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Sanctions and Nonproliferation in North Korea and Iran:

A COMPARATIVE ANALYSIS

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FAS ISSUE BRIEF

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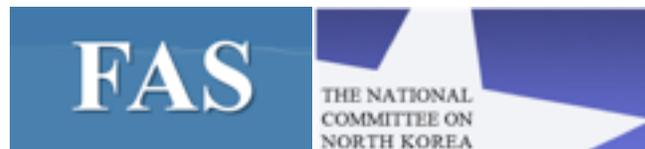
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CONSIDERATIONS FOR POLICYMAKERS

- **Sanctions, used as a hammer rather than a lever, are counterproductive.** The success of a sanctions policy ultimately should not be measured by its breadth or its efficacy in crippling the economy of the target state, but instead by its effectiveness in impeding proliferation and changing the target state's behavior – without incurring unacceptable humanitarian costs. Sanctions have exacted enormous economic costs on both Iran and North Korea and have increased the cost of noncompliance with international nonproliferation norms, but have failed to change either country's nuclear calculus or serve as stepping stones to a diplomatic solution. Economic pressure is only one part of a broader nonproliferation strategy; a heavy emphasis on sanctions alone may undermine diplomacy and perversely strengthen the targeted regime.
- **Inflexible sanctions can backfire.** In order for sanctions to compel policy changes, their target must be confident that compliance will reduce economic pressure and bring about promised incentives. However, various partners within a coalition – within a legislature, the U.N. Security Council, or an *ad hoc* international partnership – may have different views about what objective sanctions should achieve, leading to potential difficulties with their effective imposition and removal. The structure of some sanctions may also be “sticky,” making it difficult to reverse them when necessary. Within the realm of domestic U.S. politics, sanctions legislation allows for some flexibility via executive order, but the layered and overlapping nature of sanctions against Iran and North Korea may diminish the tactical maneuverability of U.S. policy. The dynamics of U.S. politics may also make the provision of promised incentives difficult.
- **China's full implementation of nonproliferation measures is key.** China has emerged as the key gatekeeper to effective sanctions on Iran and North Korea, as it balances nonproliferation and its relations with the West with its economic and geostrategic interests. A significant change in China's overall strategic calculus toward Iran or North Korea, demonstrated by rigorous application of economic pressure, is unlikely to occur anytime soon. However, through active enforcement of existing U.N. sanctions – particularly by strengthening its export control measures and working to stop Iran and North Korea's trade in military and dual-use goods – China could strengthen the existing nonproliferation regime. Additionally, despite Beijing's official policies, financial sanctions may make Chinese firms less likely to do business with either country, while sanctions on Iran's energy sector may lead to Chinese businesses demanding steep discounts.

CONSIDERATIONS FOR POLICYMAKERS (continued)

- **Sanctions scrutiny is essential to avoiding unintended consequences.** In addition to their humanitarian costs, the various unintentional effects of any new sanctions need to be carefully assessed by policymakers, particularly the effects on the internal dynamics of the targeted regime. As leaders in both Iran and North Korea have considered the United States to be inveterately hostile to their regimes, economic pressure may have inadvertently strengthened the position of hardliners in Tehran and Pyongyang, decreasing the likelihood of political or economic reforms in either country. Consequently, the prospect of regime change from below is unlikely, as the Iranian regime has ruthlessly repressed the political opposition and North Korea has single-mindedly stuck to its military-first policy.
- **Sanctions without diplomacy are an exercise in futility.** Proponents of overwhelming sanctions argue that Iran and North Korea respond only to extreme pressure. Yet the major diplomatic reversals in modern history, such as China's opening to Washington or the Camp David Accords between Egypt and Israel, have been results of not only external pressure, but also active diplomacy and changes in the international environment that allow for a readjustment of policy priorities. Previous nuclear concessions, such as Iran's suspension of its enrichment program from 2003 to 2005 or North Korea's freeze of its nuclear activities in 1994, have come about in similar environments. However, in the absence of sustained diplomatic engagement, these openings proved ephemeral.
- **Historical lessons should be learned.** The leadership in both North Korea and Iran is likely to look carefully at recent historical examples of authoritarian regimes making policy changes in exchange for the removal of sanctions. The process of U.S. normalization of its relationship with Vietnam provides a positive example, and current engagement efforts with Burma may lead to a similar outcome. However, the NATO-led intervention in Libya in 2011 provided a strong impetus for North Korea and Iran not to make concessions on their nuclear programs, particularly because Libyan denuclearization was cited as an example for the two to emulate prior to the intervention. Any precedents that the U.S. sets in future actions or negotiations regarding either Iran or North Korea will likely affect the outlook and strategy of the other.
- **Coordination is key for marrying sanctions and diplomacy.** In the U.S. context, multiple agencies and institutions – ranging from the Departments of State and the Treasury, to law enforcement, to the private sector – play interrelated roles in the formulation and execution of economic pressure. Close coordination among these institutions, with policy directed at high levels of government, is therefore necessary to fully integrate sanctions policy with diplomatic efforts. Furthermore, the close inter-governmental coordination of multilateral or U.N. sanctions is vital to the effective implementation of an international sanctions regime.

INTRODUCTION¹

The nuclear programs of North Korea and Iran have been, for many years, two of the most pressing and intractable security challenges facing the United States and the international community. While frequently lumped together as “rogue states,” the two countries have vastly different social, economic, and political systems, and the history and status of their nuclear and long-range missile programs differ in several critical aspects. Nonetheless, the U.S. and international responses to Iranian and North Korean proliferation bear many similarities, particularly in the use of economic sanctions as a central tool of policy. This policy brief aims at assessing the strategic logic and value of sanctions as a tool of nonproliferation by analyzing the history, terms, and efficacy of U.S. and international sanctions on these two states; it also addresses, though not comprehensively, actions taken by other countries, including European states, China, Korea and Japan.

The history of trade and financial sanctions targeting North Korea and Iran demonstrates the variety of ways in which economic pressure has been applied as a tool of coercive statecraft.² Sanctions targeting trade, investment, and finance have been imposed unilaterally by the United States and other nations (independently or through coordinated action), and extraterritorially, through national laws targeting third parties that do business with the target of sanctions. Since 2006, the U.N. Security Council has adopted sanctions resolutions concerning Iran and North Korea in response to their nuclear developments, augmenting existing unilateral measures and spurring new ones. “Smart” sanctions targeting key Iranian and North Korean officials and firms have been imposed alongside broader measures targeting trade and finance. The promise of economic and diplomatic incentives – the economic instruments of attraction – has played a parallel role alongside the threat of sanctions in negotiations with both countries.

