

DIGITAL CURRENCY WARS

A NATIONAL SECURITY
CRISIS SIMULATION



HARVARD Kennedy School
BELFER CENTER
for Science and International Affairs

ECONOMIC DIPLOMACY INITIATIVE
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Economic Diplomacy Initiative

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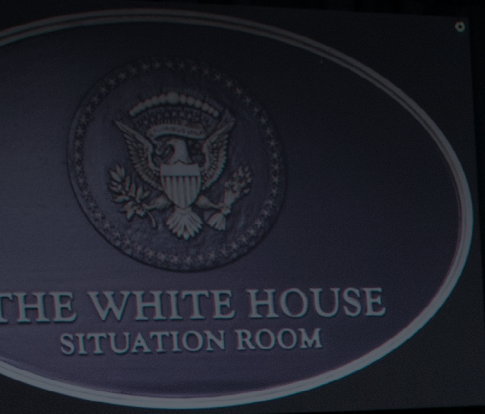
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On November 19, 2019, the Belfer Center's Economic Diplomacy Initiative hosted a national security crisis simulation in the JFK Jr. Forum to a packed audience from the Harvard and MIT communities.

Drawing on the experience of Belfer Center members who have served in the highest levels of the U.S. government, the event explored the nexus of U.S. economic power and its national security interests.

Watch the full simulation at:
belfercenter.org/DCWrecap





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Introduction

In the not-so-distant future, China becomes the first major economy to issue a central bank digital currency (CBDC). The development goes largely unnoticed at first, since payments in China are already highly digitized. Then, North Korea tests a nuclear missile that demonstrates significant advancements in its nuclear program. Analysts believe it could land a nuclear weapon in the continental United States within a year. These capabilities, it turns out, are funded using the Chinese digital currency, which U.S. authorities cannot track. Soon thereafter, countries that want to escape U.S. oversight and sanctions, like Russia and Iran, begin issuing their own digital currencies.

The President of the United States calls on the National Security Council to assess threats to U.S. national security and recommend responses. Tactically, how should the U.S. respond to North Korea's missile test if economic sanctions are no longer effective? And strategically, how can the U.S. continue to leverage economic power in the world of national digital currencies?

* * *

The mock NSC meeting unfolded at Harvard Kennedy School (HKS) on November 16, 2019, as former cabinet officials, career diplomats, technologists, and academics convened to debate responses to a game-changing technology. Participants had been briefed on the crisis 72 hours earlier, with background research and talking points compiled by HKS students acting as their chiefs-of-staff. As the NSC debated responses in the White House Situation Room, the meeting was interrupted periodically by breaking news alerts about cyberattacks on U.S. financial institutions and human rights abuses in China.

The primary objective of the simulation was to facilitate a policy discussion on the potential role of digital currencies in the global economy and its implications for U.S. national security. While the scenario is fictionalized, it is based on the real and rapid developments in digital currency technology, led by China's efforts to launch a digital yuan and Facebook's proposed Libra coin. The simulation illustrated how these and other initiatives to develop

alternative monetary systems will affect the ability of the U.S. to implement sanctions, monitor illicit activities, and uphold data privacy standards.

Moreover, and perhaps most important for the live audience comprised primarily of Kennedy School students, the simulation revealed the inner dynamics and decision-making processes of the Situation Room. As former Cabinet and senior government officials reprised their real-life participation on the NSC, the audience observed how policymakers make decisions amidst imminent threats, incomplete information, and competing priorities.

* * *

This brief includes the mock memorandum delivered to NSC members explaining the national security crisis, the highlights from their discussion, and lessons learned from the simulation. We hope that it will stimulate more discussion about how policymakers should manage the rise of digital currencies, and more broadly, protect U.S. economic power in a rapidly changing economy.

What is a digital currency?

A digital currency is any type of currency that exists in digital form (versus bills and coins). Think credit cards, Venmo, and your Starbucks gift card—these are all ubiquitous forms of digital money. In addition, there are two broad categories of emerging digital currencies: central bank digital currencies (CBDCs) and cryptocurrencies.

