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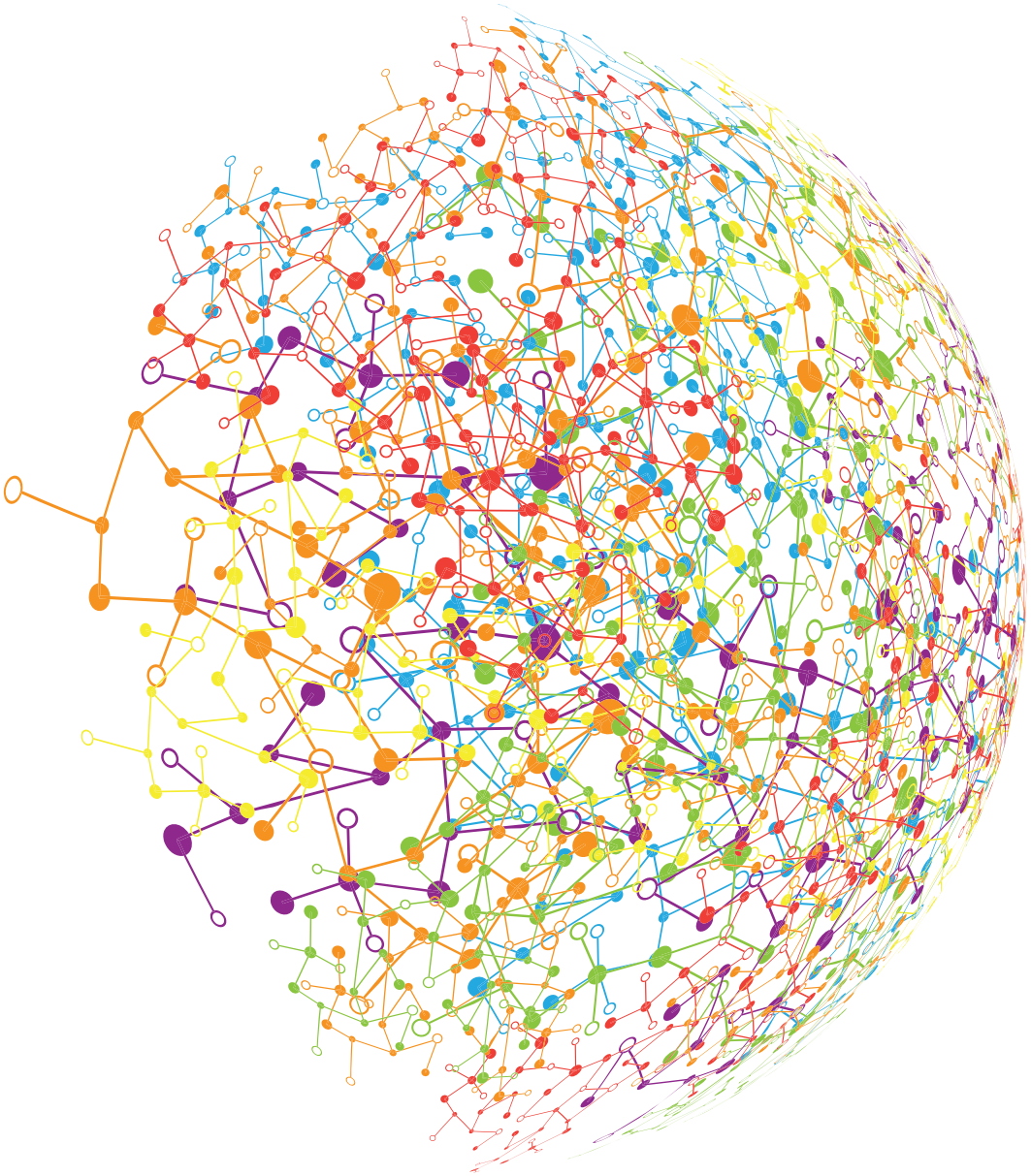


Tokenization – the future of the platform business model

Sustainable growth through blockchain-based incentives

28.07.2020 r.

