SPEECH[†]

IT'S NOT JUST THE ECONOMICS: WHY U.S. LEADERSHIP ON CBDCS IS A NATIONAL SECURITY IMPERATIVE

Daleep Singh*

Good morning, everyone. First, thank you, Professor Jackson, for inviting me to this event, to Harvard Law School for hosting this symposium, to everyone here for their interest, and most of all Governor Waller for agreeing to a friendly verbal joust!

I am now a few months removed from my time at the White House, where my job—in plain English—was to focus on strategic challenges at the intersection of international economics and national security.

Looking back, I would be hard pressed to think of any topic that better captures the essence of that job than to help shape the future of money—how it is created, what it is used for, where it flows, whether it is seen, and, ultimately, who is in control. The question before us today is whether and how to pursue a central bank digital currency (CBDC), and the geopolitical context really matters.

We are having this discussion against the backdrop of the most intense period of great power competition we have faced in decades—perhaps since World War II—in which economic tools are being deployed with greater frequency and potency than ever before. This is not a conversation that belongs solely within the realm of economic policy or national security. It is not a technocratic choice that can be made only inside the walls of the Federal Reserve and Treasury Department, nor is it a judgment that we should leave to the political or geopolitically minded parts of the U.S. government. The stakes involved in our digital assets strategy deserve and require an interdisciplinary conversation like today's symposium, cutting across economics, finance, foreign policy, technology, and the law—so once again I want to thank the organizers for bringing us together.

To be clear, the same blurry line of responsibility exists for a long and growing list of policy efforts at an historical moment in which a nation's ability to project power—and exert influence—is increasingly measured and exercised in economic terms. Take, for example, U.S. efforts to shape a

[†] This speech a lightly edited version of remarks delivered at the *Harvard National Security Journal* Symposium on Digital Currencies and National Security on October 14, 2022.

^{*} Chief Global Economist and Head of Global Macroeconomic Research at Prudential Global Investment Management (PGIM). Former Deputy National Security Advisor for International Economics and Deputy Director of the National Economic Council. The views expressed in this speech are the author's own and do not represent any position of PGIM or the U.S. government.

national innovation strategy—to set a course that sustains and enhances our global leadership in foundational technologies like artificial intelligence (AI), quantum, biotech, semiconductors, robotics, and hypersonics—each with outsized promise to boost our economic growth potential and military prowess. Or consider the efforts to strike a better balance between the efficiency and resilience of supply chains—such as semiconductors, clean energy, and pharmaceutical products—each with critical importance to our economic output and national security. Or to chart a course on climate policy, trade, corporate taxation, export controls, investment restrictions, global infrastructure finance, and a growing list of strategic priorities that will shape America's enduring capacity to lead on the world stage.

The point I am making is that the interdisciplinary challenges of crafting a U.S. strategy around digital money are profound but not unique. Our path forward will require us to balance domestic economic considerations around market efficiency, credit creation, financial inclusion, consumer protection, and financial stability, with our interest in sustaining global technological leadership, the efficacy of economic statecraft, the primacy of the dollar, and the prevalence of democratic values in the global financial system.

Let me say a bit more about the geopolitical backdrop with a few blunt observations. First, both Russia and China-at the highest levels-have expressed and revealed their desire to disrupt the U.S.-led international order. Second, both Russia and China have the capacity to challenge the U.S.-led order. China is nearly a peer competitor to the United States across economic, military, and technological dimensions. Russia punches at a much lower strategic weight than China, but it's willing to take more risk. Its leadership feels more deeply aggrieved by the West. And it has globally systemic relevance in its nuclear weapons stockpiles and energy production. Third, both Russia and China have pressed for a sphere of influence in their respective backyards, perhaps drawing from their shared and stated belief that the United States is in structural decline and preoccupied by our own challenges of political dysfunction, social cleavages, and fiscal profligacy. And fourth, as this competition plays out, there's a sizable group of large G20 economies— India, Indonesia, Brazil, Turkey, South Africa, Saudi Arabia, and Argentinathat are increasingly hedging their bets and perhaps trying to carve out a nonaligned path.

