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Thinking the Unthinkable (Again): Part I

Seven years ago we published a WGR on nuclear war and civil defense.¹ Over the past seven years, we have seen an increase in actual and potential nuclear proliferation. Both the Obama and Trump administrations have either reviewed or are reviewing their policies on nuclear weapons and we are clearly seeing a departure from the late Cold War thinking on nuclear policy. The recent false alarm in Hawaii is an indication of heightened concerns and suggests that another look at this issue is warranted.

In Part I of this report, we will review the development of nuclear weapons and the U.S. deployment policy from the end of WWII to the end of the Cold War. This history will include analysis of how the theory of deterrence developed over time and introduce the events of the post-Cold War world. In Part II, we will discuss how the Cold War arrangements have broken down in the post-Cold War world and the ensuing nuclear proliferation. We will also examine how states will cope with this changing nuclear weapons environment and the evolution of new nuclear doctrines. This will include a discussion on civil defense, nuclear strategy and weapons development. We will conclude, as always, with potential market ramifications.

The Early Days

The Truman administration faced the prospect of a land invasion of Japan in 1945. Although the European theater of war concluded in May 1945, invading Japan remained a formidable task. Operation Downfall was a two-part plan to invade Japan; while casualty estimates were wide, U.S. and Allied losses were expected to be 1.7 million at the low end and could reach 4.0 million. To understand the scale of the invasion, one phase, dubbed "Operation Coronet," would have landed 25 divisions of Allied troops; D-Day had 12 divisions. The invasion was a massive undertaking and, although the Allies would have likely prevailed, it would have come at great cost.

As the vice president, Truman had no knowledge of the Manhattan Project to build a nuclear weapon. When President Roosevelt died on April 12, 1945, the new President Truman was arguably behind the curve on the development of the atomic bomb project. The "Trinity" nuclear test was conducted on July 16, 1945. It worked, and two bombs were fashioned after the successful test. It was at this point that Truman faced the difficult decision on whether to proceed with the costly invasion or deploy this new weapon and hope that its destructive power would convince Japan to accept an unconditional surrender. On August 6 and 9, 1945, atomic weapons were dropped on Hiroshima and Nagasaki, respectively. Planners had another bomb prepared for deployment later in August and three each for the next two months. However, the Japanese government communicated its desire to surrender on August 10, 1945, and no more nuclear weapons were dropped. Although the

¹ See WGR, 1/10/2011, [Thinking the Unthinkable: Civil Defense](#).

surrender documents weren't formally signed until September 2, the war was effectively over on August 15, 1945, when Emperor Hirohito publicly announced the acceptance of the Potsdam Declaration.

Historians and ethicists have argued over the morality of Truman's decision. There is no doubt that the president's decision saved the lives of Allied soldiers. Just War precepts would argue against the use of nuclear weapons because it causes civilian casualties; however, Just War Doctrine, initially developed by St. Augustine in the 5th century, could not have envisioned mass mobilization warfare and the blurring of the distinction between civilians and the military effort that such wars bring.

A year after the war, the Truman administration offered to turn over all its fissile materials and formulas to the U.N. in exchange for all nations opening themselves up for nuclear inspections. Inspections were designed to prevent a nation from developing a clandestine nuclear program. This would have potentially banned nuclear weapons. However, the Soviet Union vetoed the proposal in the U.N. Security Council, arguing that nuclear weapons should be part of general disarmament. Three years later, it became obvious why the Soviets had opposed the U.S. offer when they detonated their own weapon.

During the 1950s, both the Soviet Union and the U.S. moved rapidly to increase the lethality of nuclear weapons. In 1952, the U.S. successfully tested a thermonuclear weapon. The Soviets did the same three years later. The U.K. developed its own nuclear weapon in 1952. France followed in 1960 and China in 1964. These five nations were given the right to possess nuclear weapons under the Nuclear Non-Proliferation Treaty of 1970. Three other

states possess proven nuclear weapons, India, Pakistan and North Korea. Israel is widely believed to possess them as well but, to date, is undeclared. South Africa had six weapons but dismantled them in the early 1990s. Japan, Canada, Germany, Australia, Mexico, Argentina, South Korea and Iran are thought to be "nuclear threshold" nations, meaning they have the industrial capacity for nuclear programs but have not taken the steps to develop weapons.

The Evolution of Nuclear Deterrence

Although it was evident from the bombing of Hiroshima that nuclear weapons were in a class by themselves in terms of destruction, in the early days, nations focused on survivability. Both the U.S. and Soviet Union developed civil defense programs. Fallout shelters were established in underground facilities. Government leaders had elaborate protection schemes to allow for political continuity. President Eisenhower developed the U.S. Interstate Highway system, in part, to facilitate urban evacuation.