Policymakers, pundits, and academics have long debated the efficacy of sanctions. While there is agreement about the circumstances in which sanctions can be most effective – for example, when they are imposed multilaterally, when they target a democratic state, and when they are imposed to bring about modest goals – their broad effectiveness is a matter of fierce contention. A 2007 study of twentieth-century sanctions concluded that they are effective about a third of the time,³ while another study of the same period argues that they have almost never proven effective at directly achieving their stated objectives.⁴ Critics have also argued that extensive sanctions can have an adverse effect: even as they impose a heavy economic burden on a target’s population at large, they may consolidate the regime by creating a rally-around-the-flag effect, empowering hardliners, enfeebling the middle-class, or enabling the elite to profit through black market activities.⁵

The United States, its allies, and the U.N. Security Council have imposed a wide range of sanctions against Iran and North Korea as part of their broader efforts to prevent the proliferation of nuclear weapons and the long-range missiles with which they may be delivered. In formulating these sanctions, there have been some fundamental similarities – as well as notable differences – in scope and strategic purposes. The sanctions regimes have been shaped by domestic and international politics, by perceptions of vulnerabilities within the political economy of each country, and by the evolution of coercive economic tools available to policymakers. In both cases, wide-ranging unilateral U.S. trade sanctions have been complemented by “smart” sanctions targeting key organizations and individuals in order to disrupt illicit activities and cause elite satisfaction, and by financial sanctions impeding the ability of either country to access the international financial system.

Economic pressure has formed one element of a broader U.S. nonproliferation strategy that has also entailed engagement, encouraging reformist policies, and building multilateral coalitions to apply diplomatic pressure. Multiple U.S. agencies and institutions play separate but interlocking roles in the creation and execution of economic pressure, and sanctions have proven most effective when an inter-agency, whole-of-government approach is used to integrate coercive economic and financial measures with diplomacy.⁶ Nonetheless, even if friction is avoided at an institutional level, finding the effective balance between sanctions and other aspects of a strategy to compel policy changes has been a central dilemma of policymaking.

BACKGROUND

Sanctions have played a major role in U.S. efforts for denuclearization in Iran and North Korea over the past two decades, imposed as both punitive and coercive measures. U.S. sanctions on both countries predate major concerns over either's nuclear programs, and have been imposed for a broad range of reasons beyond nuclear activities, including hostile actions, human rights abuses, support for terrorism, and illicit international activities.⁷ In gauging how to apply economic pressure as a tool of nonproliferation, U.S. policymakers have had to find a balance between concerns over proliferation and other undesirable policies; between taking coercive action and considering humanitarian needs; and between taking immediate unilateral measures and seeking to build coalitions for a multilateral approach.

U.N. sanctions on both countries are more recent, imposed since 2006 in parallel waves that echo some language and provisions from one another.⁸ These measures have focused primarily on denying resources and financing for North Korea and Iran's proliferation-related activities, and have (with some exceptions) shied away from provisions intended as a means of general economic coercion. U.N. sanctions on North Korea were adopted in response to the country breaking red lines in its nuclear program, specifically its first and second nuclear tests, as part of an effort to compel the DPRK to abandon its nuclear weapons program, rejoin the Nuclear Non-proliferation Treaty, and comply with its terms. In contrast, U.N. sanctions on Iran are generally less directly linked to specific provocative actions or crises. First adopted in 2006 after Iran's restart of its uranium enrichment program, the successive imposition of these sanctions has largely reflected both the timing of announcements from the International Atomic Energy Agency (IAEA) and the ability of the U.N. Security Council to reach a consensus on further measures to take.

The major difference between the nuclear programs of North Korea and Iran is that the former has abandoned the Nuclear Non-Proliferation Treaty and has tested nuclear devices, while the latter remains within the NPT and continues to claim that its nuclear program is for peaceful purposes. U.S. objectives toward North Korea are increasingly focused on impeding further proliferation or technological advances in the short-term, with complete denuclearization remaining the ultimate goal.⁹ The most recent sanctions on Iran, in contrast, have been implemented with the goal of coercing Iran to suspend its nuclear fuel cycle activities, and to accept stricter and more comprehensive monitoring of its nuclear program. The DPRK is largely cut off from the global economy, while Iran remains a major international energy supplier. As a result, U.S. and U.N. sanctions against Iran are in many ways more extensive than those against North Korea, particularly regarding financial sanctions, and the number of blacklisted institutions and individuals.

NORTH KOREA

The confrontation over North Korea's nuclear program in the early 1990s signaled the centrality of nonproliferation issues to U.S. foreign policy in the post-Cold War era. This conflict was temporarily defused by the 1994 Agreed Framework, which Pyongyang agreed to in the context of its stated desire to establish relations with Washington. Under the agreement, the U.S. promised economic incentives and improved political relations in exchange for denuclearization. While the U.S. was slow to deliver on the promises of improved relations, it did roll back many existing sanctions, despite reluctance from Congress. While in force, the agreement set back North Korea's production of fissile material substantially and eventually led to a brief relaxation in political relations. However, long-standing suspicions of a covert enrichment program in North Korea led to the end of the Agreed Framework after a contentious meeting in October 2002, eventually fostering the creation of the Six-Party Talks framework to find a diplomatic solution to the issue.

As the DPRK withdrew from the NPT and reactivated its plutonium program amid little initial diplomatic progress until late 2005, North Korea came under increasing economic pressure. Multiple government agencies within the U.S. coordinated to establish the “Illicit Activities Initiative” (IAI), which sought to create a parallel track to diplomatic efforts by stopping North Korea’s international criminal activities, such as drug smuggling, counterfeiting, and illicit weapons sales.¹⁰ Japan began to cut its economic ties to North Korea, increasing restrictions and oversight of North Korean ships ferrying between Japan and North Korea and curtailing remittances to North Korea from the Chosen Soren, the pro-DPRK ethnic Korean organization in Japan.¹¹ China and South Korea, prioritizing political engagement with North Korea during this period, did not announce new sanctions on North Korea, although there are reports, which Beijing denies, that China briefly cut off energy shipments to North Korea in March 2003 to prod it toward the negotiating table.¹²

The action with the most far-reaching ramifications during this period was the September 2005 designation of Banco Delta Asia (BDA), a small Macanese bank holding North Korean accounts, as an institution of money laundering concern. Undertaken by the Treasury Department under Section 311 of the Patriot Act in coordination with the IAI, the BDA designation was a response to North Korea’s illicit international activities; U.S. government officials believed that BDA facilitated these activities, acting as a financial node mixing the DPRK’s licit and illicit international transactions.¹³ Responding to a bank run in the wake of the designation, the Macau government froze the North Korean BDA deposits. The designation and a subsequent Treasury Department advisory notice have since led to major international financial institutions refusing transactions with the DPRK, apparently out of the fear of potentially being cut off from the U.S. financial system.

The BDA actions and the frozen accounts became a major source of tension in the Six-Party Talks, arguably undermining diplomacy in 2005 but catalyzing North Korea’s willingness to make concessions two years later. The BDA designation was made concurrently with negotiations leading to the September 19, 2005 Joint Statement on the denuclearization of the Korean Peninsula, the implementation of which was stalled almost immediately after it was issued. North Korea insisted on the return of its frozen accounts before taking any actions on its nuclear program, and it wasn’t until February 2007 that accords on returning the frozen funds and implementing the 2005 agreement were reached. However, the U.S. State Department had difficulty finding financial institutions willing to handle the tainted money in the face of Treasury Department regulations, taking four months to find a workable arrangement. The BDA action and subsequent advisory provided strong evidence that unilateral economic pressure can be very effective when applied under the right circumstances, but also demonstrated the difficulties of balancing nuclear diplomacy with other concerns such as criminal activities.¹⁴

After North Korea tested a nuclear device in October 2006, the U.N. Security Council adopted Resolution 1718, prohibiting states from transferring dual use items, luxury goods, or heavy military equipment to North Korea. However, negotiations through the Six Party Talks framework continued after this test, leading to limited diplomatic achievements and eventually the easing of some unilateral economic pressure from 2007 to 2008. The frozen BDA funds were returned to North Korea following the February 2007 implementation agreement, and South Korea resumed the provision of food and fertilizer aid that it had suspended after the nuclear test. In mid-2008, North Korea submitted a declaration of its plutonium-based nuclear activities and blew up the cooling tower at its Yongbyon nuclear complex; in response, the U.S. terminated the application of the Trading with the Enemy Act with respect to the DPRK, although President Bush also issued an executive order to “continue certain restrictions with respect to North Korea that would otherwise be lifted.”¹⁵ With the North Korean promise that an agreement on verification was forthcoming, the U.S. announced in October that it was removing the designation of North Korea as a State Sponsor of Terror.