It is in this more fragile and uncertain geopolitical context that we should consider whether China being the first mover among large economies to introduce a CBDC really matters. Let's rewind. The People's Bank of China (PBOC) began research on the e-CNY in 2014, including on a potential

issuance framework and the underlying technologies.¹ By 2016, it had developed a working prototype.² By the end of 2017, upon the approval of the State Council, the PBOC began work with commercial entities to develop and test e-CNY's usage in pilots.³ The pilot operated in ten regions across China before it was introduced to Olympic Games venues in February 2022.⁴ And today, hundreds of millions of active e-CNY wallets are reportedly in operation.⁵

Now it is often said that Beijing's motivations for moving first, and moving fast, are primarily internal: to undercut the power of Chinese tech giants that might challenge the authority of the state; to snuff out foreign payment networks such as dollar-based stablecoins and other cryptocurrencies; and most of all, to reassert control over the commanding heights of the digital economy, and, in doing so, move ever closer to perfecting a form of digital authoritarianism.⁶

But this narrow conception is less convincing when you consider what China has repeatedly said and done on the international stage. In 2020, President Xi gave a speech in which he ordered his technocrats to take advantage of China's momentum on developing a digital currency to "actively participate in the formulation of international rules" to "create new competitive advantages."⁷ Dutifully, China's economic diplomats have taken the lead in organizing cross-border digital payments experiments such as the Multiple Central Bank Digital Currency project with Hong Kong, Thailand, and the United Arab Emirates (UAE)—under the auspices of the Bank for International Settlements (BIS)—giving China a platform and reputational cover to shape

¹ WORKING GROUP ON E-CNY RESEARCH AND DEVELOPMENT OF THE PEOPLE'S BANK OF CHINA, PROGRESS ON RESEARCH AND DEVELOPMENT OF E-CNY IN CHINA 12–13 (July 2021), http://www.pbc.gov.cn/en/3688110/3688172/4157443/4293696/2021071614584691871.pdf [https://perma.cc/G2NS-24XS].

 $^{^{2}}$ *Id.* at 13.

³ Id.

⁴ Ananya Kumar, *A Report Card on China's Central Bank Digital Currency: the e-CNY*, ATL. COUNCIL (Mar. 1, 2022), https://www.atlanticcouncil.org/blogs/econographics/a-report-card-on-chinas-central-bank-digital-currency-the-e-cny/ [https://perma.cc/EE5A-YEVA]. ⁵ Id.

⁶ See, e.g., Jiaying Jiang & Karman Lucero, *Background and Implications of China's E-CNY* 7 (Working Paper), https://ssrn.com/abstract=3774479 [https://perma.cc/QX6H-7TFU].

⁷ Xi Jinping, Remarks at the Seventh Meeting of the Central Financial and Economic Affairs Commission, Certain Major Issues for Our National Medium- to Long-Term Economic and Social Development Strategy (Apr. 10, 2020) (Ben Murphy ed., Etcetera Language Group trans., Cent. for. Sec. and Emerging Tech.), https://cset.georgetown.edu/wpcontent/uploads/t0235_Qiushi_Xi_economy_EN-1.pdf [https://perma.cc/9F8W-DP9A].

global norms and standards for privacy, security, and interoperability.⁸ In 2021, the PBOC formed a joint venture with SWIFT, the messaging system that banks use to make cross-border payments, which could allow China to augment its capabilities in cross-border payments systems beyond the homegrown Cross-Border Interbank Payment System (CIPS) it unveiled in 2015.⁹

Now to be fair, it is not just China that's moving far and fast. According to the Atlantic Council, 105 countries are actively exploring CBDCs. Fifty of them are in the advanced stages, including sixteen of the G20 economies in the development or pilot stage.¹⁰ Along with the United Kingdom, Argentina, and Mexico, the United States is behind.¹¹

So coming back to the question on the table—do these developments matter for U.S. national security, and why? My judgment is yes, for three reasons.

