www.nonproliferation.org/>.

<sup>18</sup> Joby Warrick, “ISIS used chemical weapons on Iraqi prisoners, U.N. investigators find,” *Washington Post*, 13 May 2021, <https://www.washingtonpost.com/>.

Department of War Studies at King's College London, and Daniel Salisbury, a postdoctoral fellow at the Middlebury Institute of International Studies, nonstate actors primarily function as intermediaries in the international marketplace. While some terrorist organizations have shifted toward a more active role in proliferation financing and CBRN acquisition, state actors continue to dominate this domain.<sup>19</sup>

Among state actors, Iran and Syria have historically engaged in proliferation financing, though their involvement remains a niche aspect of broader illicit financial activities. In contrast, North Korea—the Democratic People's Republic of Korea (DPRK)—stands as the only state conducting nuclear proliferation on a measurable scale in contemporary times.

### **The North Korea Case Study**

North Korea has long sought to become a nuclear power. Since the state's founding, Kim Il-sung—grandfather of current leader Kim Jong-un—pursued nuclear weapons, driven by his observation of the devastation wrought by US atomic bombings of Hiroshima and Nagasaki and the threat of US nuclear strikes during the Korean War.<sup>20</sup>

From that point forward, North Korea made nuclear development a strategic priority, seeking fissile material to build its own stockpile.<sup>21</sup> The regime views nuclear weapons as a means to ensure state survival, gain international legitimacy, establish parity with the United States, and secure an advantage over South Korea.<sup>22</sup>

Financially, proliferation financing has played a central role in North Korea's weapons programs. According to the *US Department of the Treasury's National Proliferation Financing Risk Assessment*, published in February 2022, North Korea “constitutes the most complex [proliferation financing] threat globally and to the United States specifically.” The report notes that Pyongyang continues to exploit international banking networks to fund its WMD programs, with “no appreciable decline” in its use of the global financial system.<sup>23</sup>

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<sup>19</sup> Ian J. Stewart and Daniel Salisbury, “Non-State Actors as Proliferators: Preventing their Involvement,” *Strategic Trade Review* 2, no. 3 (2016), 7, <https://strategictraderesearch.org/>.

<sup>20</sup> Anna Fifield, *The Great Successor: The Divinely Perfect Destiny of Brilliant Comrade Jim Jong Un* (New York: PublicAffairs, 2019), 231.

<sup>21</sup> Mun Suk Ahn, “What Is the Root Cause of the North Korean Nuclear Program?,” *Asian Affairs: An American Review* 38, no. 4 (2011), 178, <https://www.jstor.org/>.

<sup>22</sup> Bruce Klingner, “Why Does North Korea Want Nukes?,” *The Insider*, 13 August 2018, <https://www.heritage.org/insider/>.

<sup>23</sup> *2022 National Proliferation Financing Risk Assessment* (Washington: US Department of the Treasury, 2022), 6–7, <https://home.treasury.gov/>.

Drawing on intelligence from across the US intelligence community, the assessment highlights North Korea's reliance on clandestine agents, front companies, and financial firms to conduct transactions on behalf of the regime. Some entities knowingly participate, while others unwittingly enable these schemes through compliance failures. North Korea obscures end-user identities by mislabeling goods, consolidating and repackaging shipments, and procuring items not explicitly listed on export control registers.<sup>24</sup>

Beyond traditional financing methods, North Korea has expanded its operations to include cyberattacks, stealing funds from financial institutions and cryptocurrency exchanges to finance its weapons programs.<sup>25</sup>

Through these methods, North Korea has demonstrated both the capability and ideological commitment to expanding its nuclear, chemical, biological, and radiological arsenals. Proliferation financing—alongside Pyongyang's strategic resolve—has enabled Kim Jong-un's regime to amass an estimated nuclear stockpile of 25 to 50 warheads, with a projected inventory of 25 to 48 kilograms of plutonium.<sup>26</sup> While the precise extent of proliferation financing's contribution remains unknown, its impact has likely been significant in advancing North Korea's WMD ambitions.

## How to Halt Proliferation Financing

Countering North Korea and other states engaged in proliferation financing—such as Iran, Russia, and Syria—should be a priority for any international organization or nation seeking to combat foreign aggression and CBRN proliferation. However, achieving this goal remains a formidable challenge.

