

# MAKING TOKENS GOVERNABLE

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## INTRODUCTION

**The rise of blockchain technologies has caused both challenges and opportunities to the global regulators. In this article, we point out that the blockchain technology can be a friend to regulators in the long run, and the primary regulation should be made in the chain-level instead of exchange level.**

Tokens or cryptocurrencies play a key role in blockchain ecosystems. They are the programmable contracts and can have many functions. In the bitcoin system, the bitcoins, as the tokens, help to motivate miners taking the task of maintaining the chain. In some later blockchain systems with POS (Proof of Stake) type of consensus, tokens themselves are symbols of stakes in decision-making processes. The crypto communities have issued thousands of utility tokens with various functions in the hope of revolutionizing business.

A token's primary purpose can be of payment, financing or utilities, but they all have values, high or low, and can trade with other assets. Trading of financial assets has been traditionally overseen by regulators, to ensure the fairness and efficiency of markets and to ensure that proper tax related to trading activities is collected. Tokens, or at least some sorts of tokens, have been under the scope of global financial regulators. The classification of tokens varies across regions - for example, the bitcoin can be classified as a kind of commodity or a mere payment method. However, it has been a common understanding that those tokens with security features should be treated as securities and fall under governmental regulations. Tokens with equity features, debt features, or collective investment features are considered as a new means of security issuance and should be regulated as securities.

However, in comparison with traditional securities, the tokens are much more difficult to track. It is a temptation for the regulators of some regions to outlaw the issuing and trading of these tokens based on blockchains. For example, for a standard ERC20 token issued on the blockchain of Ethereum, the ownership is anonymous, and one can create any number of new addresses on the chain. Therefore one can freely transfer some these tokens to others without revealing his/her identity. From the regulators' point of view, it is hard to catch activities such as market manipulation and insider trading. The lack of trackability and missing of regulation are considered to be substantial reasons for the chaotic nature of the ICO token markets.

In order to comply with the regulation on securities, various modification on the trading of tokens had been made. Licenses for exchanges are issued in some

countries so that only a certain number of crypto exchanges are considered "legal" in these countries. New protocols are created on Ethereum, and tokens issued based on these protocols cannot be transferred directly from one address to another. A certified broker has to be involved in completing a transaction. The idea behind these rules is to modify the token trading to fit the traditional regulatory framework – the regulation on banks, exchanges, and brokers. However, these approaches contradict the fundamental idea of blockchains – the removal of the intermediaries. If a token has to be traded through a broker, it does not need to be related to any blockchain. Moreover, this token doesn't share the liquidity of the other tokens in the blockchain world.

The efficiency of these rules is questionable. For example, after licenses are issued in Japan, the share of the trade volume in Japanese exchanges in the world has dropped more than one order of magnitude in a few months. It is not likely that most token holders in Japan stopped trading, and it is anticipated that most of the trading just moved to unlicensed exchanges offshore.

On the other hand, the blockchains, with all the transactions recorded on publicly accessible databases, have provided unprecedented transparencies. Tools had been developed for information query from blockchains such as the bitcoin. One type of query can be made to find out the whole transaction history of a specific address. The other kind of query focuses on a particular coin and obtain the transaction history since its creation. For a regulation purpose, the only missing piece is the user identity associated with addresses on the chain.

Therefore, we anticipate that the regulation in the token age is primarily on-chain. Such kind of regulation would require the information of associated identities of each address on the chain. The identity information is essential for the management of tokens with security features, at least for the period of immediate future, to aid the healthy growth of the blockchain ecosystem. The elimination of market manipulation and insider trading relies on the accessibility of all the trade information. Moreover, some tokens may be only eligible to a certain set of investors. The on-chain regulations can easily

ensure that only accredited investors can have corresponding wallets.

Therefore, a governable chain would be a permissioned blockchain, with a KYC process associated with each address and transparent to a governing body. The governing body might evolve to be decentralized in the future, while currently, but it should be considered as the government regulators initially to comply with the current laws globally.

The publicly available data on chains broadens the regulation spectrum to a whole new level. One could create algorithms to analyze crowd activities and identify highly suspicious trades. The collaboration between regulators and external analyzing contractors will be possible without sharing the private information to the contractors. The governing body can use a type of regulation tokens to incentivize the policing and analysis. This kind of partnership may eventually pave the way for the future decentralized governing.

Tokens are programmable contracts and expand the horizon of securities in the age of blockchains. Wallets are the gateways for individuals to access blockchains and represent users' identities in the world of blockchains. For an established blockchain ecosystem in the future, we expect many specialized chains to be in existence while various inter-chain services serve as communicators between chains. Therefore the inter-chain smart contracts can eventually help to integrate wallets of multiple chains. The unified wallet, with a trackable identity, can turn to be a governable unit. ■



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Mr. Mirage Li got his Ph.D. degree in Physics from Princeton University in 2007, and worked on Wall Street as a strategist and later as a trader.

In 2014, he founded FH Technologies, a firm focusing on High-Frequency Trading. From late 2017, Mirage started trading cryptocurrencies and developed a keen interest in the application of blockchain technologies. He then founded Bit Connection Company Limited in Hong Kong; a company focused on the technological service in Blockchain technologies.