A CBDC is simply the digital form of a country's fiat currency. Instead of printing paper bills and minting coins, the central bank issues unique digital tokens, whose value is backed by the full faith and credit of the government. So how is this different from your credit card or Venmo balance today? CBDCs (like cash) are the liability of the central bank, which would typically maintain reserves, deposits, and accounts, rather than a private firm.

Cryptocurrencies, on the other hand, are typically not managed or guaranteed by a central authority. The most well-known example, bitcoin, runs on distributed-ledger technology, which allows many devices to maintain independent records of transaction activity and use consensus models to decide which record is correct. Because there is no central bank or government guarantee, the value of cryptocurrencies tends to fluctuate widely.

In the simulation, we are referring to the widespread adoption of CBDCs, which have the potential to be much more stable, and therefore are more suitable as a replacement for cash, than cryptocurrencies.

Simulation Participants

Vice President of the United States

Meghan L. O'Sullivan, former Special Assistant to the President and Deputy National Security Advisor for Iraq and Afghanistan

Secretary of the Treasury

Lawrence H. Summers, former Secretary of the Treasury, Treasury Department

Secretary of State

Nicholas Burns, former Under Secretary of State for Political Affairs, Department of State

Secretary of Defense

Ash Carter, former Secretary of Defense, Department of Defense

National Security Advisor

Eric Rosenbach, former Chief of Staff to the Secretary of Defense, Department of Defense

Deputy National Security Advisor

Aditi Kumar, Executive Director, Belfer Center for Science and International Affairs

Director of National Intelligence

Jennifer Fowler, former Deputy Assistant Secretary for Terrorist Financing and Financial Crimes, Treasury Department

Ambassador to China

Richard Verma, former Ambassador to India, Department of State

Assistant to the President for Economic Policy

Gary Gensler, former Chairman, U.S. Commodity Futures Trading Commission

Assistant to the President for Digital Currencies

Neha Narula, Director, MIT Digital Currency Initiative



NATIONAL SECURITY COUNCIL
WASHINGTON, D.C.

MEMORANDUM

TO: National Security Council
FROM: National Security Advisor
SUBJECT: Digital Currency Wars
DATE: 16 November 2021

The National Security Council is meeting on November 19, 2021.

In March 2020, the People's Bank of China (PBoC) launched a sovereign digital currency known as the digital yuan. Support for Central Bank Digital Currencies (CBDCs) grew rapidly after private platforms, notably Facebook, proposed issuing cryptocurrency tokens, raising fears that privately issued currencies would destabilize the global economic system. China is the only major economy with a CBDC in circulation today, although several nations, including the UK, Canada, and Israel, are actively considering similar projects.

The digital yuan is centrally issued by the PBoC, is fully backed by fiat reserves, and replaces cash in circulation. It is based on a two-tier system: the PBoC issues the currency to select commercial banks and payments providers; these institutions re-distribute it to individuals and businesses. The currency is stored in digital wallets and payments can be made using a number of applications, including AliPay, WeChat, and mobile banking apps.

All transactions are encrypted, and PBoC officials have said that they aim to "strike a balance" between upholding user privacy and tracking illicit activity. The digital currency is fully interoperable with the Chinese Cross-border Interbank Payments System (CIPS), which rivals SWIFT in processing global payments. A distributed inter-bank ledger system makes clearing and settlement fast and efficient among participating members. China has effectively developed end-to-end payments infrastructure that bypasses SWIFT and U.S. clearing and settlement systems.

In China, the digital yuan has taken off rapidly and represents 95% of all domestic payments. Retail customers have flocked to the currency because of ease of use and reduced fees. Adoption has also been widespread in the business community, for example to pay contractors involved in

Belt and Road Initiative (BRI) projects in the Caucasus, Central Asia, and Africa, who can quickly and cheaply convert digital yuan to local currency using Chinese banks.