First, CBDCs have great potential to either enhance or erode the potency of U.S. economic statecraft. As mentioned earlier, we are facing perhaps the most intense competition from major, nuclear-armed powers since World War II. The implications include higher uncertainty, less scope for cross-border cooperation to manage cross-border risks, and greater likelihood of conflict—either directly or via proxies. The latter of these will likely trigger more frequent and more potent use of financial sanctions and other forms of economic statecraft, especially when the alternatives—military conflict between nuclear powers, or doing nothing to defend core principles that underpin global peace and security—are generally seen as far, far worse. To be very clear: the potency of financial sanctions hinges on our ability to constrain the access of or fully exclude a rogue actor from the dollar-based financial system, a network that has grown geometrically in value with its size and reach.

Taking this as a premise, what is the risk of our remaining a CBDC bystander? Consider the scenario in which all countries currently exploring a

52

⁸ Press Release, Bank for Int'l Settlements, Central banks of China and United Arab Emirates join digital currency project for cross-border payments (Feb. 23, 2021), https://www.bis.org/press/p210223.htm [https://perma.cc/D4DH-3JQG].

⁹ *SWIFT sets up JV with China's central bank*, REUTERS (Feb. 4, 2021), https://www.reuters.com/article/china-swift-pboc/swift-sets-up-jv-with-chinas-central-bank-idUSL1N2KA0AK [https://perma.cc/DA83-XZMV].

 ¹⁰ Central Bank Digital Currency Tracker, ATL. COUNCIL, https://www.atlanticcouncil.org/cbdctracker/ (last visited Oct. 4, 2022)
[https://perma.cc/83KU-BNCT] [hereinafter Atlantic Council CBDC Tracker].
¹¹ Id.

CBDC eventually issue one. That would mean countries representing upwards of 90 percent of global GDP, not counting the United States, will have CBDCs in circulation. It is no stretch to assume that each of these countries will establish CBDC-to-CBDC platforms to improve upon the slow, costly, opaque, and complex status quo for cross-border transactions. Indeed, according to the Atlantic Council, over a dozen countries are actively testing cross-border CBDC exchanges.¹² More to the point, it is likely that China—the leading trading country in the world and first mover in this space—is well positioned to influence the setting of norms and standards in a competing or parallel digital payment architecture, blunting or even eliminating our ability to apply financial sanctions as we currently do through correspondent banks and SWIFT.

Beijing's motivation for doing so is clear. In June of this year, President Xi criticized the "abuse" of international sanctions on Russia, and last year China's Ministry of Commerce issued measures that allow Chinese citizens to sue parties that comply with "unjustified extra-territorial application" of foreign measures—including U.S. sanctions.¹³

Admittedly, the Chinese and Russian central banks can already arrange to make payments with each other that bypass the dollar and could mitigate the impact of sanctions. Payments could also get routed through unsanctioned commercial banks between China and Russia. But these bilateral payment systems are still quite limited in scale and scope outside their borders. CIPS, the Chinese payment system, counted only about 1,300 members earlier this year, two-fifths of them domestic residents, making China still reliant upon SWIFT for cross-border transactions, and at risk of being discovered in any attempt to evade or backfill sanctions.¹⁴

So why is a world of CBDCs a potential game changer? It is the technological scalability of CBDCs that could allow countries to transact far

¹² *Id*.

