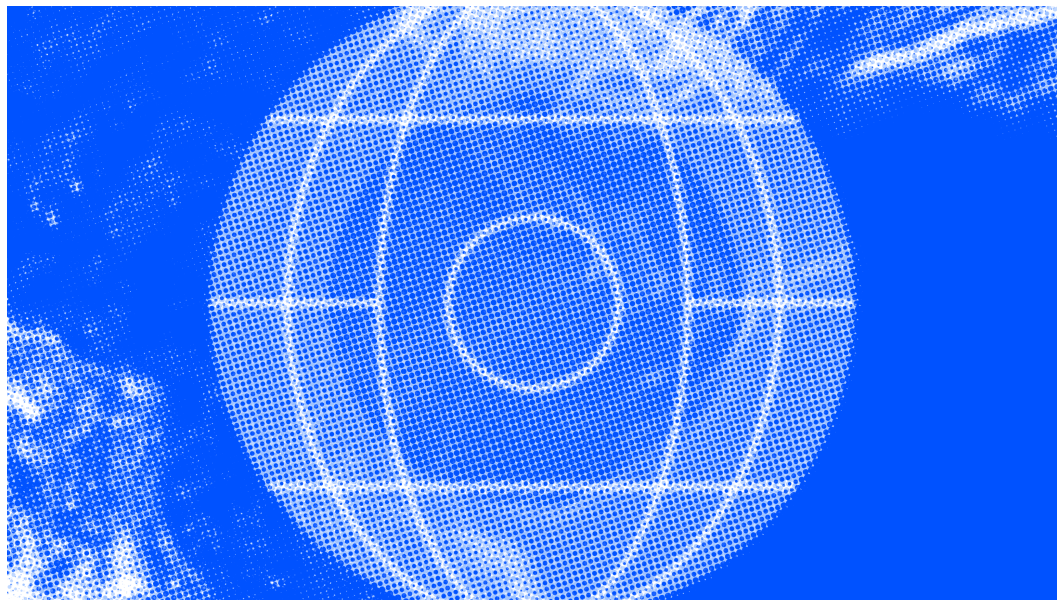




National Security in the Age of Digital Innovation: The Critical Role of Crypto

By: Faryar Shirzad | January 2023



Thirteen years ago, someone using the pseudonym Satoshi Nakamoto published the Bitcoin whitepaper, showing how ownership could be immutably and incorruptibly encoded in a digital ledger. Satoshi did this by creating a new form of currency: Bitcoin. Bitcoin showed that value, like messages, can be delivered electronically. We call this breakthrough blockchain technology, and it has solved one of the most confounding challenges in the development of the internet, which was how to digitally transmit value without relying on verification by an intermediary.



The simple but profound breakthrough of the blockchain has ushered in a multitude of potential use cases, resulting in an explosive wave of crypto innovation.

The most visible of these use cases is the ability to create tokenized ownership interests, which can be used both to store value and as a means of payment. This has led to the rapid emergence of a crypto financial system involving crypto tokens on blockchain networks. While these tokens and networks each have their own performance and functional characteristics, use cases continue to develop and the current market remains speculative. The resulting volatility in token prices is the aspect of crypto that gains the most airtime in the media and is most familiar to casual observers. But crypto's adoption is stealthily manifesting into a variety of use cases, and even making the traditional financial system more efficient and resilient, through the development of new decentralized solutions to age-old problems.

Most crypto market observers understand that the long term economic benefits of crypto are deeply important. But there is also a critical national security dimension to crypto technology that needs to be better understood by crypto enthusiasts and foreign policy experts alike. This is especially important given the questions that some policymakers, particularly in the U.S., have raised regarding whether crypto advances or undermines national security interests. The answer is clear: while crypto, like any technological innovation, brings change and requires adaptation, keeping pace with – and perhaps taking a leadership role – in digital innovation is critical to a country's national security strategy.