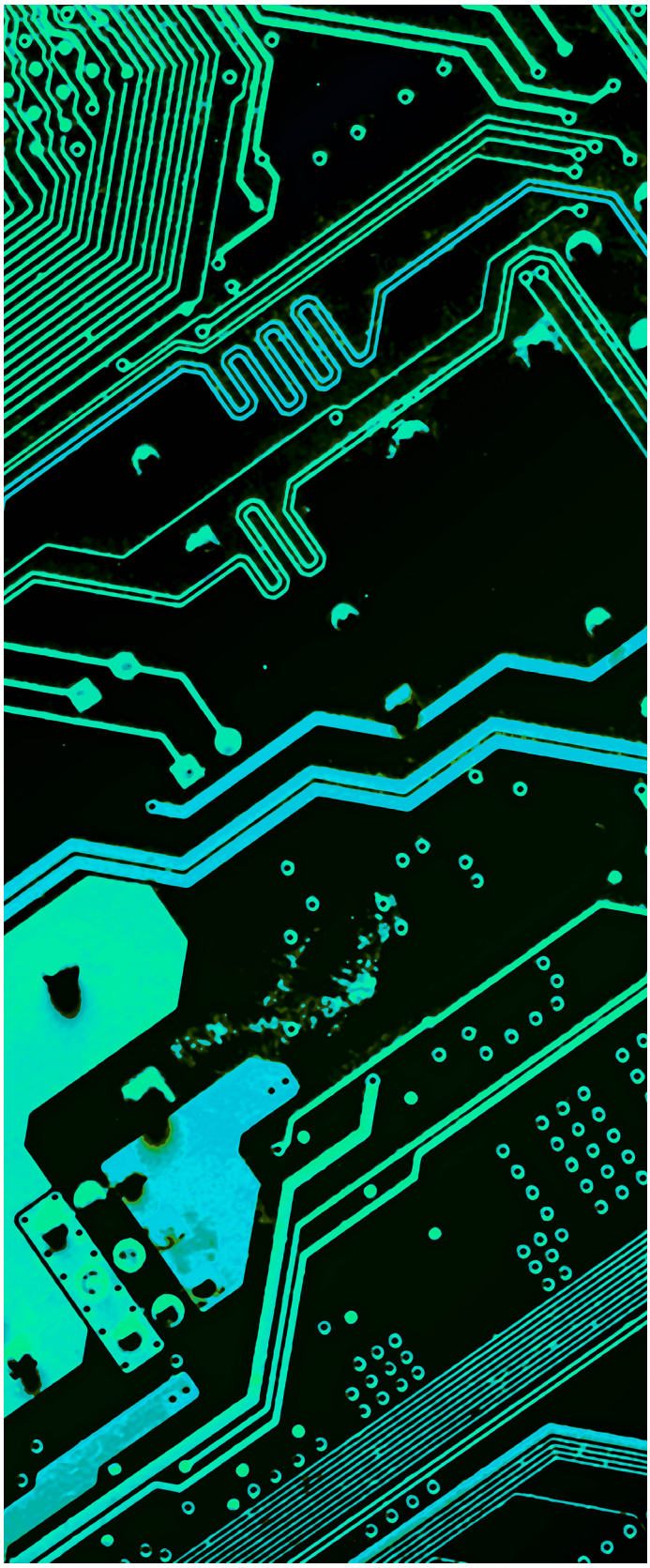
Introduction

Platforms create value by connecting the participants in a marketplace, making it easy for them to transact and enabling them to innovate together. In the broader context of ever-increasing digitization this feature has led to the ongoing rise of the platform business model.

Examples of platform business models include social networks, apps for ride-hailing or takeaway delivery, as well as mobile phone networks and operating software. What these platforms have in common is that their success depends on the generation of network effects. A positive network effect occurs when "the value that a customer on one side realizes from the platform increases with the number of customers on the other side."[1]

To start the platform and generate network effects, platform owners make use of incentives to attract producers and users. Until now, the most popular incentive mechanism has been subsidies, which work by increasing the profit of producers and lowering the cost for consumers. This approach has proven to be costly and unreliable.

Blockchain technology enables an alternative incentive mechanism through tokenization. Tokenization addresses the weaknesses of the subsidy approach while also protecting the platform against disintermediation and multi-homing, making tokenization a high-potential alternative to subsidy-based incentive mechanisms.