North Korea’s withdrawal from the Six-Party Talks and its second nuclear test in 2009, following international condemnation of an attempted North Korean satellite launch using ballistic missile technology, scuttled this limited détente. U.N. Security Council Resolution 1874, which followed the second nuclear test, tightened trade restrictions

and financial sanctions on North Korea. The resolution also called on states to inspect, in their ports and on the high seas, vessels believed to be carrying cargo prohibited by U.N. resolutions on North Korea, and required the seizure and disposal of such cargo when identified. Since the adoption of UNSCR 1874, there have been several high-profile incidents in which North Korean arms have been seized in transit, or in which suspect North Korean vessels have been forced to return to the DPRK while on the high seas.¹⁶

After the sinking of the South Korean naval corvette *Cheonan* in 2010, unilateral economic pressure on North Korea further increased. The United States added to the blacklist of individuals and entities linked to North Korean proliferation and other illicit activities, while Japan placed further restrictions on its already greatly-reduced remittances to North Korea.¹⁷ South Korea closed its sea lanes to North Korean ships and cut off nearly all bilateral trade and assistance, with the significant exception of the Kaesong Industrial Complex.¹⁸ Other than abandoning Kaesong, which the South Korean government continues to value for symbolic, diplomatic, and economic reasons,¹⁹ the U.S. and its East Asian allies may have few means of directly putting additional economic pressure on North Korea. The U.S. might target additional financial institutions linked to illicit North Korean activities under Section 311 of the Patriot Act, or declare the DPRK government a money-laundering concern (as it has done with Iran and Burma). However, such measures may not be as effective as the BDA sanctions were, as many foreign banks are already wary of doing business with the DPRK and as North Korea has likely taken steps to obscure and diversify its foreign bank transactions in the wake of the Treasury Department's Advisory.²⁰

IRAN

U.S. sanctions on the Islamic Republic of Iran were initiated with a freeze on Iranian assets in response to the 1979 hostage crisis; during the 1980s, the Reagan administration imposed increasingly strict trade sanctions on Iran due to its support for terrorism. As the Clinton administration began its tentative engagement with North Korea under the Agreed Framework in the mid-1990s, unilateral U.S. sanctions on Iran further expanded, prompted by strong Congressional support for such measures and vigorous lobbying by organizations including the American Israel Public Affairs Committee. Unilateral U.S. trade restrictions with Iran culminated with a ban on nearly all U.S. trade and investment under Executive Order 12959, issued in May 1995 in order to preempt a Congressional initiative to enact such a ban legislatively.²¹

In response to Iran's opening of its energy sector to foreign investment, Congress passed the Iran and Libya Sanctions Act (ILSA) in 1996, marking the beginning of a long-running effort to internationalize sanctions on Iran's energy sector.²² This legislation called for the application of extraterritorial sanctions in which the U.S. would restrict business with any foreign firm that invested in Iran's petroleum sector. While this legislation may have made some potential investors wary of dealing with Iran, its attempt to marshal foreign cooperation through the threat of third-party sanctions opened significant fissures between the U.S. and its allies. Both the Clinton and Bush administrations repeatedly issued waivers rather than enforce the extraterritorial sanctions imposed by ILSA, demonstrating the limits of the U.S. commitment to sanctions.²³

Some unilateral U.S. sanctions against Iran were revoked toward the end of the Clinton administration in the hope of engaging the reformist government of President Mohammad Khatami. However, the Bush administration rejected this approach, and later ignored Iranian overtures for improved relations, particularly as concerns over Iran's nuclear program increased with the public revelation of the Natanz enrichment facility and Arak heavy water reactor in 2002. Britain, France, and Germany took major roles in nuclear negotiations with Iran during the latter years of the Khatami administration, leading to Iran's temporary suspension of its enrichment program and the voluntary implementation of the IAEA Additional Protocol. (Iran's alleged nuclear weaponization efforts are also believed to have been suspended during this period.)

Like the Agreed Framework, however, this achievement had shallow roots, and fell apart after a more permanent agreement could not be reached. In the wake of Iran's resumption of uranium enrichment, successive U.N. resolutions called on the country to suspend the program, and imposed increasingly strict sanctions. While these measures targeted institutions connected to Iranian proliferation activities – such as the Revolutionary Guard Corps, the Islamic Republic of Iran Shipping Lines, and Iranian banks associated with proliferation activities – they did not directly affect the country's all-important petrochemical sector. After the restart of Iran's enrichment activities, the U.S. Treasury Department also began a campaign to compound the economic pressure on Iran by pressing foreign banks to cut their relations with Iran, citing the financial and reputational risks of doing business with the country.²⁴

After a brief period of outreach in 2009, the Obama administration – at times pressed by Congress – has taken sanctions against Iran to new heights by mustering international support for major sanctions on Iran's energy and financial sectors. In June 2010, the U.N. Security Council adopted Resolution 1929, strengthening asset freezes on Iranian institutions, calling for the inspection of suspect Iranian cargo, and calling on states to take action against Iranian banks linked to proliferation activities. After the adoption of this measure, the EU, Canada, Japan, and South Korea announced bans on new investments in Iran's energy sector. In the United States, the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (CISADA) updated the Iran Sanctions Act, widening the scope of foreign transactions with Iran that could trigger sanctions and targeting firms selling refined gasoline to Iran. The Obama administration, under pressure from Congress to break with its predecessors, proceeded with enforcing extraterritorial sanctions on firms investing in Iran's energy sector, and additionally imposed sanctions on firms selling gasoline to Iran under the terms of CISADA.²⁵

The Obama administration has also continued the Bush administration's campaign to pressure international banks against doing business with Iran, identifying Iran as a “jurisdiction of primary money laundering concern” under Section 311 of the Patriot Act in November 2011. These actions, combined with signals of unity from key U.S. allies, led to the passage of legislation in late 2011 calling for the U.S. to cut off relations with Iran's Central Bank.²⁶ The Obama administration's approach has clearly had a major impact on Iran's economy, leading to the cutoff or reduction of oil shipments to much of Europe, isolation from key global financial institutions, and significant inflation within Iran. The push by the administration and the EU to sever Iran's links to the international financial system led to SWIFT (the Belgian-based financial messaging network) cutting off relations with all Iranian banks, and Chinese investors pulling out of the Iran-Pakistan pipeline due to the fear of losing access to the U.S. market.²⁷ However, it remains to be seen whether such pressure can be sustained amid high energy prices, and more fundamentally, whether concentrated economic pressure – as a component of a broader strategy – will compel Tehran to change deeply-held policies.