Digital and crypto innovation is borderless and transcends traditional boundaries. This reality (which is true for most technological innovations) can be uncomfortable for any nation, particularly one like the United States that has already achieved global leadership. And while adopting a strong crypto policy is important for all countries, the reasons to adopt such a policy are perhaps strongest in the U.S.

Part 1

The Case for Strong Crypto Policy in the United States

The strength of the United States' financial system is central to its global leadership. Investors and borrowers from around the globe have long sought to do business in the United States because it has the deepest, most robust, and innovative financial markets that are protected by a time-tested legal system. This strong demand for U.S. assets has lowered financing costs for American businesses and consumers, as well as for the US government, contributing to American economic might. The dollar's position as the world's currency has also allowed the United States to establish a safe and efficient international financial system, which in turn has allowed the US government to use the country's economic might as a tool for its foreign national security strategy, including through the imposition of economic sanctions, with great effect.

The crypto market is still maturing, as evidenced by the cycle of booms and busts that the industry has gone through over the last several years. Nonetheless, it has already become an important aspect of finance, and is already playing a role in ensuring the continued vitality of the US financial system. The current retail token trading of crypto is the aspect of crypto markets with which many are familiar, and is the first major example of crypto's importance to the financial system. These tokens, which each have different performance and functional characteristics, have also attracted interest from an expanding circle of developers in recent years who are building new applications using the networks underlying individual tokens. As a result, these markets are growing rapidly around the world, at the same time that policymakers are providing more legal clarity and certainty for both users and innovators by moving to establish regulatory frameworks around intermediated crypto trading.

The speculative nature of these markets, and the heavy retail orientation, is only the first-stage in the maturation of these markets. The next phase – adoption by institutional investors – is happening today. These institutions are providing opportunities

to access crypto markets through managed funds, where customers can include crypto as a component of their broader investing strategy. As with traditional financial markets around the world, wide scale adoption by institutional investors will dampen volatility. Through these steps, the cryptoeconomy continues to rapidly evolve and mature in a variety of directions.



One particularly innovative aspect of this evolution is the increased use of decentralized financial platforms, commonly known as DeFi. DeFi is a broad term for applications that facilitate transactions on a peer-to-peer basis, thus eliminating the need for financial intermediaries.

DeFi protocols can empower individuals to earn interest, borrow, lend, buy insurance, and trade assets/liabilities without paying fees to an intermediary. In short, DeFi takes the premise of crypto tokens and expands on it, creating a digital alternative to the financial system, without the associated costs. This can create more open, free, and fair financial markets that are accessible to anyone with an internet connection.

While DeFi allows for individuals to transact without the need for an intermediary, the technology is also being used by traditional financial institutions to execute fundamental aspects of their activities. For example, JP Morgan recently executed a foreign exchange trade between Singapore dollars and Japanese Yen on a third-party DeFi protocol. They were able to do this while following their stringent regulatory constraints, and without altering the protocol. While this was only a first step, it's an important illustration of the interest that traditional institutions are demonstrating vis-a-vis crypto-based solutions.

Another facet of this evolution is the emergence of stablecoins, which are crypto tokens that are pegged to a “stable” reserve asset, typically the U.S. dollar. Stablecoins are designed to reduce volatility relative to unpegged cryptocurrencies like Bitcoin; they bridge the worlds of cryptocurrency and everyday fiat currency because their relative prices remain constant. The combination of traditional-asset stability with digital-asset flexibility has proven to be wildly popular. While adoption remains at an early stage, stablecoins are providing critical payments alternatives that are cheaper and faster – particularly with regard to cross-border transactions – than the traditional mechanisms.

Just in the use case of remittances, the use of stablecoins can reduce costs dramatically for individuals who can least afford the costs of traditional mechanisms, and the aggregate impact on countries for whom remittances constitute a significant percentage of GDP are significant. It’s for these and other reasons that billions of dollars in value have flowed into stablecoins, as they’ve become some of the most popular ways to store and trade value in the crypto ecosystem.