The rise of the platform model

Platform business models create value by matching multiple participants and coordinating their transactions and cooperation. Platform business models often provide entirely new value propositions, apply novel revenue models, or build on the assets of private individuals.[2] As these platforms attract more participants and generate network effects, they can proliferate and dominate a market in a winner-takes-all dynamic.

Platforms have increased productivity through highly efficient matching and supporting more efficient asset utilization while at the same time driving innovation.[3] There are now over 30 such platforms worth over $1b, led by FAANG in North America and Tencent and Alibaba in Asia.[2] The popularity, growth, and value generation of these platforms are mainly driven by (1) the mostly digital nature of these platforms that makes the cost of serving an additional user negligible and (2) the automated processes inherent in these models, meaning value creation and growth are not limited by human or organizational issues.[4]

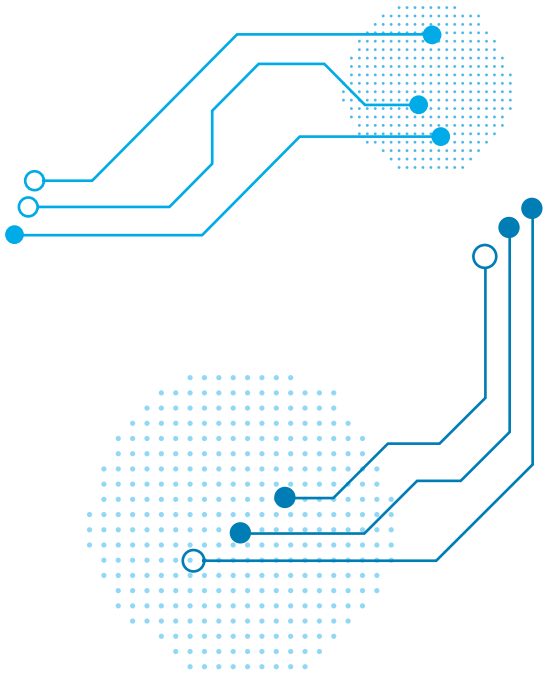
Subsidies as an incentive mechanism for network effect generation

Irrespective of the market or product of the platform business, success is dependent on the generation of network effects. Until now, the go-to method for network effect generation has been subsidizing the demand and supply sides of a network. As an example, a ride-hailing service would offer passengers cheap rides while also paying the taxi driver above-market rates. This is not only highly capital intensive but can also expose the firm to fraudulent activities.[5] Since competing platforms also use subsidies, passengers and taxi drivers will respond to a fall in subsidized rates by migrating to the next platform that provides higher subsidies; a cycle that requires continued financial support for the platform – especially as competition intensifies. This industry-wide dependence on subsidies generates a race-to-the-bottom dynamic and negatively impacts the overall viability and profitability of platform businesses.

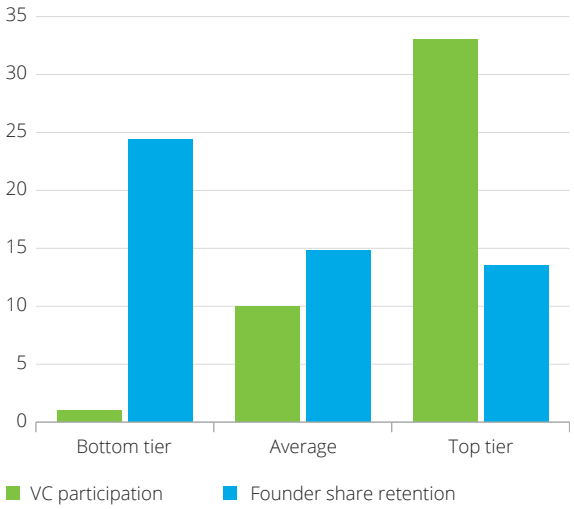
Tokenization and the two types of network effect

There are two types of network effects. Direct (same-side) network effects occur within one user group, such as the users of a messaging app. Indirect (cross-side) network effects occur between multiple groups of users, such as between taxi drivers and passengers on a ride-hailing network or sellers and buyers on an ecommerce platform. In platforms that leverage indirect network effects, there is usually a group of producers and a group of consumers who have been connected through the platform, allowing them to make transactions.