THE OBJECTIVES OF THE SANCTIONS REGIMES

The primary objective of the sanctions in place against Iran and North Korea is to compel the countries to abandon their proliferation-sensitive nuclear activities, a goal which remains elusive. Additionally, the sanctions have several secondary objectives, including containing the regimes by degrading their military capacity and denying them access to vital resources such as dual-use technologies; and creating a moral hazard by penalizing illicit or provocative behavior while setting a precedent to deter other states. Sanctions have also been imposed in part to satisfy domestic constituencies, as they often present a way to meet demands for punitive action when few feasible alternatives are available to policymakers.

The containment-related objectives of the sanctions regimes against Iran and North Korea are the measures that target trade in nuclear, missile, and military technologies, making proliferation more difficult and costly. The Iran, North Korea, and Syria Nonproliferation Act is a cornerstone of U.S. nonproliferation efforts in this regard, imposing extraterritorial sanctions on entities that supply WMD-related technology to the targeted states. U.N. sanctions against North Korea and Iran prohibit the transfer or supply of nuclear- or missile-related technology or dual-use

goods, and have also sought to curb their trades in conventional arms. Additionally, sanctions on conventional arms have been imposed both as a punitive action and as a means to dry up the revenue streams that support nuclear and missile activities in Iran and North Korea; Iran's Revolutionary Guard Corps and the Korean People's Army both conduct extensive international business activities through front companies as a source of funding.

The most recent U.N. sanctions against Iran and North Korea incorporate aspects of the Proliferation Security Initiative, calling on states to inspect ships in their territory and to consent to the inspection of their flag ships at sea when they are suspected of carrying banned Iranian or North Korean cargo. States are obliged to seize and dispose of cargo violating U.N. resolutions. Since the adoption of these initiatives, there have been several seizures of North Korean and Iranian arms in transit.²⁸

Financial sanctions and asset freezes against Iran and North Korea have also been extensively implemented, first as targeted measures intended to counter proliferation or black market activities, and more recently as means to reduce the two countries' abilities to participate in the world economy. Asset freezes (and related travel bans) of targeted individuals and organizations have been frequently used as components of "smart sanctions," aiming to cause the disruption of international supply and personnel networks and precipitate elite dissatisfaction rather than collectively coerce a target's population.²⁹ However, targeted organizations in both North Korea and Iran have responded to sanctions by working through aliases, front groups, and subsidiaries; the result has been a cat-and-mouse game of enforcement and evasion.

In contrast to targeted asset freezes, sanctions targeting financial transactions have an inherently broad reach, affecting both legitimate and illicit international transactions. Unilateral U.S. financial sanctions, which threaten to prevent firms doing business with the targeted country from accessing the U.S. financial system, may be more effective than trade sanctions, given the global role of the dollar and the importance of the U.S. market to financial services companies. While the U.S. has nearly no trade ties to Iran or North Korea, and therefore little direct leverage in applying trade sanctions, financial sanctions and other financial measures can have a substantial impact – still with only a limited cost to U.S. economic interests. Additionally, while unilateral trade sanctions give third-country firms a perverse incentive to conduct business with the sanctioned party due to the likelihood of heightened profits, U.S. financial sanctions give international banks a strong incentive for compliance, given the risks of being isolated from the U.S. financial system.³⁰ The U.S. Treasury Department began to realize the full potential of this tool only relatively recently, with the unexpected impact of the 2005 Banco Delta Asia case encouraging similar efforts against Iran.³¹

The major differences in the strategic calculi for imposing heavy sanctions on Iran and North Korea lie in the fact that Iran, as a major exporter of oil and natural gas, is deeply integrated in the international economy. Iran's petroleum industry gives foreign actors a major source of leverage, but injects economic interests, particularly of U.S. allies, into attempts to formulate multilateral action. The U.S. has nearly no direct economic links to Iran, and therefore is affected by the imposition of new sanctions only insofar as they effect global market prices, yet several of its key allies in Europe and Asia have historically been heavily reliant on Iranian oil. This dynamic has led for the need for the U.S. to prioritize its international strategic goals. The Clinton and Bush administrations, for example, repeatedly opted for waiving rather than enforcing extraterritorial provisions of the Iran Sanctions Act against foreign companies. With key U.S. allies increasingly concerned about Iran's nuclear activities, and under strong pressure from Congress, the Obama administration has proved to be more determined to sanction foreign violators. Nevertheless, Washington may come under pressure to issue waivers to allies such as Turkey and South Korea, particularly if energy prices remain high.

While entrenched economic interests shape much of the international diplomacy toward Iran, divergent views on multilateral action against North Korea stem primarily from geopolitical and strategic disagreements. Although sanctions are seen as a necessary response to the country's nuclear activities and bellicose behavior, economic reform is believed by its neighbors to be a necessary precursor to greater openness within the country and reduced

tensions in the region. The economic cost of reunifying with North Korea is a pressing concern for many South Korean policymakers. Even amidst recent high inter-Korean tensions, the Kaesong Industrial Complex has continued to move South Korean capital across the DMZ. China has a major interest in maintaining regional stability, and does not want to see a North Korean internal collapse leading to a unified, U.S.-allied Korea along its border. Humanitarian concerns, and the memory of the Kim regime maintaining power even during the severe North Korean famine of the 1990s, raise additional doubts about the efficacy of coercing North Korea through economic pressure alone.

One significant, and inadvertent, similarity between the effect of international sanctions on Iran and North Korea is that economic and diplomatic isolation has led to increasing Chinese influence in both countries. China has become a dominant trading partner of both Iran and North Korea, giving it significant leverage both in its relations with those two countries and with the United States. While nonproliferation clearly matters to Beijing, it appears its value is secondary to China's broader economic and strategic goals, or that China approaches its nonproliferation agenda in a very different way from the U.S. China has used its position on the U.N. Security Council to delay or weaken sanctions, while choosing to loosely or selectively enforce them. Still, the West needs to work with China to use its leverage to intensify diplomatic efforts with both Iran and North Korea.

SANCTIONS BY SECTOR

Energy

- **Iran:** Energy exports comprise the vast majority of Iran's total exports, and provide most of the government's revenue; unilateral sanctions imposed by the U.S., EU, and other countries have targeted Iran's energy sector in order to cut off the state's jugular revenue vein. The U.S. has banned the import of Iranian oil since 1987, and the Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA) sanctions foreign investment in Iran's energy sector. CISADA also targets firms that sell gasoline to Iran, as Iran's Achilles' heel was believed to be its narrow refining capacity and strong dependence on imported gasoline. During the past two years, however, Iran circumvented sanctions on its gasoline imports by increasing its domestic production and removing consumer subsidies.³² A combination of domestic nonproliferation concerns and well-calibrated U.S. diplomacy have brought the European Union, South Korea, Japan and other major buyers of Iranian oil on board with a graduated halt to importing Iranian energy. Once the EU embargo of Iranian oil is fully implemented, Iran's oil sales may fall as much as 40%.³³ U.N. sanctions do not target Iran's energy sector as such, but UNSCR 1929 notes a "potential connection between Iran's revenues derived from its energy sector and the funding of Iran's proliferation-sensitive nuclear activities," as well as the potential for some equipment to be used in both the petrochemical industry and nuclear fuel cycle facilities.