Additionally, China has been leading a campaign to increase adoption of the digital yuan across Southeast Asia, expanding the government's influence over the region as a whole. Today, a growing number of retail payments in Indonesia, Myanmar, Cambodia, and Laos are in digital yuan, due to lack of trust in domestic governments and banking institutions and instability of local currencies. Chinese banks and tech companies have facilitated this adoption by providing point-of-sale devices that accept digital currency payments.

A few months ago, a handful of individuals were arrested in Beijing after making purchases at an independent bookstore that stocks certain political books considered sensitive and banned in mainland China. More recently, with a more pro-China party in power, the Taiwan government is considering adopting the digital yuan to improve cross-Strait economic ties and overcome persistent economic stagnation.

These developments have created some concern, particularly among Western democracies and global human rights organizations, about the Chinese government's access to payments data, enabling enhanced surveillance not only on its own citizens, but also on the citizens of other countries in the region. Chinese officials have claimed that they are committed to data privacy, except in matters of national security.

On November 17th, North Korea tested an intercontinental ballistic missile that traveled 2,100 miles over southern Japan and landed in the Philippine Sea. U.S. intelligence indicates that North Korea conducted the test with a simulated warhead which survived re-entry, demonstrating that it has overcome the last major technical hurdle to having a reliable weapons system. North Korea now poses a direct nuclear threat to Guam, a U.S. territory and major military installment in the Western-Pacific. With a medium degree of confidence, the CIA assesses that within 6 to 9 months North Korea will have the capacity to deliver a nuclear warhead against the continental United States.

North Korea is now in open defiance of financial sanctions, using the digital yuan to transfer money in and out of the country, and to pay for arms, raw nuclear materials, rocket fuel, and other sanctioned products. Since these transactions operate on Chinese-owned infrastructure, U.S. and E.U. authorities are entirely in the dark about North Korean economic activity.

A National Security Council meeting has been called on November 19th following the missile test.

In response to the immediate threat, the NSC needs to:

- Manage the impact of the North Korean missile test, in a scenario where the efficacy of sanctions is called into question
- Manage the geopolitical risks posed by China's expanding regional influence through the digital yuan

More strategically, the NSC needs to develop suggestions to:

- Manage proliferation of China's digital currency infrastructure (including payments, clearing and settlement) to other nations
- Debate the creation of a USD-based alternative to compete with the digital currencies of key political and economic adversaries
- Consider ways to create new international norms for digital currency, particularly around information sharing between governments in matters of national security.

Discussion Highlights

National Security Advisor Eric Rosenbach opened the NSC principals meeting with a clear set of objectives: (a) develop an immediate response to the North Korean provocation; (b) assess threats to U.S. interests posed by China's digital currency; and (c) recommend policy options to manage the rise of the digital yuan.



IMMEDIATE RESPONSE: CONDEMNATION AND COOPERATION

“I wish I had better news. Our ability to fundamentally sanction North Korea in a devastating way depends upon Chinese cooperation,” declared Secretary of the Treasury Lawrence Summers. With North Korea using the digital yuan to pay for nuclear materials, missile components, and other sanctioned products, participants recognized that American sanctions, while always leaky, were now meaningless. Noting that the U.S. had a well-developed set of military response options to any North Korea provocation, participants instead focused the discussion on potential diplomatic efforts. Secretary of State Nicholas Burns argued for condemning the missile launch stating, **“The President has to convince the Chinese to join with us and put pressure on the North Koreans not to go down this military path.”**

Secretary Burns also recommended reaching out to allies Japan, Australia, South Korea, and the E.U. to apply economic and political pressure on North Korea. Diplomatic pressure should also be applied to China in order to drive the Chinese government to lessen its support for North Korea. **“We’re in a tight spot,”** said Burns. **“We need options if sanctions are not immediately available to us.”**

Secretary Summers focused more on cooperation with China than with U.S. allies. **“China and America have always found areas of mutual interest - neither side wants to see North**



“We need options if sanctions are not immediately available to us.”

