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Taming Bitcoin

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There has been a panic in the global bitcoin market since September. On 4 September, the People's Bank of China declared Bitcoin's ICO (Initial Coin Offering) an 'illegal financial activity', and not soon after that, Caixin reported the shutdown of Bitcoin-RMB exchanges. Six days later, the largest digital currency exchange platform in the country, Bitcoin China, announced the termination of its exchange business by the month's end. Since the Chinese market made up two-thirds of the total Bitcoin trade, the market value of Bitcoin took a 40% dive in two weeks, plummeting to US$3,000 on 15 September (before since roaring again to almost US$17,000, its all-time high).

Meanwhile, Western economies sounded their alarm about the risks of Bitcoin's ICO. One may well be wondering whether Bitcoin isn't the latest fad in financial technology? Why is its value in constant flux? Why are governments around the world so guarded about Bitcoin? What are the economic factors behind its recent regulations and sanctions?

What is Bitcoin?

Importantly, Bitcoin is not just another currency, but also a point-to-point payment system. What distinguishes Bitcoin from conventional currencies is the absence of a centralized party to administer and control its payment system. Through a medium known as 'blockchain', one can offer payment to another in Bitcoin and the transaction is validated by a third party, which then receives rewards in Bitcoin as it competes to solve complex mathematical problems in a process called 'mining'. Blockchain, in short, can operate in auto-mode: transactions are verified by anyone who offers to do so and are then recorded automatically.

One core appeal of Bitcoin is its tamper-proof nature. A transaction, once created, is for technical reasons extremely difficult to alter. More to the point, all transactions are public and permanent, providing trust in the system for both businesses and investors. Another benefit is that as each transaction is encoded before it is displayed in the public domain, Bitcoin, like cash, preserves the anonymity of users, offering a sense of privacy and security in an interconnected world. Of course, the anonymous and decentralised nature of blockchain can be exploited to conceal money laundering and terrorist financing. North Korea, for instance, is said to have a Bitcoin mining operation to bypass UN sanctions.

You may have already noticed the subversive nature of Bitcoin. Almost by construction Bitcoin is designed to bypass the existing banking system. Not only does Bitcoin bypass banks with its P2P system, the clearing function of banks is also replaced by reverse-addition of account balances in the blockchain. It improves transaction efficiency by rendering bureaucracy in banks and transaction fees obsolete. Having in mind the damages the Big Banks inflicted on the global economy in 2008, the advent of Bitcoin is definitely music in the ears of many.

Bitcoin's Dangerous Stealth of Sovereignty

All is well until we are duly reminded that a coin, or rather a Bitcoin, has two sides. The risks of money laundering and cybersecurity associated with Bitcoin have been well documented. What is more fundamental, however, is Bitcoin's secret assault on state sovereignty - after all, this is what sovereigns most care about.

Any given state would automatically surrender three types of autonomy once Bitcoin is adopted as a major national currency. First, central banks would lose control of monetary policy as the supply of Bitcoin is entirely dependent on mathematical algorithms, thus ceding influences on the money supply and hence the levels of consumption, investment and exports in the economy. In the rather likely event that the supply of new Bitcoins is exhausted, the economy will degenerate into a deflationary trap if not a full-blown recession.

Second, the state would lose oversight of its exchange-rate policy. The speculative nature of Bitcoin transactions should be clear by now. From the beginning of this year, the value of a bitcoin has jumped sixteen-fold to US$17,000, while experiencing regular sharp corrections by as much as -21% in the early part of November. Volatility on this terrific scale is all great for speculators, but perhaps not so great for manufacturers and exporters.

Third, governments will be in horror to see their financial policy effectively neutered. If members of the public save and invest mostly with Bitcoin, a sharp drop in value would bankrupt ICO-listed businesses, ICO investors, Bitcoin savers and banks which receive deposits in Bitcoin. Contagion could occur if Bitcoin permeates into every aspect of the economy.

In the realm of international finance, there is a golden rule called the Mundellian Trilemma: that no central bank can achieve all three goals - free capital flow, stable exchange rate and independent monetary policy - and only two out of three can be achieved at the same time. Under the hypothetical scenario of a Bitcoin hegemony, we are only left with a free capital flow as the sole item on the menu, satisfying only the greed of reckless profiteers and the zeal of fanatic 'libertarians'. At the end of the day, Bitcoin is akin to a gold standard albeit one not backed by gold. In other words, Bitcoin is obstructing governments from adjusting against market shockwaves while retaining little to no intrinsic value of its own. What good does Bitcoin *as a currency* really bring to the economy as a whole?

For these reasons, Bitcoin will be deprived of its function *as a currency* by sovereign states in the long run, which is why Jamie Dimon, CEO of JP Morgan, claimed that bitcoin is a 'fraud' as government regulation is imminent and inevitable. China has been a forerunner in the field of Bitcoin regulation. Earlier this year, the People's Bank of China (PBoC) issued an important report named the Report on China's Financial Stability (2017). It designates Bitcoin as a 'special virtual commodity', one without the legal status of a currency, and also emphasizes that Bitcoin speculation entails 'certain risks'.

Of course, China is not really going to ban Bitcoin. Although Bitcoin-RMB exchanges have been shut down, the ban does not target the virtual 'currency' per se and does not extend to transactions between virtual currencies. As such, Bitcoin is now something analogous to a financial security. Business as usual, but conduct at your own risk.