- **North Korea:** As an energy importer plagued with regular power shortages, the DPRK is vulnerable to potential sanctions on its energy imports. However, there are no U.S. or U.N. sanctions that specifically target this sector, although incentives offered in exchange for North Korean denuclearization have centered on energy assistance. China, which provides the vast majority of the DPRK's energy imports, is unlikely to apply pressure on its energy sector for an extended period.³⁴ However, there are rumors that Beijing briefly cut off energy exports to the DPRK in response to its withdrawal from the NPT in 2003 and after its 2006 missile test (China denied reports of the cutoff in both instances).³⁵ If China did indeed suspend its energy shipments in an attempt to quietly pressure the DPRK, the tactic yielded mixed results, with North Korea coming to the bargaining table after the first instance and conducting its first nuclear test after the second.

Banking and Finance

- **Iran:** U.S. and other financial sanctions on Iran are more extensive than those on North Korea, reflecting Iran's greater integration into the global economy. Recent U.S. efforts to sanction the Central Bank of Iran symbolize a new phase in the standoff over Iran's nuclear program, and have the potential to significantly damage Iran's economy by cutting off much of its revenues from energy exports. While these financial sanctions have already had a wide-ranging impact in several crucial aspects, the full impact of these measures remains to be seen.

For example, the extent of U.S. willingness to grant waivers to these sanctions to allies; Iran's ability to evade these sanctions through creating new financial mechanisms; and the long-term impact of sanctions on the global petroleum market will all influence the outcome. The EU has also sanctioned Iran's Central Bank, leading the financial messaging service SWIFT to cut off relations with Iranian banks. U.N. resolutions against Iran require states to freeze the assets of institutions and individuals with connections to Iran's nuclear activities. These resolutions also call on, but do not require, states to refrain from providing financial assistance to Iran for non-humanitarian purposes, and to deny any financial services that could contribute to Iranian proliferation activities.

- **North Korea:** A combination of North Korea's history of debt defaults, its illicit activities including counterfeiting currency and laundering money through foreign banks, and international and unilateral sanctions have largely severed the country's ties to the international financial system. As a result, North Korea has increasingly turned to novel ways of acquiring hard currency from abroad (such as opening an international chain of restaurants), in addition to its black market activities and arms sales. The 2005 Treasury Department advisory notice regarding Banco Delta Asia made financial institutions extremely wary of conducting business with North Korea, to the extent that the U.S. State Department had difficulties convincing foreign and domestic banks to act as intermediaries in returning North Korea's unfrozen BDA funds in 2007. In 2004, prior to the BDA designation and Treasury Department advisory, North Korea's only bank located in Europe, the Golden Star Bank in Vienna, was shut down by the Austrian government.³⁶ UNSCR 1718 obliges states to freeze the assets of entities linked to North Korea's nuclear program, and UNSCR 1874 further calls on states not to provide financial assistance to North Korea except for humanitarian or development purposes, and to deny any financial services that could contribute to the DPRK's proliferation activities.

Shipping and Cargo Inspections

- **Iran:** Sanctions have had a major effect on Iran's shipping sector, both directly through sanctions on the Islamic Republic of Iran Shipping Line (IRISL) and indirectly through measures related to banking, insurance, and Iran's energy industry. The U.S. and EU ban business with the IRISL outright; after the EU decision to sanction Iran's energy sector in early 2012, insuring Iranian ships carrying oil has also become a very complicated endeavor.³⁷ Iran Air is also under sanctions from the EU and the U.S., and the state-run company's difficulties in buying replacement parts for its aging fleet has become a major point of contention for Iran. U.N. sanctions call for freezing some IRISL assets, and prohibit states from servicing vessels that are believed to carry illicit cargo; UNSCR 1929 also calls on states to inspect suspect cargo coming to or from Iran in their territory, to seize and dispose of illicit cargo, and to assist with inspections of vessels on the high seas.

- **North Korea:** North Korea's shipping industry is very small compared to that of Iran, but owing to limited overland infrastructure, maritime trade – and air shipping to a lesser extent – is vital to the country's licit and illicit international trade.³⁸ A U.S. executive order issued subsequent to North Korea's removal from Trading with the Enemies Act sanctions prohibits owning, leasing, operating, or insuring any DPRK-flagged vessel.³⁹ UNSCR 1874 calls on states to inspect suspect cargo coming to or from North Korea, to seize and dispose of illicit cargo, and to assist with inspections of vessels on the high seas. It goes beyond similar U.N. sanctions on Iran by also requiring flag states to direct their ships to a local port for inspection should they refuse to give permission on the high seas. After the adoption of this resolution, there have been several high-profile interceptions of ships carrying prohibited goods to countries including Syria and Myanmar.⁴⁰ The U.N. Panel of Experts on North Korea has argued that, since the adoption of UNSCR 1874, North Korea has increasingly relied on foreign-owned and -flagged vessels as intermediaries to deliver illicit goods to recipient countries. North Korea's state-run airline, Air Koryo, has also been charged with abetting sanctions violations, but its limited flight destinations provides third parties with few sources of leverage.⁴¹

Ballistic Missile, Nuclear, and Dual-Use Technologies

- The containment-related aspects of the sanctions regimes targeting Iran and North Korea aim to prevent the transfer of proliferation-sensitive technology to or from the two countries. The Iran, North Korea, and Syria Nonproliferation Act authorizes extraterritorial U.S. sanctions on foreign entities and persons that supply the eponymous countries with WMD or dual-use goods and technology. U.N. Security Council Resolutions concerning North Korea and Iran also ban the transfer of missile, nuclear, and dual-use goods and technology, as defined by the Nuclear Suppliers Group. However, U.N. resolutions on Iran's nuclear program carve out exceptions for the provision of light-water reactors and related fuel and material, reflecting Russia's ongoing involvement with the Bushehr nuclear power plant.

Military Equipment

- **Iran:** Energy exports have financed Iran's conventional arms purchases, and Iran's arms transfers to groups such as Hezbollah and Hamas have been a major point of contention with the West. Russia and China have traditionally been the Islamic Republic's most important suppliers of military goods,⁴² and North Korea has contributed to the development of its missile program. UNSCR 1929 banned the transfer of heavy weapons, as well as related material and services, to Iran. Russia notably implemented the resolution's sanctions by freezing a contract for the delivery of S-300 surface-to-air missile systems. Although Iran has sought to boost its domestic weapons production, the continued enforcement of an arms embargo has the potential to significantly degrade its overall military capabilities.⁴³

- **North Korea:** Arms sales are a major component of North Korea's foreign trade. UNSCR 1874 imposes a near-total arms embargo on North Korea, banning the transfer of all arms out of the DPRK and all but light arms into the country. However, a report from the U.N. Panel of Experts on DPRK sanctions indicates that, despite several interdictions of missiles and conventional arms, North Korea continues to export these goods.⁴⁴ Iran is believed to be one of the DPRK's major partners in this trade.