However, as time passed, it became increasingly evident that both sides had enough warheads to ensure neither side would avoid massive destruction. This situation developed into a strategy called "Mutual Assured Destruction," or MAD. This strategy brought stability to the nuclear situation; although the destructive capacity had the capability to probably destroy all human life eventually, MAD led to a balance of terror that essentially prevented the use of nuclear weapons. MAD was predicated on three principles:

1. Both sides had second strike capabilities. This discouraged either side from launching weapons first because they knew their opponent could respond with an equally devastating attack.

2. A nuclear power under MAD had to have multiple delivery systems. Both the U.S. and U.S.S.R. had a nuclear triad—the ability to deliver nuclear weapons by bomber, missile and submarine. Thus, if one delivery method was destroyed in an attack, the remaining “legs” could respond.
3. Both sides developed protocols to prevent improper signaling that would suggest an attack was imminent. The creation of “hotlines” and other confidence-building measures reduced the likelihood of a mistake that would lead to an accidental launch of these deadly weapons.
4. Anything that reduced the threat of a first strike undermined MAD. Thus, anti-ballistic missile systems were generally outlawed by treaty.

One of the important ways nuclear weapons changed warfare is that unconditional surrender became impossible between two nuclear powers. Unconditional surrender requires the losing nation to suffer complete capitulation. However, a nuclear power, facing such dire conditions, could launch a nuclear strike to ensure that the opponent would be devastated as well. Thus, a nation with nuclear weapons or a nation beneath the “nuclear umbrella” of one of the major nuclear powers could not suffer regime change without the potential threat of equal annihilation from an allied power.

This factor led to limited wars during the Cold War. It also meant the Cold War would end by economic and social collapse rather than a clear victory. Nuclear weapons changed how wars were fought and how they ended. For the most part, nuclear proliferation was contained during the Cold War. Outside of France and the U.K., the other European nations were content with the protection offered by NATO. Japan and

South Korea were confident enough in U.S. protection so as to eschew their own programs and remain at the nuclear threshold. India and Pakistan were not signatories to the Nuclear Non-Proliferation Treaty but their development of nuclear weapons was mostly due to their historical animosity. Israel is also a non-signatory to the treaty and, while there is some dispute as to whether the country ever tested a nuclear device, Israel is surrounded by hostile powers and had a clear incentive to at least have strategic ambiguity about having a weapon. Two other nations also developed nuclear weapons, Libya and South Africa. The former gave up its program in 2003 (see below) and the latter did so in 1989.

The Post-Cold War World

Initially, after the U.S.S.R. collapsed, it appeared the nuclear superpowers would reduce their stockpiles and, perhaps, eventually back away from these weapon systems completely. However, a series of events ended that sentiment. First, a NATO-backed air campaign against Serbia, which did not receive U.N. permission, signaled to Russia that its “near abroad” had slipped from its control. The Russians knew the U.S. would have never done such a thing during the Soviet era. They believed the former Eastern Bloc would become a neutral buffer, but the spread of NATO and the Serbian campaign convinced them that the U.S. intended to encroach into the former buffer zone and undermine Russian security.

Second, President Bush’s “Axis of Evil” speech signaled that the U.S. was willing to engage in unilateral regime change. President Bush specifically mentioned three states, Iraq, Iran and North Korea. Iraq did experience regime change; the U.S. and its allies invaded Iraq without U.N. approval in 2003 and eventually executed the Iraqi leader. Although Libya was not mentioned

specifically by Bush, its leader, Muammar Gaddafi, saw the invasion in Iraq and voluntarily gave up his nuclear weapons in 2003. In 2011, the U.S., France and the U.K., with U.N. approval, protected rebels who eventually killed the Libyan leader.

The lesson learned by the other members of the Axis of Evil was that the U.S. intended to remove their leaders and the only guarantee to prevent such an outcome was to have nuclear weapons. As a result, both North Korea and Iran moved to build nuclear programs.² North Korea has tested

² To be fair, both programs predated President Bush. However, Bush did establish U.S. policy for regime change in both countries and thus made nuclear development essential for regime survival.

several nuclear devices and claims to now have a deliverable warhead. Iran is a threshold nuclear power with a pact in place to delay crossing that point, negotiated by President Obama. If that treaty is abrogated, we would expect Iran to rapidly build a deliverable weapon.

Part II

Next week, we will conclude our discussion on the changes in nuclear weapons doctrine.

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