Joshua Tjeransen, a PhD student and research assistant at the Center for Science and Security Studies at King's College London, underscores the difficulty of this task, writing that “any degree of proliferation finance success is considered ‘a win’ for the associated network.”<sup>27</sup> His analysis highlights the diverse and often sophisticated methods states and malign actors use to engage in proliferation financing.

Efforts to track, delay, or halt these financial networks require a coordinated, multinational approach that spans the public and private sectors. International organizations, national governments, and financial institutions must work together across jurisdictions to disrupt illicit funding streams.

At the international level, the United Nations has taken steps to address this challenge. In 2004, the UN Security Council adopted Resolution 1540, which

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<sup>24</sup> 2022 *National Proliferation Financing Risk Assessment*, 8.

<sup>25</sup> Kassenova, “The Exploitation of the Global Financial Systems.”

<sup>26</sup> “North Korea,” *National Threat Initiative*, 2022, <https://www.nti.org/>.

<sup>27</sup> Tjeransen, “How weapons of mass destruction are supported.”

mandates that all states “shall refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes.”<sup>28</sup> The resolution further requires states to implement and enforce domestic laws to prevent proliferation.

Resolution 1540 emerged directly in response to the AQ Khan affair and remains a cornerstone of international nonproliferation policy. However, despite its strong legal framework, the resolution has faced criticism regarding its implementation.

A report commissioned by the US Department of Energy’s National Nuclear Security Administration (NNSA) and conducted by a subsidiary of Brookhaven National Laboratory highlights several shortcomings in how the resolution has been enforced. The report, authored by the founder of an international security nonprofit, an adjunct professor of business at the University of Arizona, and the chair of Brookhaven’s Nonproliferation and National Security Department, identifies multiple gaps in execution that undermine the resolution’s effectiveness.

They note that many terms of UN Security Council Resolution 1540 remain only partially implemented worldwide. Only 80 of the 192 UN member states have established proper export controls, a shortfall exacerbated by the inability of Financial Action Task Force (FATF) stakeholders to agree on a definition of national proliferation financing.<sup>29</sup> These weaknesses—both the lack of consensus on the definition of proliferation financing and the limited adoption of export controls—significantly undermine the resolution’s effectiveness and delay any meaningful response.

To address this issue, the international community must pursue diplomatic solutions with nations that have yet to adopt export controls. Policymakers must assess these countries’ priorities and determine how international support for their pressing concerns could incentivize them to implement the resolution’s export controls. Such negotiations require skill and deep familiarity with each nation’s specific challenges. While some states, such as Iran and North Korea, will likely resist these measures, others may accept them in exchange for assistance with key projects or initiatives. Expanding the adoption of export controls in these regions would help curb proliferation financing.

Even Western allies have struggled to curb illicit financial activities. Moyara Ruehsen, a professor of financial crime intelligence at Middlebury College, and Leonard S. Spector, former assistant deputy administrator for arms control and

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<sup>28</sup> United Nations Office of Disarmament Affairs, “UN Security Resolution 1540 (2004),” *United Nations*, 30 October 2022, <https://www.un.org/>.

<sup>29</sup> Bafode Drame, Lisa Toler, and Susan Pepper, “Forensic Analysis of Terrorist Counter-Financing to Combat Nuclear Proliferation,” (Manuscript, Atlanta, GA, 2016), 5, <https://www.bnl.gov/>.

nonproliferation at the NNSA, detailed these challenges in a 2015 article for *The Bulletin of the Atomic Scientists*. They observed that “the United States remains largely alone in imposing fines for violating sanctions,” though significant progress has been made since 2010 in countering proliferation financing.<sup>30</sup>

Financial institutions face significant limitations in their ability to assist the international community in enforcing export controls. Kassenova, in an article for the Carnegie Endowment for International Peace, explores these challenges, noting:

some countries lack the legal basis to deal efficiently with implementing the sanctions because their institutions are not authorized to take relevant actions . . . [the inherently] inefficient process for updating domestic regulations and informing private sector promptly to match changes in UN designations of entities and individuals . . . the difficulty with identifying sanctioned countries, entities, and individuals or their middlemen behind transactions . . . [and] the limited capacity of financial institutions to distinguish proliferation activity.<sup>31</sup>

These deficiencies create a major obstacle for the financial sector in combating proliferation financing. To address this issue, financial institutions must take a far stronger, more proactive role in preventing illicit transactions that support state actors seeking CBRN weaponry.