Other Goods

- **Iran:** Although non-US sanctions on Iran have, for the most part, not targeted trade in non-energy goods, the combination of declining oil exports and financial sanctions may disrupt Iran's overall economy and trade relations. The U.S. restricts nearly all bilateral trade with Iran, with a few exceptions for the export of items including humanitarian goods, food, and medicine. From 2000 to 2010, the import of some Iranian goods into the U.S., including luxury items such as carpets and caviar, was permitted. U.N. sanctions on Iran have not directly targeted trade in goods unrelated to the country's military or nuclear program.
- **North Korea:** International and unilateral sanctions, along with reductions in humanitarian aid, have left North Korea increasingly reliant on China for trade and investment. U.S. and Japanese sanctions on the DPRK tightly restrict trade in nearly all goods except for humanitarian items. South Korea, which under the 1998-2008 Sunshine Policy provided significant aid to the North, has since cut most of its economic ties, with the very significant exception of the Kaesong Industrial Complex. UNSCR 1718 includes a provision requiring states not to sell luxury goods to North Korea. These goods, arguably, play an important role in the political economy of the DPRK, helping to buy loyalty in an elite patronage system. The effectiveness of these sanctions, however, is questionable, particularly because individual countries are left to define such items. For example, Russia does not count watches valued under \$2,000 or fur coats under about \$10,000 as luxury goods; China does not publish any such list, and does not appear to meaningfully enforce the provision.⁴⁵

ENDNOTES

- ¹ The authors would like to thank Peter Crail, Charles Ferguson, Karin Lee, and James Walsh for their helpful comments on this paper. They would also like to thank the Ploughshares Fund and The Carnegie Corporation of New York for supporting this research.
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APPENDIX: TIMELINE OF SANCTIONS AND DEVELOPMENTS IN IRAN'S AND NORTH KOREA'S NUCLEAR PROGRAMS

Iran		North Korea
<p>1953: Following a British-led embargo on Iranian oil, Prime Minister Mohammad Mosaddegh overthrown in coup.</p> <p>1957: U.S. and Iran sign a civil nuclear cooperation agreement under the Atoms for Peace program.</p>	1950s	<p>1950: Korean War begins; U.S. institutes total embargo on exports to North Korea.</p>
<p>1967: Tehran Nuclear Research Center constructed.</p> <p>1968: Iran signs NPT.</p>	1960s	<p>1965: Revised U.S. Export Administration Regulations places DPRK on the list of most restricted countries.</p>
<p>1974-1978: The Shah's government purchases nuclear reactors and technology from the U.S., France, and Germany.</p> <p>1979: Islamic Revolution topples the Shah. Iran's new government says it does not need nuclear power, and ends cooperation with the U.S. and Europe.</p> <p>1979: Hostage crisis leads to U.S. freezing Iranian assets and suspending oil imports.</p>	1970s	
<p>1980: Carter administration bans almost all trade and travel to Iran.</p> <p>1981: Algiers Accords end hostage crisis; U.S. lifts sanctions and unfreezes some Iranian assets; Iran-U.S. Claims Tribunal established.</p> <p>1983: U.S. and French Peacekeepers killed in Beirut bombings; Iran is linked to the attack.</p> <p>1984: Iran listed as State Sponsor of Terror by State Department</p> <p>1984-1987: Iraqi bombing heavily damages uncompleted Bushehr Reactor</p> <p>1987: The Reagan administration bans nearly all imports from Iran.</p>	1980s	<p>1980: North Korea begins construction of experimental reactor at Yongbyon.</p> <p>1983: North Korean agents attempt to assassinate South Korean president in bombing in Rangoon.</p> <p>1985: DPRK signs NPT under Soviet pressure.</p> <p>1987: Korea Airlines Flight 858 bombed by North Korean agents.</p> <p>1988: North Korea listed as State Sponsor of Terror by State Department.</p>
<p>1992: Iran-Iraq Arms Nonproliferation Act signed into law in U.S.</p> <p>1995: Iran signs contract with Russia to build LWRs at Bushehr.</p> <p>1995: Executive Order 12959 bans U.S. trade and investment in Iran.</p> <p>1996: Iran and Libya Sanctions Act signed into law in U.S.</p> <p>1997: Mohammad Khatami elected president of Iran. Some U.S. sanctions are relaxed in the following years.</p>	1990s	<p>1992: IAEA inspectors visit North Korea for the first time. Inspectors are blocked from key sites, and find evidence of unreported plutonium production.</p> <p>1993: North Korea announces its planned withdrawal from NPT, leading to the adoption of UNSCR 825. North Korea suspends its withdrawal before it takes effect.</p> <p>1994: U.S. and North Korea sign the Agreed Framework.</p> <p>1995: U.S. begins to allow limited commerce and trade with North Korea</p> <p>1998: South Korea begins Sunshine Policy, greatly increasing trade, political contacts, and aid to the North.</p> <p>1998: North Korea test-fires a missile over Japan.</p> <p>1999: DPRK announces moratorium on missile tests; U.S. trade and travel restrictions eased.</p>

Iran		North Korea
March: <i>Iran Nonproliferation Act signed into law in U.S.</i>	2000	
August: <i>Iran and Libya Sanctions Act renewed.</i>	2001	
<p>January: Iraq, Iran, and North Korea named as an “axis of evil” in State of the Union address.</p> <p>August: Secret uranium enrichment facility in Natanz and heavy water facility in Arak publicly revealed.</p> <p>September: Russian technicians begin construction of Iranian nuclear reactor at Bushehr.</p>	2002	<p>January: Iraq, Iran, and North Korea named as an “axis of evil” in State of the Union address.</p> <p>September: North Korea admits to abducting Japanese citizens in summit with Prime Minister Junichiro Koizumi.</p> <p>October: U.S. accuses North Korea of having a secret uranium enrichment program, violating the Agreed Framework.</p> <p>December: North Korea reactivates its Yongbyon reactor and expels IAEA inspectors.</p>
<p>May: Iran proposes to provide full transparency on its nuclear program and cooperate on several other matters in return for ending all U.S. sanctions on Iran. The U.S. dismisses the proposal.</p> <p>September: IAEA announces that Iran had breached its safeguards agreement, and calls on Iran to fully declare its nuclear activities.</p> <p>October: Iran says it will suspend its uranium enrichment program, and sign and implement the IAEA Additional Protocol.</p>	2003	<p>January: North Korea withdraws from the NPT.</p> <p>April: Delegations from North Korea, the U.S. and China begin talks in Beijing on North Korea's nuclear program.</p> <p>August: First round of Six-Party Talks held in Beijing, ends inconclusively.</p>
November: Iran agrees to suspend most of its uranium enrichment under a deal with the EU.	2004	June: Golden Star Bank in Vienna, North Korea's only bank in Europe, suspends its operations.
<p>June: Mahmoud Ahmadinejad is elected President of Iran.</p> <p>July-August: Iran negotiates with France, Germany, and the United Kingdom over IAEA monitoring and fuel enrichment.</p> <p>August-September: Iran resumes uranium conversion at its Isfahan plant. IAEA finds Iran in violation of the NPT.</p>	2005	<p>September: <i>The U.S. Department of Treasury designates Banco Delta Asia in Macau an institution of “money laundering concern”; Macanese authorities freeze DPRK accounts.</i></p> <p>September 19: North Korea commits to abandon its nuclear program and return to the NPT in return for security guarantees and economic assistance.</p> <p>December 13: <i>The U.S. Department of Treasury issues an advisory warning U.S. and international financial institutions to “guard against the abuse of their financial services by North Korea.”</i></p>
<p>January: Iran breaks IAEA seals at its Natanz nuclear research facility.</p> <p>February: IAEA votes to report Iran to the U.N. Security Council.</p> <p>June: P5+1 negotiations begin.</p> <p>July 31: UNSCR 1696 adopted</p> <p>August 31: U.N. Security Council deadline for Iran to halt its work on nuclear fuel passes. IAEA says Tehran has failed to suspend the program.</p> <p>September: <i>Iran and Libya Sanctions Act renewed as Iran Sanctions Act</i></p> <p>Dec 23: UNSCR 1737 adopted</p>	2006	<p>March: A North Korean delegation visits the U.S. to discuss the BDA designation; the meeting is inconclusive.</p> <p>July 4: North Korea test-fires several missiles, including a long-range Taepodong missile.</p> <p>July 15: UNSCR 1695 adopted</p> <p><i>October: The North Korea Nonproliferation Act, amending the Iran and Syria Nonproliferation Act, is signed into law in the U.S.</i></p> <p>October 9: North Korea conducts first nuclear test</p> <p>October 13: Japan announces sanctions, including bans on North Korean imports and North Korean vessels docking at Japanese ports.</p> <p>October 14: UNSCR 1718 adopted</p> <p>December: <i>US. imposes “Glenn Amendment” and new Atomic Energy Act sanctions.</i></p>