The emergence of crypto technology and its rapid adoption as a store of value and increasingly as a means of payment has raised questions about whether this technology and its emerging use cases are a threat – or a boon – to the US financial system, and to American national security broadly.

These questions are understandable. Crypto promises to disrupt much of the status quo, and the early vision of crypto is ambitious and sometimes couched in geopolitical terms as a mechanism that is insulated from state power.

At the same time these questions are being asked about crypto, the US already faces challenges to our position as a financial leader. The dollar remains strong, but the percentage of central banks reserves denominated in dollars recently fell to the lowest point in 25 years. Most U.S. banks have lost their dominance in global banking. Many have [reduced their presence](#) in emerging markets, citing increased risks, and this has created openings for other countries to step in to fill the void. China, for example, already has four of the five largest banks in the world, positions that were occupied by U.S. and European banks just twenty years ago. And in 2020, Chinese commercial banks were the number one lender in 63 emerging market countries, controlling a quarter of the market share of cross-border loans.

Countries like Russia and China have also been moving quickly to develop payments architecture to rival the dollar. While these systems are still nascent, the political imperative behind them is palpable among countries seeking an alternative to the US dollar and to the SWIFT system. China's Cross-Border Interbank Payments system, or CIPS, for example serves as an alternative to SWIFT, and is of increasing geopolitical significance as countries seek to insulate themselves from the reach of US and European sanctions. Russia also claims that its alternative to SWIFT – the SPFS – grew at a record pace last year.

The development of alternative payments settlement systems is occurring alongside a rapid development of electronic and digital payments globally, with many of the countries most concerned with western sanctions having massive adoption of digital retail digital payments in their economy. Chinese e-commerce and social media giants Alibaba and WeChat have about a billion active users each in their mobile payment platforms. India leads the world in real-time digital payments – it clocks almost 40 percent of such transactions globally. India's Unified Payment Interface, which facilitates real-time peer-to-peer transactions, contributes significantly to this figure.



Not only is crypto innovation essential to US Global leadership, but it can be used by public and private entities to combat financial crimes.

The blockchain is traceable and transparent, which enables effective tracking of illicit activity, much more so than is possible with fiat transactions maintained on private ledgers. Recent high-profile arrests underscore this point. In 2020, the IRS [dismantled three online terrorist financing campaigns](#) that had solicited donations in crypto. Despite the terrorist group's boast that "Bitcoin donations were untraceable," FBI agents tracked crypto from over 300 accounts related to the campaigns. Similarly, authorities [were able to trace](#) and recover many of the lost funds from a Russia-linked ransomware attack on the critical Colonial Pipeline in 2021. Currently, law enforcement relies heavily on assistance from crypto-native companies – including several exchanges – who have the analytical capabilities to monitor and trace activity on the blockchain. In recent years, however, key government agencies are building their own capability to do this type of analysis, and have sought special funding to build in-house expertise in this area.

Part 2

Five Reasons Crypto is Important to US National Security



These developments provide important context to the question of how to consider crypto. While the time and the arc of innovation will eventually tell us more, there are a number of important reasons why the U.S. – and other countries – should welcome the growth and adoption of crypto technology as a component of their national security strategy.

First, the presence of crypto exchanges and other intermediaries located in a particular country will ensure that critical on- and off-ramps to the crypto economy operate under domestic rules and comply with any national security controls or laws that a country may impose. This will ensure that a government will be able to stop bad actors who wish to move illicit funds or otherwise engage in illegal activities, thus protecting its national security objectives. It will also ensure that these exchanges operate under appropriate supervisory and governance controls that protect consumers and mitigate systemic risk. The recent melt-down of FTX, an off-shore exchange, is a timely example of the imperative of ensuring high regulatory standards, and the reality that it can be difficult to insulate the US from the impact of regulatory gaps overseas. The importance of U.S. regulatory oversight will only increase as Congress and the Biden Administration take action to create a clear national regulatory framework around intermediated crypto markets.