¹³ Guy Faulconbridge, *China's Xi criticises sanctions 'abuse', Putin scolds the West*, REUTERS (June 23, 2022), https://www.reuters.com/world/china/chinas-xi-criticises-sanctions-abuse-putin-scolds-west-2022-06-23/ [https://perma.cc/PZZ2-JKNK]; MOFCOM Order No. 1 of 2021, Rules on Counteracting Unjustified Extra-territorial Application of Foreign Legislation and Other Measures (promulgated by the Ministry of Commerce and approved by the State Council, effective Jan. 9, 2021), http://english.mofcom.gov.cn/article/policyrelease/announcement/202101/20210103029708.s html [https://perma.cc/82AT-J6AV].

¹⁴ See Why China's Payment System Can't Easily Save Russian Banks Cut Off From Swift, BLOOMBERG (March 14, 2022), https://www.bloomberg.com/news/articles/2022-03-14/whychina-s-payment-system-can-t-easily-save-russia-quicktake#xj4y7vzkg [https://perma.cc/HTF7-3WFM].

more quickly, in higher amounts, with less detection, and less currency volatility—than they do now.

With this as the backdrop, it is not an overstatement to say that the standard setting for CBDC interoperability-including the rules that govern exclusion from a CBDC network—will become a key geopolitical front in a digitized global economy. Appropriately, the BIS, as the central bank to central banks, is leading and organizing this effort. Unsurprisingly, China is actively proposing rules for how sanctions would get enforced-or not-in CBDCintermediated transactions.¹⁵ Put simply, the United States needs a seat at the head of this table, and without a proposal of our own-reflecting our standards, values, and geopolitical interests—we are playing a weak hand. To avoid any misunderstanding: when I say proposal, I do not mean to imply we need a finished product, or even a final decision on whether to issue a U.S. CBDC. But we do need a technological model, or a menu of options, to be taken seriously. In my conversations with central bankers and finance ministry officials, the rest of the world is asking what we're for as it relates to CBDC interoperability. It is an unforced error for the United States not to heed this call.

Second, and to broaden out my first point, we have a strong national security interest to develop a U.S. CBDC to reinforce leadership in digital payments technology, separate and apart from the importance of sustaining the potency of sanctions. That means promoting standards that uphold democratic values as they relate to privacy and human rights; protections against illicit finance; the security and operational integrity of digital architecture; rule of law and dispute resolution; consumer, investor, and market protections; and accessibility for digital platforms, legacy architecture, and international payment systems.

Without the U.S. voice at the table, backed by a viable CBDC prototype in hand, we would likely see a continuing fragmentation of CBDC standards. As mentioned earlier, nineteen of the Group of Twenty (G20) countries are exploring a CBDC, with sixteen already in the development or pilot stage.¹⁶ There are already nine cross-border wholesale (bank-to-bank) CBDC tests and three cross-border retail projects, numbers that are likely to increase in the current geopolitical climate.¹⁷ Even worse than fragmentation would be the coalescing around a global standard that is at odds with democratic

¹⁵ See Tom Wilson & Marc Jones, *China Proposes Global Rules for Central Bank Digital Currencies*, REUTERS (March 25, 2021), www.reuters.com/article/us-cenbanks-digital-china-rules/china-proposes-global-rules-for-central-bank-digital-currencies-idUSKBN2BH1TA [https://perma.cc/UJW2-GBSE].

¹⁶ Atlantic Council CBDC Tracker, *supra* note 10.

¹⁷ Id.

values—for example, by allowing for mass financial surveillance of citizens or the unauthorized sharing of personal information. This is not just an abstract concern. China's global dominance of 5G network infrastructure is largely the result of a state-led effort to generate large economies of scale and lock in standards at odds with our interests for security and transparency.

Respectfully, the stakes are simply too high to cede leadership on standards-setting to the private sector—and in backing this claim I would submit the history of financial innovation. Sometimes it works out well. The ATM is the classic example. Electronic payments and microcredit might be others. But we all know more recent horror stories with globally systemic consequences. Subprime mortgage securitization. CDO squared. Unregulated over-the-counter swaps.