Tokenization has an exceptionally high potential for indirect network effects, which often face greater issues as they must maintain and coordinate the activities of two or more different userbases. In the direct context effect, the token would mostly be limited to a payment token. In the case of indirect network effects, tokenization can be used to incentivize producers to participate through collaborative value generation on the network.



VC participation and founder token retention in token sales



Tokenization as a new incentive mechanism

Tokenization is the representation of property in a digital format. This can be ownership of physical goods such as real estate, equity in a company, or the promise of the future use of a platform's services. For tokenization to work, there is one critical condition that must be met. It requires trust that there is a finite number of tokens in existence. Scarcity ensures that the value of tokens cannot be altered by an influx of supply. Digital files – by their nature – are very easy to duplicate (e.g. via copy/paste). Because of this, the mere ownership of a digital file cannot guarantee ownership because it is impossible to verify the number of possible copies. In short, the scarcity of digital files was impossible to prove until the invention of blockchain technology – which ingeniously uses the same cryptography as credit card payments and smartphone security.

A blockchain is a distributed ledger where independent entities store many different copies of the ledger but updating changes to the ledger (transactions) is done collectively with the use of a consensus algorithm. These updates take the form of transaction blocks. The blocks are linked to each other using robust cryptography; hence the name blockchain.[7] This combination of wide distribution and cryptography ensures that the transactions are verified, transparent and irreversible.

Token sales and platform business fundraising strategies

Initial Coin Offerings (ICOs) are the blockchain-industry equivalent to the Initial Public Offering. During an ICO, cryptocurrency or fiat money is exchanged for the tokens issued by the platform business. Unfortunately, this mechanism was misused to defraud unsophisticated investors and many projects illegally issued securities. Nevertheless, it was a breakthrough from a financial innovation perspective and legitimate tokenized platforms such as Ethereum and Chainlink also raised funds via ICO. A multitude of ICO variants such as Initial Security Offerings and Initial Exchange Offerings have also been developed.

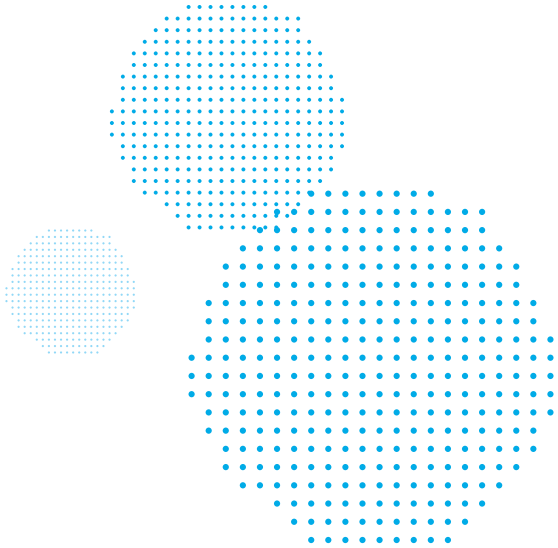
In 2017, the top ICOs averaged $26.4m in early-stage funding, significantly more than the $11.4m raised by early-stage VC rounds, with 12.4% of tokens going to the developers. Average ICOs, however, only managed to scrape together $3.5m in funding while retaining 18% of tokens for their developers. A big difference between the two came from prior VC-backing. Over 30% of top ICOs had previously received seed capital, compared to only 9.5% of average ICOs and none of the failed ICOs. This suggests that platform models should use traditional methods of angel and seed capital in conjunction with tokenization strategies for the most effective fundraising and growth.[8]

Fraudulent drivers

Gaming platform systems by faking user numbers has become so commonplace in China that it has its own term – shuadan.

During its heavily financed attempt to expand into China, a US ride-sharing firm found itself unprepared for the country's entrepreneurial and quick-thinking citizens who faked riders and enriched themselves on subsidies that were meant to help it break into the market and displace the incumbent DiDi Chuxing. The American firm eventually sold its Chinese operations to the competitor.