Second, crypto markets are largely U.S. dollar denominated. Around [95 percent](#) of all crypto trades are conducted with the use of dollars or dollar denominated stablecoins. By embracing crypto, the United States can help to ensure it retains the dominance of the dollar in crypto, thus ensuring the growth of the crypto markets becomes reinforcing of the strength of the U.S. dollar. Other countries understand this dynamic and are moving

rapidly to create non-U.S. dollar crypto alternatives. The EU, for example, recently passed a comprehensive crypto regulatory regime that limits the ability of non-Euro denominated stablecoins to operate in the EU. The intent of these measures was not explicitly articulated, but it appears that an important motivation was the hope of incubating an alternative to US dollar-denominated stablecoins. While the EU has moved first, other countries are considering similar measures aimed at weakening the link between the crypto markets and the U.S. dollar.

Third, and relatedly, central banks around the world are also exploring the potential to issue their sovereign currency in digital form – known as central bank digital currencies (CBDCs). China's digital currency, the e-yuan, is one example, but there are about 100 countries who are currently engaged in the development of a CBDC version of their currency. This widespread interest in tokenization of fiat currency is reflective of a broad based international understanding that tokenization will be an increasingly important part of the future monetary and financial system. At the same time, it also raises potential privacy and security concerns. The e-yuan, for example, operates on a centralized ledger supervised by the People's Bank of China. Its widespread adoption could give the government [expansive visibility](#) into global transactions and leverage over users – whether countries, companies, and individuals – outside China.

Fourth, adoption of blockchain and distributed ledger applications in the U.S. financial system will ensure that the U.S. financial system continues to innovate and evolve, and thereby remains on the cutting edge. The move toward electronic trading in the late 1960s was disruptive to the old order and established market structure, but it ushered in the explosive growth of our capital markets, which fueled significant elements of economic growth in the decades that followed. The willingness to make that jump was critical to the rapid growth of our financial system, and to New York (and London) remaining the centers of global finance. The disintermediating impact of crypto technologies will be similarly disruptive, as the evolution of our financial system and

our economic lives are becoming more closely related to the technical advances of the internet. As mentioned above, Singapore and Japanese regulators worked with JP Morgan to allow the use of DeFi in foreign exchange transactions. In the EU, regulators are similarly providing “sandboxes” for financial institutions to experiment with the adoption of tokenization and new technology. That same willingness to allow for innovation should be an imperative for US policymakers with regard to the US capital markets and banking system.

Fifth, cryptocurrencies and the blockchain also have implications far beyond financial markets: they are reshaping how people can navigate an increasingly digital world. With tokenization, individuals will have the ability to engage and transact through smart contracts and decentralized protocols that offer new ways of securing, tracking, and transferring information and value. Crypto has thus become a catalyst for experimentation and innovation in a number of ways that are separate and distinct from the financial sector. From decentralized digital media, to transferring real property using NFTs, to securing the IoT, to helping refugees securely establish/protect their identity, to making remittances faster/cheaper, the use cases are developing quickly, and policymakers should encourage the development of these applications in the United States.

Part 3

Components of a National Strategy



Given all this, how should the United States incorporate crypto into its national strategy?

First, the federal government should state clearly that the United States welcomes digital asset and crypto market innovations. The Biden Administration, to its credit, took an important step in this direction with the issuance of its Executive Order on Digital Assets, in which National Security Advisor Jake Sullivan and National Economic Council Director Brian Deese said:

“The rise in digital assets creates an opportunity to reinforce American leadership in the global financial system and at the technological frontier. . . .The United States must maintain technological leadership in this rapidly growing space, supporting innovation while mitigating the risks for consumers, businesses, the broader financial system, and the climate. And, it must play a leading role in international engagement and global governance of digital assets consistent with democratic values and U.S. global competitiveness.”