Koreans grow their drug trade or engage in cyber attacks. We need to formulate a strategy that achieves cooperation with China.” In order to achieve this cooperation, participants recommended that we find areas of alignment for both the U.S. and China. Richard Verma, acting as the Ambassador to China, pointed out, **“Rather than faulting the Chinese for getting ahead of us in the financial-technology revolution, we should partner with them and cooperate in the years ahead.”**

THREATS TO THE U.S.: THE PERILS OF PAYMENTS

Participants noted that at the broader strategic level, the People’s Bank of China (PBoC) had not only introduced a digital currency, but also a payments infrastructure that would bypass the Society for Worldwide Interbank Financial Telecommunications (SWIFT), the global interbank messaging system that is instrumental in U.S. sanctions and monitoring of illicit financial flows. Gary Gensler, the Assistant to the President for Economic Policy, stated, **“The new system will not undermine the US dollar in international commerce, but it will mean that SWIFT cannot be used as an instrument of national security.”**

The simulation explored the vulnerabilities of SWIFT, a system that was set up in 1973 and has been criticized as outdated and vulnerable to security threats. Recent cyber attacks, like the theft of \$81 million by North Koreans from the Central Bank of Bangladesh, have highlighted SWIFT’s end-point



weaknesses. The simulation illustrated these concerns by introducing a cyber attack on SWIFT resulting in the theft of \$3 billion from commercial banks based in Germany, Saudi Arabia, and the UAE. Intelligence agencies assessed that North Korea was behind the attack, potentially with an aim to drive more users to the digital yuan system—and out of U.S. purview.



Participants debated whether other nations, and particularly U.S. competitors and adversaries like Russia and Turkey, would join China’s currency system. The scenario highlighted that from a technical perspective, the digital yuan infrastructure could be portable. Countries could create different ‘instances’ of the

system, selecting their own banks and payments providers as network participants to release digital forms of their local currencies. Deputy National Security Advisor Aditi Kumar noted that, **“For example, Russia’s central bank and largest commercial banks could be added as ‘nodes’ to the Chinese system to create a Russian instance with a digital Ruble.”** If China succeeds in proliferating its currency “tech stack” to other nations, it would be a viable alternative to the U.S. and E.U.-led system for cross-border payments. Vice President Meghan O’Sullivan stated, **“We may be moving into a world where the U.S. is not financially dominant.”**

Finally, policymakers considered implications for data privacy. Gensler noted that, **“the Chinese government has full transparency into the digital yuan,”** not only for domestic, retail payments, which it may already have had through AliPay and WeChat Pay, but also commercial and cross-border payments. Neha Nerula, the President’s Assistant for Digital Currencies, argued that users’ digital identities and payment records would be easily traceable, particularly if a state-sponsored entity is intent on uncovering those identities.



POLICY OPTIONS: GLOBAL GOALS, DIGITAL DESIGN

The simulation concluded with three policy recommendations to the President:

- 1. Explore the development of a U.S. digital currency:** To maintain America's dominance in global payments, participants recommended exploring the development of a U.S. central bank digital currency. Some argued that the U.S. payments system is already largely digitized, making many of the benefits of a CBDC irrelevant. Others countered that U.S. payments technology is outdated and prone to privacy and security breaches. Gensler noted that, **"We are in the waning days of SWIFT."** Another point of contention was who would lead the charge in the exploration and potential development of a CBDC—the Secretary of Treasury argued that the U.S. government had the technical capabilities to build a CBDC system "in-house", whereas the President's Assistant for Digital Currencies pushed for private-sector involvement.
- 2. Strengthen the SWIFT network:** Participants agreed that the SWIFT system needed to be secured against cyber threats and other security vulnerabilities. Further, in the face of potential mass emigration off the platform, participants agreed that the U.S. and its allies needed to create more incentives for member banks to stay on SWIFT. The Treasury Secretary suggested the U.S. should cut back on its use of secondary sanctions, referring to a common criticism that the overuse of coercive economic tools is driving nations to seek alternatives to the U.S.-led financial system.
- 3. Reinforce U.S. alliances:** Most representatives agreed that diplomatic pressure on America's allies is needed to counter China's influence. As China offers investment through the Belt and Road Initiative and increased access to the digital yuan, the NSC proposed creating a joint delegation with South Korea, Japan, Australia, and the E.U. to strengthen Western leadership of the financial system. The Secretary of State recommended increasing the funding for the BUILD Act by nearly four times the current budget to improve American soft-power economic influence with these developing nations. Secretary of Defense Ash Carter stated, **"The development of a digital yuan does not change much militarily, but economically it makes a world of difference."**