See reference 6 for more information



How is tokenization used to create network effects

As the name suggests, digital scarcity combines the almost instant worldwide transferability of digital files with the value-carrying ability of something of known scarcity such as gold or land. This provides owners of these assets with an undeniable and now purely liquid form of value. These properties can be leveraged by platform models to create network effects.

The following criteria are needed to create network effects via tokenization:

- A limited supply of tokens or transparent supply schedule is available.
- These tokens must be the only way to access the service of the platform.
- The tokens must be easily exchangeable for fiat currencies.
- The tokens are tradable on secondary exchanges.

Let us take a closer look at the previously mentioned ride-hailing service. In this platform, tokens are used as the only way for passengers to pay drivers for a ride. Because the tokens are limited in their supply, their value will go up with each additional trip sold on the platform. From this rise in token value, drivers get to share in the growth of the network. Given a correct configuration of the token this makes them co-owners of the network and incentivizes them to participate in the network early on.

This encourages more service providers to join and partake in the network token's appreciation of value, which drives the adoption of the network on the supply side.

The growing number of drivers on the platform will start to pull users in on the demand side to achieve the network effect that is so difficult to achieve with the traditional approach. This mechanism is depicted in the graphic below.

The result is a virtuous cycle where the platform business grows because of a network effect that is based on the incentive of platform co-ownership on top of the exchange of monetary value for services. This incentive mechanism has the benefit of being more cost-effective and making the platform more "sticky" than subsidized platforms.

By making the tokens exchange-tradeable, it is also possible for investors to profit off the growth of the network. Investors and traders may keep their tokens liquid so drivers and passengers can convert fiat currency into tokens and the other way around.

Additional advantages of tokenization

As with the generation of network effects, a platform business faces its most significant challenges in its interaction with the broader ecosystem of users and stakeholders. Typically, platform businesses face two additional problems:

Multi-homing – participants simultaneously use different platforms that offer the same type of service. This leads to competition between platforms, which can instigate a price war or rampant subsidies.

Disintermediation – once participants have been introduced to each other, they stop using the platform because it is cheaper to do business directly.

Having said that, tokenization can enable contributors to become co-owners through their involvement in the platform. Not only is this an incentive mechanism to generate network effects, but users' personal token investments would function as an effective strategy against multi-homing and disintermediation by aligning the motivations of all user groups with those of the platform.