These aspirational statements of policy – while high level and non-binding – are critical to provide a common sense of direction to the diverse parts of government who will touch this versatile and innovative technology. The Clinton Administration did something similar, though stronger, in the early 90’s when it recognized that investing in the budding internet would improve Americans’ quality of life and be a powerful catalyst for economic growth. There, the Administration [said](#):

“For [the internet’s] potential to be realized fully, governments must adopt a non-regulatory, market-oriented approach to electronic commerce, one that facilitates the emergence of a transparent and predictable legal environment to support global business and commerce. Official decision makers must respect the unique nature of the medium and recognize that widespread

competition and increased consumer choice should be the defining features of the new digital marketplace.”



In hindsight, this recognition that was perhaps easily dismissed when it was issued proved prescient and influential in having government policy follow a relatively consistent trajectory.

Second, the government needs to follow any statement of national priority with tangible steps to provide regulatory clarity to this sector. The United States lags behind many other countries when it comes to digital asset regulation. Jurisdictions like Australia, Brazil, the EU, Hong Kong, Singapore, Switzerland and the U.K. have started developing serious regulatory frameworks for crypto, while the U.S. has made little progress on developing a comprehensive national market regulatory framework. This lack of regulatory clarity can bring unfortunate results – as innovators and investors seek out more stable and predictable regulatory jurisdictions to operate and develop.

Third, the U.S. needs to embrace the emergence of the web3 world, which through tokenizing activity allows individuals to navigate our increasingly digital world in a more empowered way. The current system of intermediaries controlling much of our digital lives, and operating as an assumed but unnecessary part of our financial regulatory structure, has delayed innovation without an accompanying benefit to consumers to show for it. Policymakers around the world in recent years have devoted significant attention to addressing the problems of the incumbent system – too big to fail, anticompetitive behavior, privacy, and large intermediaries monetizing the data of individuals without compensation. All of these things can be addressed in some fashion with the innovation of tokenization, and that potential should be embraced as a matter of public policy.

Part 4

Conclusion

While web3 applications hold the answers to many problems, they will also raise important questions of their own. The ability of individuals to hold their own assets, and to potentially tokenize even their own identity, will require the government to abandon a reflexive move towards increased surveillance over the lives of individuals. Privacy more generally is a difficult issue for regulators to navigate alone, and requires the political branches of government to confront and resolve. The benefits are potentially enormous, but it requires a clear and determined application of policy to realize it.



Instead of viewing the growth of digital assets as a threat, countries, and in particular the United States, should view it as an opportunity to reinvigorate the competitiveness and preeminence of its finance and technology industries.

While crypto has undoubtedly stumbled this past year, what is often overlooked is that the technology itself has proven robust and resilient. The underlying technology of the tokens and the networks on which they operate have proven to be sound. So have decentralized crypto protocols. This says something about the benefits that crypto has to offer, and the ways in which it can be used to spur innovation while simultaneously protecting consumers. Indeed, there have been instances in our nation's past where our failure to embrace technology put us at a disadvantage. China's strategic moves to subsidize 5G technology, for example, gave Beijing a tool of immense geopolitical and economic power that set us back in this important space. It is critical at a time when technology plays such a significant role in geopolitics for the US not to repeat the same mistake of inaction and complacency.

Foundationally changing entire industries and economies is a daunting task. There is risk to effecting such change. In the face of such a dramatic change, those who fear change or are invested in the current system will point to those risks and what has not materialized as proof that we should stand still. But if a country adopts a posture of ambivalence about this innovation – like the U.S. seems to be at this moment – it does so at its own peril.



As with the internet and a host of other technologies – most of us do not have the full vision today to understand what this technology could become. But if a country makes the right policy investments today, they will be positioned to reap the benefits that decentralized technology has to offer.