The lesson we have learned the hard way is that governance matters, especially during the period of creative destruction when the applications of a new technology are still taking shape. More practically, based on my conversations with foreign official counterparts, private stablecoins issued from big tech are unlikely to generate the trust that would be conferred to a digital currency backed by the U.S. government. In fact, I would argue it was the potential for private stablecoin issuance to scale at rapid speed that motivated the threefold increase in CBDC exploration over the past two years.

The third reason why a CBDC matters for national security, and by far most important, is that we have an overwhelming interest to reinforce dollar primacy and to minimize even the most remote risks of losing its status. Now I want to take this step by step, because perhaps like some of you, I have been frustrated with lazy narratives that foresee the loss of dollar primacy without bothering to connect the dots.

So let me start with the easy part by saying what I hope is beyond dispute—dollar primacy is a national asset that provides incalculable benefits to the United States. It gives us tremendous leverage to absorb a shock (recall the S&P downgrade in 2011, after which the dollar strengthened and our borrowing costs fell), unrivaled capacity to deliver a shock (see sanctions), and the ability to fund our government, households, and businesses at much lower costs than would otherwise be the case (the academic estimates I have seen on the borrowing cost advantage for the federal government range widely, from 10 to 200 basis points across the yield curve, which impacts interest expense quite substantially on a debt stock well over 20 trillion dollars¹⁸). So that is point one.

¹⁸ Ralph S. J. Koijen & Motohiro Yogo, *Exchange Rates and Asset Prices in a Global Demand System* 25 (U. of Chi., Becker Friedman Inst. for Econ. Working Paper No. 2019-91, 2020),

Point two: let me acknowledge that right now—on paper—there's nothing to see, and nothing to worry about as it relates to dollar primacy. In fact, if I reflect on this week's discussions at the IMF meetings in D.C., the preoccupying question was whether the global economy could bear the unrelenting strength of the dollar.¹⁹ It has risen more on a nominal trade weighted basis year to date than any other year over the past half a century, excluding 2008 and 1997—both of which ended in tears!²⁰

If you look at the traditional measures of primacy—the use of a currency to buy or sell goods, to borrow money, or to save money—you do see a reduction in the dollar's share of global foreign reserves (a proxy for saving money) of about 12 percentage points this century, but the dollar is still in a dominant position, almost 3 times more than the currency in second place—the euro—and more than 20 times more than the renminbi.²¹ As a payment currency, the dollar's share has remained stable at a high level, and the dollar's share has grown considerably as a source of funds in debt and loan markets.²² So again, on paper, there's nothing to see.

Point three: the steady dominance of the dollar is unsurprising. Why? Two reasons. First, the dollar is now tantamount to the operating system of global finance, with incredibly powerful network effects that generate inertia in its status. Second, there is no credible alternative. Many still worry about existential challenges in the Euro area as it struggles to forge a closer union. Japan's economy has been stagnant for decades, with decreasing depth and

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3383677 [https://perma.cc/B342-TXRL]; Arvind Krishnamurthy & Hanno Lustig, *Mind the Gap in Sovereign Debt Markets: The U.S. Treasury Basis and the Dollar Risk Factor, in* KANSAS CITY FED. RSRV. JACKSON HOLE SYMP. ON CHALLENGES FOR MONETARY POL'Y 445, 450–56 (2019); Emily Lambert, *How Much Does the US Dollar's Primacy Depend on Investor Demand?*, CHI. BOOTH REV. (Feb. 2, 2022), https://www.chicagobooth.edu/review/how-much-does-us-dollars-primacydepend-investor-demand [https://perma.cc/YT5V-RS53].

¹⁹ See, e.g., Press Briefing, WEO Annual Meetings 2022 (Oct. 11, 2022), https://www.imf.org/en/News/Articles/2022/10/12/tr101122-weo-transcript

[[]https://perma.cc/P9JX-ZHPF] ("The strength of the dollar is also a major challenge.").