From Bitcoin to Central Bank Digital Currency

Should Bitcoin fail, does it mean the merits of blockchain we mentioned above will all be for nought? Not necessarily so. I can assure you that the 'nationalization' of the Bitcoin will be the greatest event of this century for central banks around the world. While the outright seizure of the Bitcoin system is technically infeasible and practically absurd, governments will definitely exploit the advantages of blockchain whilst minimizing its shortfalls by creating statutory digital currency at the state level. What this means in practice is to change the 'private ledger' of Bitcoin into the 'public ledger' of a so-called

Central Bank Digital Currency (CBDC), whereby the validating node - the government - can check the validity of transactions without needing to perform the time-consuming, energy-intensive task of mining, and without confronting the logic of giving out coins to greedy miners. An immediate benefit is a much more efficient clearing and settlement system. Things are proceeding fast. In June 2017, the IMF presented a paper expressing support for the issuance of CBDC. Meanwhile, the United Kingdom is looking into a digital Pound Sterling called 'RSCoin' and Russia is experimenting with its own 'CryptoRuble'.

In short, CBDC, rather than Bitcoin, should be what people are looking out for. There is, however, no single form of CBDC. This is ultimately because blockchain is simply a system of data records; no physical assets are transferred. What form a CBDC takes will depend on whether central banks would like to settle payment with or without the blockchain network. In China, where digital RMB is at its testing stage and information remains limited, blockchain seems only to be used for data recording, but not payments and clearing. The People's Bank of China and commercial banks will each clear transactions in digital RMB in the same way they do with its non-digital cousin, as a means to get away with the inefficient mining process of blockchain. But in this way, China will still be able to utilize the vast amounts of data recorded on the blockchain for research and analytics purposes. Taking the best of both worlds, Beijing hopes to preserve the modus operandi of existing commercial banks, while utilizing existing customer base and IT infrastructure of the banking system to promote digital currencies.

The British "RSCoin", if materialized, would also operate under the dual system of central bank and commercial banks, but it goes further than the digital RMB in that it counts on the blockchain for handling payments. Clearing and settlement will first take place in the 'small' ledgers maintained by designated banks, and upon accumulating to a certain amount, the remaining overall balance is totaled up for final clearance in the 'big' ledger held by the Bank of England. However, while boosting efficiency in banking, this would leave a greater disruption to the existing ecology in the financial sector: what role is left to the commercial bank when the central bank can always take it over and maintain an RSCoin account for every citizen?

The stance of India as another developing giant is also interesting. While New Delhi once floated plans to legalize Bitcoin and to regulate investments, transactions and overseas payments using Bitcoin via taxation, the latest position seems to point, again, to the nationalization of Bitcoin. As S Ganesh Kumar, executive director of the Reserve Bank of India, put it, 'Our current position on bitcoins is that we will not be using them for any payments and settlements … though the technology underlying crypto-currencies will not end.' Since the Indian government has yet to articulate a coherent stance on Bitcoin, it may be worth pondering why. One primary reason is probably found in India's decentralized government and inefficient bureaucracy, which might explain why many are keen to pay even their utility bills in Bitcoin. However, given the weight of the sovereignty argument, New Delhi may well be compelled to embark on the journey of nationalization.

One country, two currencies

Moving back from CBDC to Bitcoin, Beijing's heavy-handed response to Bitcoin still appears astonishingly cautious, especially when compared to those of other jurisdictions. One possible factor behind China's *public* conservatism towards Bitcoin is, ironically, the country's *private* enthusiasm for the virtual currency. Sixty per cent of Bitcoin is in the hands of Chinese users and 70% were produced by Chinese users, making Bitcoin China's second currency. This is bound to raise eyebrows among Chinese mandarins. In April 2017, Chinese President Xi Jinping first used the term 'financial security' and stated that 'financial security is an integral part of national security' and 'is a vital strategic and fundamental part in the country's socio-economic development'. In this context, how could Bitcoin ICO not be concerning were it not, in the words of the Chinese Internet Finance Association, for 'the disturbance it caused to society'?

In an era of the Fourth Industrial Revolution, we might reasonably conclude that 'nationalization' is and will be Beijing's answer to fintech, artificial intelligence and the sharing economy. Thus, Google was

'nationalized' as Baidu, Facebook as WeChat, Uber as Didi Chuxing and now Bitcoin as digital RMB. Nationalization 2.0 has propelled China as a major player in globalization by absorbing new technologies while furthering the development of its national champions.

Hong Kong has many benefits to reap from China's 'nationalization' drive, the IPOs of these new champions being the most shining illustration. In the context of digital RMB, Hong Kong can play a critical role, too. Since the PBoC has made clear its long-term plan for RMB's 'managed convertibility', cross-border flows of onshore digital RMB will be under heavy scrutiny, similar to the way Alipay's overseas payments are capped. Thus, as the city's Financial Services Development Council rightly points out, Hong Kong is strategically positioned to manage the inflows and outflows of digital RMB given its status as the world's largest offshore RMB centre. At the same time, Hong Kong should also develop a 'digital Hong Kong Dollar' to foster its leading position as an international financial centre. In this way, the 'one country, two systems' principle in the city can be put to full use and acquire new purpose.

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