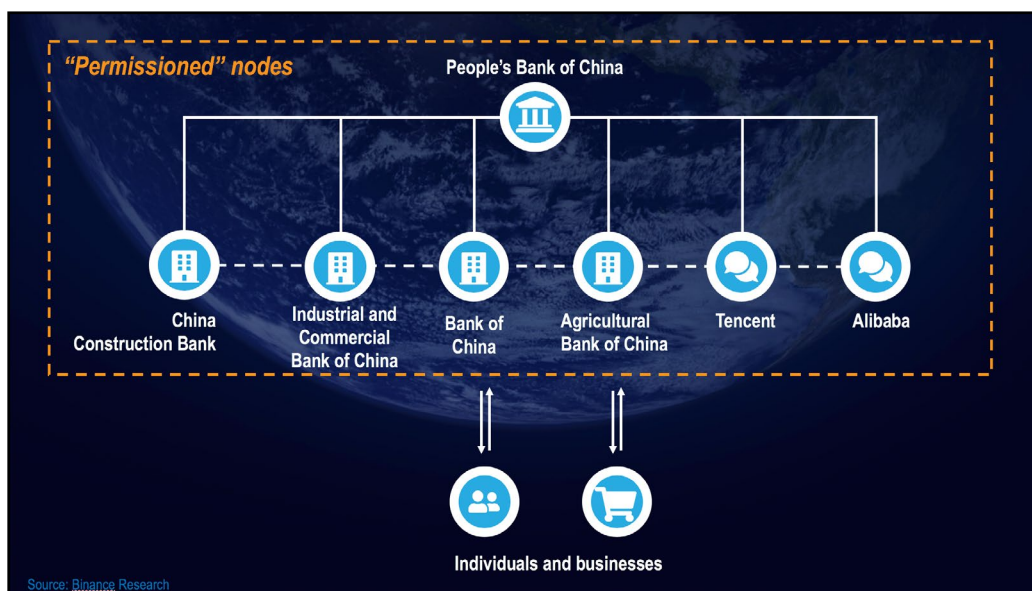
Lastly, participants highlighted that POTUS must call President Xi immediately to discuss avenues for cooperation. The U.S. must recognize that it cannot build a new payments system alone and ought to cooperate with China. Summers said, **"We need to enter into a different kind of dialogue with China because anything that we want to do with sanctions, whether it includes North Korea or not, depends on Chinese cooperation."**

Lessons Learned

1. NOT ALL DIGITAL CURRENCIES ARE LIKE BITCOIN.

Given its attention-grabbing booms and busts in recent years, it is no surprise that bitcoin has come to dominate discussions about digital currencies. Policymakers are right to dismiss it as the future of money—without a central authority to guarantee its value over time, bitcoin, and cryptocurrencies like it, are more akin to stocks, rather than replacements for fiat cash. However, most policy discussions today miss that the most viable emerging models of digital currencies, such as China’s digital yuan or Facebook’s Libra, are vastly different from bitcoin.

Mainly, they are under the control of a government or company which can not only ensure a stable value, but also wide accessibility through mobile apps, integration with social media, point-of-sale terminals, and so on. The convenience of digital currencies may be enough to create widespread adoption. In the case of a government that also eliminates fiat cash, users would have no choice but to switch to a fully digital system.