²⁰ See Fed. Rsrv. Bank of Kansas City, *TWEXB Series*, FRED, https://fred.stlouisfed.org/series/TWEXB [https://perma.cc/S6LG-RRQJ]; Fed. Rsrv. Bank of Kansas City, *DTWEXBGS Series*, FRED, https://fred.stlouisfed.org/series/DTWEXBGS (last visited Nov. 26, 2022) [https://perma.cc/8ULL-M87C].

²¹ IMF, *Currency Composition of Official Foreign Exchange Reserve*, https://data.imf.org/?sk=b77820ce-df53-4cc5-a74f-7fe55668b2e8&hide_uv=1 (last visited Nov. 26, 2022) [https://perma.cc/G83Y-THSM].

²² See Carol Bertaut, Bastian von Beschwitz & Stephanie Curcuru, *The International Role of the* U.S. Dollar, FEDS NOTES (Oct. 6, 2021), https://www.federalreserve.gov/econres/notes/feds-notes/the-international-role-of-the-u-sdollar-20211006.html [https://perma.cc/UH5S-RSVZ].

liquidity in its financial markets. And China has not embraced the kind of reforms that would make the renminbi a credible currency in which to save or borrow money. It still has capital controls, it doesn't have an independent central bank, nor does it have transparent rule of law or an independent judiciary.

Point four: we should never take dollar primacy for granted. Like any other asset, dollar primacy will depreciate in value if we manage it poorly. Let's recall the conditions that gave us dollar primacy in the first place: strong and independent institutions like the Fed, rule of law, an open system for the flow of trade, capital, people, the ability to innovate, the deepest, most liquid, safest, financial markets in the world, a story that attracts ideas, talent, goodwill, and trust that the United States will be a faithful steward with the socalled exorbitant privilege of dollar primacy.

The fact that many across the world are raising the question of whether they can still trust the dollar-based financial system in the wake of our sanctions response to Russia is itself a risk that we should take very seriously. Dollar primacy is nothing more than a network. All networks have tipping points, often psychological ones that are impossible to identify in advance. And we know from the history of networks—whether they are in biology, technology, finance, or my son's eighth grade lunch table—they lose value slowly and then very suddenly. By the time the erosion of dollar primacy shows up in the data, it will likely be too late to stop the process.

Now let me bring this back to why it matters that we are a distant CBDC laggard playing an uncertain trumpet. Let's go through a thought exercise. Imagine that China consolidates and grows its leadership position in cross-border payment technology. Why? Well, as I mentioned before, it has a strong geopolitical and economic motivation to challenge the dollar's unrivaled status. And, importantly, it is positioned to offer a better product to address a genuine market need for faster and cheaper cross border payments. Currently, the many steps required to process an international wire transfer are lengthy, costly, and frustrating for the one in eight people across the world that send or receive remittances with regularity. According to World Bank data, average global remittance costs are 6 percent of the transaction,²³ whereas a distributed ledger technology (DLT)-based infrastructure can reduce those costs to less than 1 percent.²⁴ With regard to speed, the Director-General of China's digital

²³ World Bank Group, 42 REMITTANCE PRICES WORLDWIDE Q. 1, 7 (June 2022), https://remittanceprices.worldbank.org/sites/default/files/rpw_main_report_and_annex_q222. pdf [https://perma.cc/WL4F-X4NG].

²⁴ See Rodrigo Mejia-Ricart, Camilo Tellez & Marco Nicoli, Paying across borders - Can distributed ledgers bring us closer together?, WORLD BANK BLOGS (March 26, 2019),

currency initiative said earlier this year that the e-CNY will eventually process 300,000 transactions per second (TPS), many orders of magnitude higher than Visa at 1,700 TPS.²⁵

Without a competing CBDC issued by a major economy, let's further assume that the share of cross-border transactions denominated in renminbi continues would converge towards China's share of global trade, already the highest in the world. With more internationally traded goods invoiced in renminbi, academic research and historical experience suggests we might expect a higher equilibrium level of renminbi deposits and other financial claims held outside of China to undertake these transactions.