Iran		North Korea
<p>February: IAEA says Iran failed to meet a deadline to suspend uranium enrichment.</p> <p>March 24: UNSCR 1747 adopted</p> <p>May: IAEA reports that Iran has expanded its enrichment program in defiance of Security Council demands.</p> <p>June: Iran agrees to allow inspectors to visit the Arak nuclear plant following IAEA talks.</p> <p>October: <i>The U.S. announces new sanctions targeting Iran's Revolutionary Guard and three Iranian banks.</i></p> <p>December: U.S. National Intelligence Estimate says Iran halted its nuclear weapons program in 2003, but is keeping the option of developing weapons open.</p>	<p>2007</p>	<p>Feb 13: Six-Party Talks lead to agreement to shut down Yongbyon reactor in return for aid and the removal of sanctions.</p> <p>July: IAEA inspectors verify shutdown of North Korea's Yongbyon reactor.</p> <p>October: Pyongyang commits to disable three nuclear facilities and declare all its nuclear programs by year-end.</p> <p>December: Lee Myung-bak elected President of South Korea, marking an end of the Sunshine Policy of unconditional aid.</p>
<p>February: Iran launches a rocket designed for satellite launch.</p> <p>March 4: UNSCR 1803 adopted</p> <p>May: IAEA says Iran is still withholding information on its nuclear program.</p> <p>July: Iran test-fires a new version of the long-range Shahab-3 missile.</p> <p>August: Iran says it has successfully launched a test rocket capable of carrying a satellite into space.</p> <p>September 27: UNSCR 1835 adopted.</p>	<p>2008</p>	<p>January: U.S. says North Korea has failed to meet end-of-2007 deadline on declaring nuclear activities.</p> <p>June: North Korea makes a declaration of its nuclear assets.</p> <p>June: <i>President Bush lifts North Korea sanctions under Trading with the Enemy Act.</i></p> <p>August: Kim Jong-il suffers a near-fatal stroke.</p> <p>October 11: <i>U.S. removes North Korea from list of state sponsors of terrorism</i></p>
<p>June: Iran's opposition protests following Mahmoud Ahmadinejad's reelection, claiming the election to have been fraudulent.</p> <p>September: Secret Iranian enrichment facility outside of Qom revealed.</p> <p>September: Iran test-fires a series of medium- and longer-range missiles.</p> <p>October: Five permanent U.N. Security Council members plus Germany offer Iran proposal to enrich its uranium abroad; Iran rejects the P5+1 proposal.</p>	<p>2009</p>	<p>January: <i>The Obama administration authorizes sanctions on three North Korean firms.</i></p> <p>April 5: Attempted North Korean satellite launch.</p> <p>April 13: The U.N. Security Council issues a Presidential Statement saying the launch contravened UNSCR 1718.</p> <p>May 25: 2nd North Korean nuclear test.</p> <p>June 12: UNSCR 1874 adopted</p>
<p>May: Iran, Brazil, and Turkey broker a fuel swap agreement to reduce Iran's LEU stockpile. Western states claim the deal will not stop Iran's enrichment capabilities.</p> <p>June 9: UNSCR 1929 adopted</p> <p>September: <i>U.S. imposes sanctions against eight senior Iranian officials for human rights violations.</i></p>	<p>2010</p>	<p>March: Sinking of South Korean warship Cheonan.</p> <p>July: <i>U.S., Japan, and South Korea announce new sanctions on North Korea.</i></p> <p>November: North Korea reveals advanced enrichment facility and under-construction light-water reactor to U.S. delegation.</p> <p>November 23: North Korea shells Yeonpyeong island.</p>

Iran		North Korea
<p>September: Iran announces that the Bushehr nuclear power station has been connected to the national grid.</p> <p>November: IAEA releases report saying Iran's nuclear program has military dimensions.</p> <p>December: <i>U.S. passes sanctions on Iran's central bank, and the EU pledges to end oil imports from Iran.</i></p>	2011	<p>December 17: Death of Kim Jong-il</p>
<p>February: IAEA inspectors leave Iran after being denied access to Parchin site.</p> <p>March: Iranian banks denied access to SWIFT messaging service.</p> <p>March: Chinese bank pulls out of a deal to finance Iran-Pakistan pipeline.</p> <p>April: P5+1 talks resume in Istanbul.</p>	2012	<p>February 29: North Korea announces moratorium on nuclear activities and missiles launches.</p> <p>April: North Korea attempts satellite launch; <i>UNSC Presidential statement condemns the launch and calls for designating new entities for sanctions.</i></p>

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The U.S. Treasury Department maintains a list of laws, executive orders, and other measures concerning sanctions on North Korea at

<http://www.treasury.gov/resource-center/sanctions/Programs/pages/nkorea.aspx>. The Treasury Department also maintains a list of special measures taken under Section 311 of the Patriot Act at http://www.fincen.gov/statutes_regs/patriot/section311.html.

The Security Council Committee established pursuant to Resolution 1718 (2006) website (<http://www.un.org/sc/committees/1718/index.shtml>) contains a number of documents, country and expert panel reports, regulations, and other resources concerning UN sanctions on North Korea.

Iran: A useful overview of current U.S. sanctions legislation concerning Iran, as well as a list of entities sanctioned under U.N. resolutions and U.S. laws and executive orders and a comparison of the sanctions policies of various countries, can be found in Kenneth Katzman, "Iran Sanctions," Congressional Research Service Report for Congress, March 28, 2012.

The U.S. Department of the Treasury maintains a list of laws, executive orders, and other measures concerning Iran at

<http://www.treasury.gov/resource-center/sanctions/programs/pages/iran.aspx>. The European Commission's webpage on EU-Iran trade contains information on relevant sanctions, as well as trade statistics; it is available at http://ec.europa.eu/trade/creating-opportunities/bilateral-relations/countries/iran/index_en.htm.

The Security Council Committee established pursuant to Resolution 1737 (2006) website (<http://www.un.org/sc/committees/1737/>) contains a number of documents, country and expert panel reports, regulations, and other resources concerning UN sanctions on Iran.