2. THE RISE OF DIGITAL CURRENCIES WILL CHALLENGE U.S. POWER IN THE GLOBAL ECONOMIC SYSTEM.

Since the end of WWII, U.S. global economic dominance has been assured due to strong demand for the U.S. dollar, as well as the network of U.S. financial institutions that facilitate the global flow of money. The vast majority of global payments today pass through the dragnet of U.S. institutions, making it possible for U.S. authorities to track illicit activity and implement punitive sanctions.

However, this economic hegemony is likely to be challenged by the development of digital currencies. While the technical specifications are still emerging, these currencies are likely to bypass U.S. institutions for transactions that do not involve the dollar. Chinese authorities have already declared their intention to reduce reliance on SWIFT, building on past efforts by Russia, China, Iran, and others to build an alternative to the U.S. led system. For some nations (and non-state actors) that want to avoid U.S. sanctions and oversight, this is incentive enough to adopt a digital currency. Not only adversaries, but even allies and partners like Germany and India, have expressed frustration at the ‘overuse’ of U.S. sanctions and secondary sanctions. Convenience, interoperability with other technology, and reduced transaction fees could further increase uptake, creating large blind spots in U.S. authorities’ ability to monitor global payments flow and enforce U.S. sanctions.

3. ON MOST ECONOMIC MATTERS, COOPERATION WITH CHINA WILL BE KEY.

NSC members in the simulation unanimously agreed that fostering a cooperative relationship with China would be critical to maintaining U.S. power. While demand for the U.S. dollar, capital markets, and financial institutions is unlikely to disappear anytime soon, digital currencies present one avenue by which significant payments activity could shift away from the U.S. If China pursues its digital currency ambitions, including opening the currency for cross-border transactions, the



U.S. will have few options but to cooperate. As simulation participants pointed out, there are many areas of mutual interest between the two nations, from trade to climate change to containing North Korea. U.S. policymakers should use these shared interests to devise a forward looking economic policy strategy, which includes data sharing on potential illicit financial flows and cooperation on sanctions policy.

4. THERE IS LITTLE AGREEMENT ON WHETHER THE U.S. SHOULD DEVELOP ITS OWN DIGITAL CURRENCY.

The debate around whether the U.S. needs to issue its own digital currency is still in its infancy. Domestically, most banking applications are already digital, and payments are relatively fast and efficient. Thus, many of the benefits of adopting a digital currency that are more apparent in developing economies—like increasing financial inclusion and leapfrogging inefficient payments technology—are less relevant in the U.S. context.



However, U.S. policymakers will likely have to react to other digital currency initiatives. Should Facebook, for instance, be allowed to issue its own digital token? And, as the simulation explored, how will the U.S. respond to China's digital yuan and similar initiatives by other nations? Simulation participants agreed that, at minimum, keeping nations in the U.S.-led system would require skillful diplomacy and significant investment to make the traditional cross-border payments system more efficient and secure. There was, however, no agreement on whether an entirely new digital infrastructure is needed to ensure U.S. competitiveness in the payments system.

5. THE DISCOURSE ON DIGITAL CURRENCIES NEEDS TO BRING TOGETHER POLICYMAKERS AND TECHNOLOGISTS.

Related to the first lesson above, in the course of designing this simulation, we found that the policy community has a limited understanding of digital currencies, beyond the bitcoin model. On the other hand, we found that technologists who are in the weeds of cryptography and advances in blockchain have not fully explored the geopolitical implications of digital currencies. The simulation was one of the first exercises to bridge these perspectives.

Unsurprisingly, simulation participants sparred on whether government agencies are best placed to lead the discussion on digital currencies, with some technologists arguing for private sector input. Combining the expertise and perspectives of policymakers and technologists, and the public and private sectors, will be critical to addressing not only the technology, but the values that underpin the digital economy.



“We may be moving into a world where the U.S. is not financially dominant.”

About the Project

The **Economic Diplomacy Initiative** aims to provide analysis and recommendations to policymakers on challenges at the intersection of economic policy and national security. From traditional economic measures like trade agreements and economic sanctions, to emerging challenges like data privacy and digital currencies, the project aims to advance our understanding of how leaders should use economic relationships to pursue both economic growth and national security interests.

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