To extend the scenario further: if the size of these renminbi claims rises to a material level for China's trading partners, then government authorities in these countries would have greater incentive to accumulate renminbi reserves as insurance against foreign exchange fluctuations or a sudden stop to renminbi capital flows. As Jeremy Stein and Gita Gopinath have laid out in their research, it is not hard to imagine a reinforcing feedback loop between these dynamics, whereby the increased use of a currency for cross border trade eventually, or concurrently, leads to greater usage of the currency as a unit of account, and ultimately as a store of value.²⁶

In fact, this is not just an imaginary scenario. It would follow the historical sequence of events that led to the displacement of the British pound by the U.S. dollar after World War I. As described by Barry Eichengreen, the Federal Reserve Act of 1913 allowed U.S. banks to facilitate dollar-denominated transactions with dollar trade credit, leading to rapid growth in the use of the dollar for the invoicing and settlement of cross-border trade.²⁷ In his words: "experience suggests that the logical sequencing of steps in internationalizing a currency is: first, encouraging its use in invoicing and settling trade; second, encouraging its use in private financial transactions; third, encouraging its use by central banks and governments as a form in which to hold foreign reserves."²⁸

Now while I would readily acknowledge that China lacks almost all of the competitive advantages I listed as attributes that gave the dollar its

https://blogs.worldbank.org/psd/paying-across-borders-can-distributed-ledgers-bring-us-closer-together [https://perma.cc/9L6M-SN2N].

²⁵ Kumar, *supra* note 4.

²⁶ See generally Gita Gopinath & Jeremy C. Stein, *Banking, Trade, and the Making of a Dominant Currency*, 136 QUARTERLY JOURNAL OF ECONOMICS 783 (May 2021).

²⁷ Barry Eichengreen, *The Renminbi as an International Currency*, 33 JOURNAL OF POLICY MODELING 723, 724–25 (2011).

²⁸ *Id.* at 725.

primacy—most of all trust—let me remind everyone once again that the incentives to hedge against the dollar-based financial system are on the rise in the current geopolitical environment, and CBDCs could very well be a building block in Beijing's capacity to build a competing or parallel network. Even for those of you who think there is only a remote chance of my story being true, my response would be this: Why take a chance of losing a national treasure? Why gamble our position of strength? Why not fully explore all options to improve our product?

As a concluding point, nothing I have said is meant to get ahead of the long list of important design and deployment questions that need to be addressed before the United States decides whether to issue a CBDC. Would this be a retail or wholesale CBDC? If the former, where would the accounts reside, what would be the services offered with these accounts, and by whom? What would be the design modalities that limit the disintermediation of the commercial banking system—particularly during times of stress? How would the government, or its agents, protect data and safeguard the operational integrity of the CBDC? What would be the implications for credit creation, both in peacetime and during episodes of stress? Which features would the CBDC include to improve the execution of stimulus provision, whether it is an automatic stabilizer or a discretionary program put in place during a crisis? And how might a CBDC interact with and co-exist with other digital currencies, both privately issued and those backed by other fiat currencies?

My message is not that we have those answers today. It is more modest. Let's get on with the work of grappling with these questions, in the best tradition of American innovation, by collaborating across government, academia, and the private sector and committing to develop, experiment with, and refine a CBDC prototype. And let's do so in the spirit of democratic legitimacy, seeking input from public and private stakeholders and then putting the decision before our elected officials. It may be that our leaders ultimately decide, years down the road, that we don't need a CBDC, that the process of creative destruction is advancing our national interests just fine without the hand of government. But even for the sake of risk management, let's not make hope and inertia our digital assets strategy. Let's create a public option. Let's compete. And may the best product win.