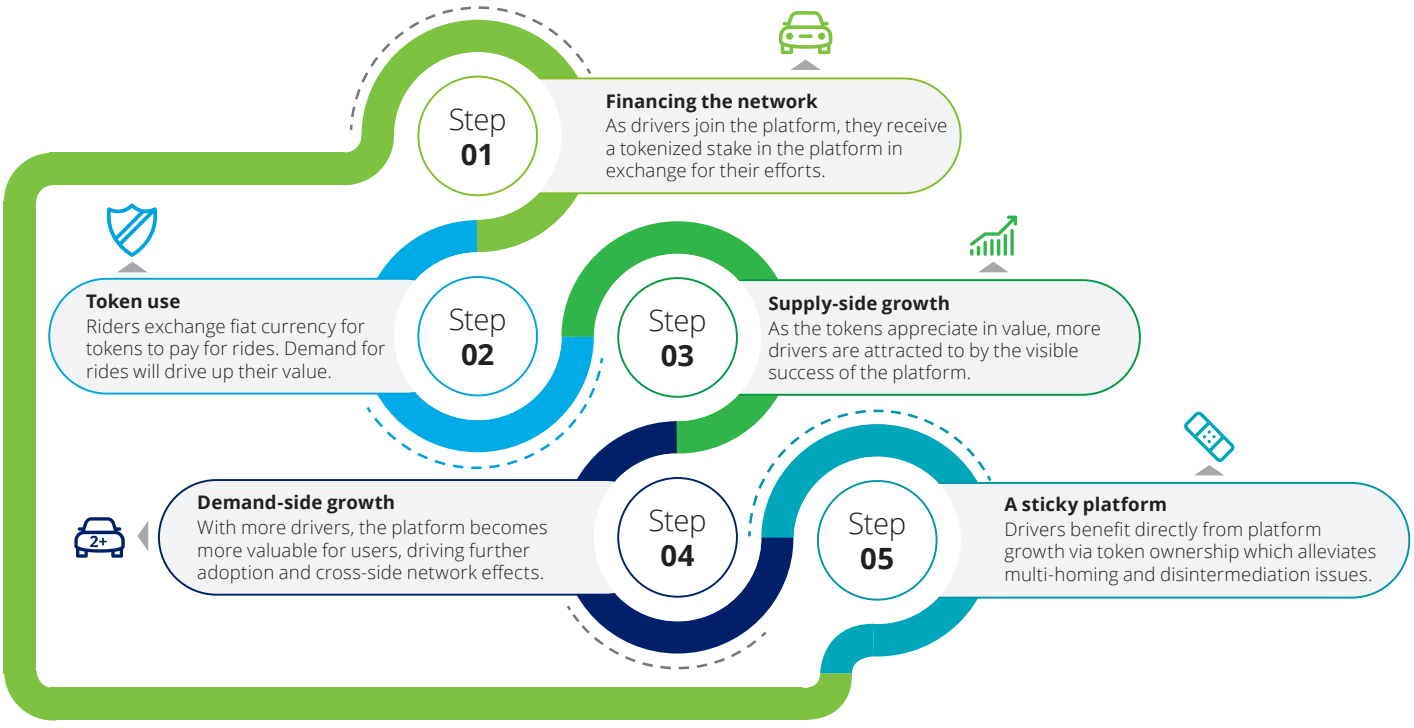
Challenges within the tokenized space

Tokenization is a high-potential incentive mechanism which offers a compelling alternative to the unreliable and costly traditional path to building a platform business. This does not mean that tokenization is without its challenges.

Token economics – Tokens are still an emerging field, and best practices are in the process of being established. Much independent thought ought to be given to the incentive mechanism and the type of participant behavior that could add the most value to the platform.

Token governance – A platform that is governed by token holders could see bottleneck challenges in the decision-making around its structure and operation. Extra steps are required to set up the appropriate forms of governance and to ascertain the impact these will have on participants.

Types of tokens – The type of token employed in a platform business model will affect its tax treatment and is dependent on the characteristics and rights provided by the token. Adding functionality to a token may result in wider tax implications depending on the jurisdiction at hand. Making the distinction between utility, equity, and security tokens and deciding which rights are available to token holders are vital to determining how it will be taxed and regulated.9



Lack of regulatory clarity – Regulators worldwide are looking into the potential of tokenization. They are especially focused on striking a balance between supporting innovation and ensuring systemic financial stability. Furthermore, they are considering whether to include tokenization under existing legal frameworks or develop new ones. Innovators should, therefore, check their specific token economic model with a specialized lawyer.

Usability challenges – Smooth onboarding and easy sign-up are crucial for user adoption and retention of platform businesses – whether they are tokenized or not. Tokenized platforms also have additional usability challenges associated with the tokens themselves. Therefore, steps should be taken to make token ownership and exchange to fiat currency as easy and intuitive as possible.

Tax implications of a tokenized platform model

Not all digital assets are created equal. Their characteristics inform their treatment across various regulatory bodies, including tax agencies. Many digital assets used in tokenized business models are considered "property" for tax purposes but "what kind of property is it?"

Some asset backed tokens are intended to be digital representations of assets like gold, diamonds, or fractions of real estate. While this may increase the ability to trade these assets, it also brings questions about who has the right to tax any gain or loss on the sale or apply indirect taxes like VAT. Other asset backed tokens may represent a right to claim or redeem another asset meaning we could have two pieces of property and tax considerations as a derivative or financial instrument.

We've also seen tokenized business models create assets deemed "securities" by some regulators. Tax practitioners should apply caution in classification as the type of security (e.g. equity, debt, or derivative) or whether or not it is even classified as a security for tax purposes.