FAS ISSUE BRIEFS



A Nuclear-Free Mirage
(2011 September 26)

Charles P. Blair, Senior Fellow on State and Non-State Threats, interviewed Federation of American Scientists' Senior Fellow for Nuclear Policy Dr. Robert Standish Norris. The report takes a deeper look at the nuclear policies of the Obama administration—policies that Dr. Norris terms “radical” with regard to their vision of a nuclear weapon free world.

The B61 Life-Extension Program: Increasing NATO Nuclear Capability and Precision Low-Yield Strikes
(2011 June)

A modified U.S. nuclear bomb currently under design will have improved military capabilities compared with older weapons and increase the targeting capability of NATO's nuclear arsenal. The B61-12, the product of a planned 30-year life extension and consolidation of four existing versions of the B61 into one, will be equipped with a new guidance system to increase its accuracy. As a result, the U.S. non-strategic nuclear bombs currently deployed in five European countries will return to Europe as a life-extended version in 2018 with an enhanced capability targets.

Using Enrichment Capacity to Estimate Iran's Breakout Potential
(2011 January 21)

While diplomats and officials claim Iran has slowed down its nuclear drive, new analysis shows that Iran's enrichment capacity grew during 2010 and warns against complacency as five world powers resume talks this week.



Will Iran Give Up Twenty Percent Enrichment?
(2010 July 22)

Since February, Iran has been enriching uranium to concentrations of 20 percent U-235. A stockpile of 130 kg of 20 percent enriched uranium would reduce, by more than half, Iran's time to develop a bomb. A key unknown is whether Tehran will stop the higher enrichment and, if so, under what circumstances.

WWW.FAS.ORG/PUBS/BRIEFS.HTML

Recommendations for the U.S. Delegation to the NPT Review Conference
(2010 April 29)

The Nuclear Non-Proliferation Treaty (NPT) has endured as the cornerstone of the non-proliferation regime and remains the only legally binding multilateral agreement on nuclear disarmament. In May 2010, the NPT Review Conference met at the United Nations and provided a critical opportunity to advance the vision President Obama laid out of a world free of nuclear weapons.



The Twenty Percent Solution: Breaking the Iranian Stalemate
(2010 April 16)

President Obama's deadline to address concerns about Tehran's nuclear program passed at the end of 2009, so the White House is moving to harsher sanctions. But the U.S. is having trouble rallying the needed international support because Iranian intentions remain ambiguous

Eight Recommendations for Improving Transparency in US Arms Transfers
(2010 January 8)

Transparency is essential for effective congressional and public oversight of arms exports. Without complete and accurate data on the quantity, type and recipients of exported defense articles and services, it is impossible to assess the extent to which arms transfers further national security and foreign policy.



Calculating the Capacity at Fordow
(2009 December 2)

FAS experts conclude that while the construction and the announcement of Iran's Fordow Fuel Enrichment Plant, does not prove an intention to deceive the International Atomic Energy Agency (IAEA), it raises troubling questions. The facility is too small for a commercial enrichment facility, raising concerns that it might be intended as a covert facility to produce highly enriched uranium for weapons.

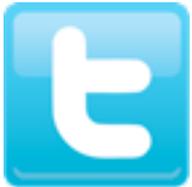
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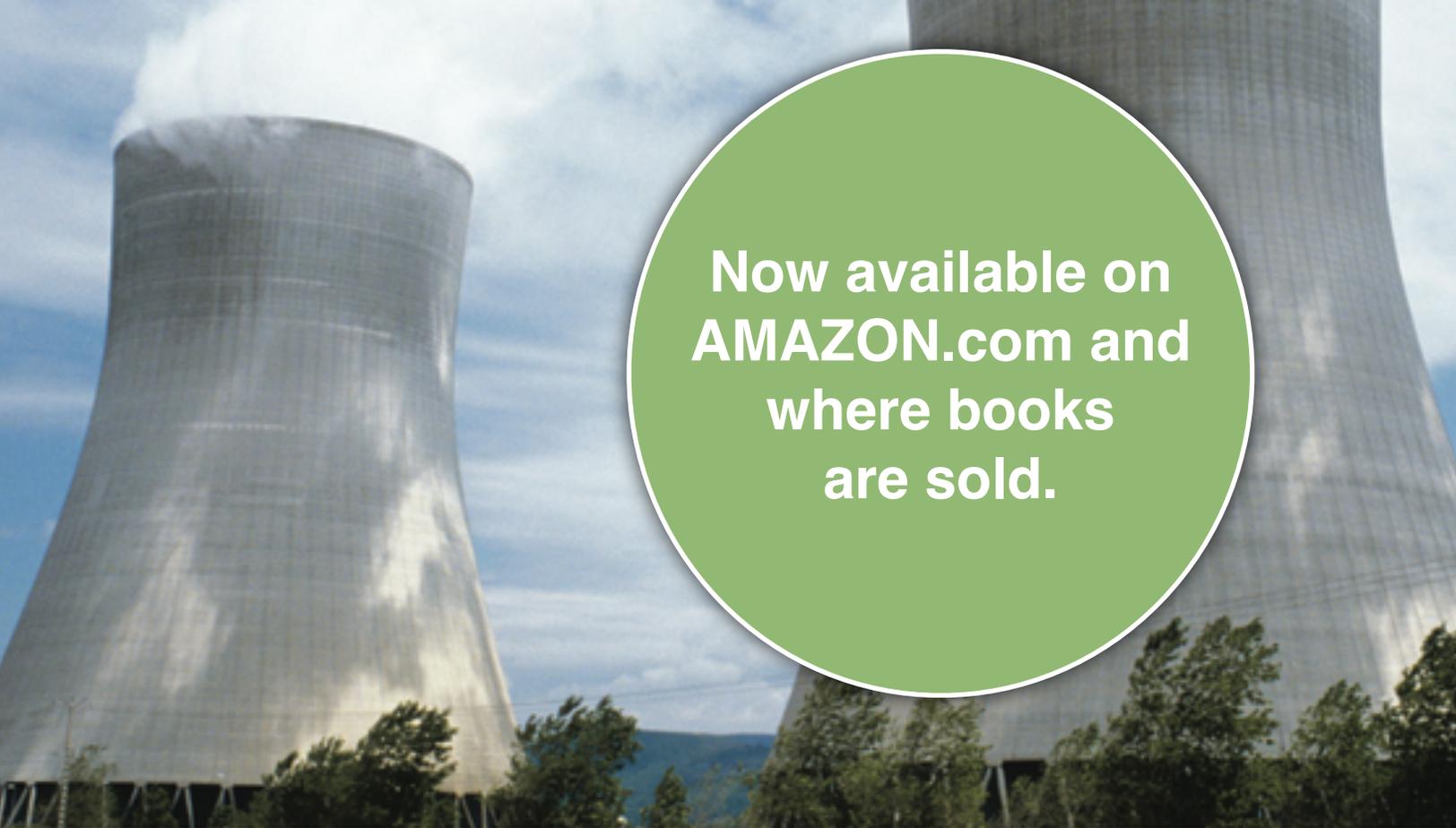
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A photograph of two large, silver, hyperboloid cooling towers of a nuclear power plant. The towers are set against a blue sky with scattered white clouds. The tower on the left has a plume of white steam rising from its top. In the foreground, there are green trees and a clear sky.

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