The FATF underscores this responsibility in its 2010 report, *Combating Proliferation Financing*: “Vigilance exercised by [Financial Institutions] over the activities of their customers is the fundamental element of the framework of measures against money laundering and terrorist financing.”<sup>32</sup> The report further recommends that financial institutions incorporate proliferation financing risks into their preventive measures and internal controls. It also calls for improved coordination in intelligence-sharing efforts among international financial institutions, organizations such as INTERPOL and the UN, and national law enforcement and intelligence agencies, including the FBI, CIA, and MI6.<sup>33</sup>

Financial institutions face significant constraints in their efforts to combat proliferation financing. Because they often lack full visibility into their clients’ activities, their ability to intervene remains limited. As one analysis notes, “often financial

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<sup>30</sup> Moyara Ruehsen and Leonard Spector, “Follow the proliferation money,” *Bulletin of the Atomic Scientists* 71, iss. 05 (2015), <https://journals.sagepub.com/>.

<sup>31</sup> Togzhan Kassenova, “Challenges with Implementing Proliferation Financial Controls: How Export Controls Can Help,” *Carnegie Endowment for International Peace*, 30 May 2018, <https://carnegieendowment.org/>.

<sup>32</sup> *Combating Proliferation Financing: A Status Report on Policy Development and Consultation* (Paris: Financial Action Task Force, 2010), 18, <https://www.fatf-gafi.org/>.

<sup>33</sup> *Combating Proliferation Financing*, 18–19.

institutions do not know who they are dealing with ... [and] see only a small part of data related to a given transaction, and they do not have the technical expertise to distinguish what is proliferation-relevant and what is not.”<sup>34</sup>

However, Kassenova outlines several measures that could enhance financial institutions’ ability to detect and prevent illicit transactions. She emphasizes that greater scrutiny of automatically flagged telephone numbers, business addresses, and individuals’ biographical details can strengthen oversight. She further recommends: “including information on the line of business in customer profiles and denoting whether business and/or activities involve dual-use and/or military goods ... scanning transactions against ... foreign governments’ proliferation-relevant lists ... [and] adopting technical solutions to monitoring trade finance transactions that are more sophisticated and efficient than a manual review of trade documents.”<sup>35</sup> By implementing these measures, financial institutions can improve their ability to detect proliferation financing, strengthening both their own security and the broader stability of the global economy.

## **Conclusion**

Addressing the challenge of proliferation financing is neither simple nor straightforward. It requires continuous coordination among international organizations and allied nation-states with the authority to enact meaningful change. Moreover, existing systems must undergo significant revitalization—if not complete overhaul—to enhance their effectiveness.

For the international community, diplomacy must remain central to efforts to curb proliferation financing. Engaging with nations to alleviate their internal pressures in exchange for cooperation on export controls—much like North Korea’s historical “nukes for food” negotiations—could provide mutual benefits.<sup>36</sup> This approach would address immediate economic or security concerns while advancing broader nonproliferation objectives.

The financial industry also has a critical role to play. Institutions can shift from manual oversight to more automated solutions, incorporating blockchain technology and artificial intelligence to track suspicious transactions and monitor high-risk entities. Strengthening cooperation with international organizations, law enforcement, and intelligence agencies—as well as adopting more proactive regulatory

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<sup>34</sup> Kassenova, “Challenges with Implementing Proliferation Financial Controls.”

<sup>35</sup> Kassenova, “Challenges with Implementing Proliferation Financial Controls.”

<sup>36</sup> Philip Gourevitch, “Nukes for Food,” *New Yorker*, 29 February 2012, <https://www.newyorker.com/>; and Josh Smith, “North Korea’s Kim talks food not nukes for 2022,” *Reuters*, 31 December 2021, <https://www.reuters.com/>.

compliance and anti–money laundering measures—will further enhance their ability to counter illicit financial activities.

The fight against proliferation financing remains ongoing and will persist as a threat well beyond 2025. However, ensuring that nation–states, financial institutions, and the broader international community treat it as a priority is essential. Only through sustained cooperation and vigilance can the world prevent CBRN weaponry from falling into the hands of malign actors or enabling a hostile state to develop nuclear capabilities for destructive purposes. 🦅

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