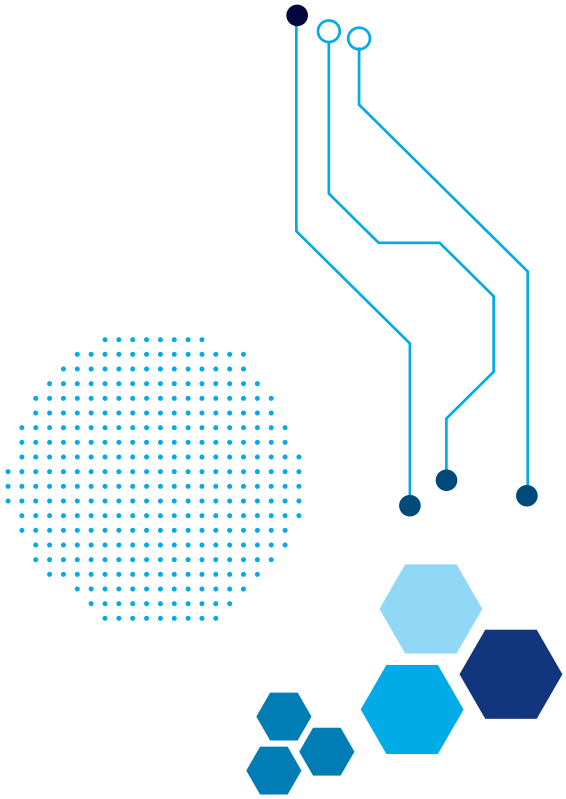
Even stablecoins have variability, being digital representations of fiat, fiat backed, or a weighted mixture of fiat. Each of these types may have unique tax treatment to the issuer and the holder that also varies by jurisdiction.

Tokenization is a revolutionary paradigm shift for platform business models.

Deloitte NL
Konrad Lemanczyk

Conclusion

Direct subsidies have long been the default means to generate network effects in platform business models. With the development of a compelling alternative, the shortcomings of subsidies are becoming apparent. Tokenization is an incentive mechanism that is developing rapidly and has the potential to become the new means of generating both funding and stronger indirect network effects. Tokenization could also address additional challenges such as multi-homing and disintermediation. For this reason, any organization or entrepreneur attempting a project with a platform business model should give serious and thorough consideration to the strategic possibilities offered by tokenization.



About Deloitte Blockchain

At Deloitte, our people collaborate globally with clients, regulators, and policy makers on how blockchain and digital assets are changing the face of business and government today. New ecosystems are developing blockchain-based infrastructure and solutions to create innovative business models and disrupt traditional ones. This is occurring in every industry and in most jurisdictions globally. Our deep business acumen and global industry-leading audit, consulting, tax, risk, and financial advisory services help organizations across industries achieve their varying blockchain aspirations. Reach out to our leaders to discuss the evolving momentum of blockchain and digital assets, prioritizing initiatives, and managing the opportunities and pain points associated with blockchain adoption efforts.

About Coinstone Capital

Coinstone Capital is a boutique digital asset investment adviser. We combine in-depth blockchain knowledge with a wealth of fund management expertise to assist clients in creating digital asset portfolios customized to their specific requirements. As current market circumstances expose weaknesses in traditional financial infrastructures, blockchain-based financial mechanisms are proving to be the robust and reliable foundation of a new wave of financial and business model innovation. Reach out to Coinstone Capital to learn how our fresh but critical thinking is making us the forward-thinking investor's partner of choice.

Contact us:

Caron Schaller
Consultant – Blockchain (NL)
+31 88 288 5911
caschaller@deloitte.nl

Rob Massey
Global Tax Leader – Blockchain (US)
+1 415 783 6386
rmassey@deloitte.com

Floris van Lieshout
Manager – Blockchain (NL)
+31 88 288 2470
flvanlieshout@deloitte.nl

Gys Hough
Managing Partner – Coinstone Capital (NL)
+31 62 859 6730
gys.hough@coinstonecapital.com

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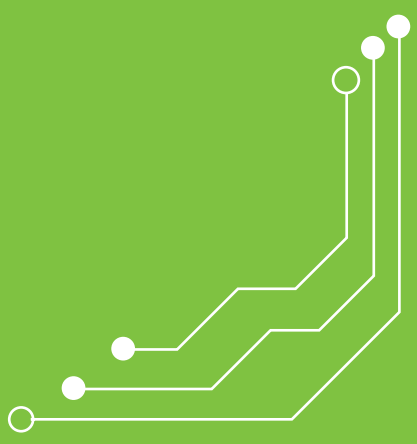

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