

The logo consists of the letters 'I B I N' in a white, sans-serif font, enclosed within a white rectangular border.

I B I N

International
Blockshare
Identification
Number

The background features several sets of concentric, curved blue lines that resemble ripples or a stylized fingerprint pattern, set against a dark blue background.

Whitepaper

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International Securities Identification Number (ISIN)

The International Securities Identification Number, commonly referred to as ISIN¹, is an identification number that is utilised to identify financial assets such as securities. ISIN is similar to a serial number. ISIN was firstly issued in 1981 but the numbers did not gain wide global acceptance until 1989.

Initially, ISIN was previously only considered as a secondary form of security identification, used primarily for clearing and settlement. ISIN is not only significant for clearing and settlement purposes, but it's widely used by share custodians to keep track of holdings. Today, ISIN is utilized and accepted globally as a standard norm in identifying securities in the traditional financial market.

ISIN has 12 alphanumeric characters in total. The number's structure consists of a two-letter country code, a nine-digit numeric identifier and a single check-digit number. The two-letter country code is determined by the region the company's headoffice is located. The nine-digit numeric identifier, which is referred to as the National Securities Identifying Number (NSIN), is issued by the National Numbering Agency (NNA) in the company's country or region.

National numbers formulated with less than nine digits are padded with leading zeros. The single check-digit is used for security purposes and it assists against counterfeit numbers.

1 <https://www.isin.org/isin/>

Blockchain Technology and Equity Markets

The 2008 global financial crisis unsettled the markets, and securities experienced heavy crashes. A year later in 2009, Satoshi Nakamoto introduced Bitcoin, a peer-to-peer electronic cash system. Bitcoin is based on cryptographic proof instead of trust that underlines traditional financial systems. Cryptography permits willing parties to transact directly with each other without the need of a trusted third party and the transactions are immutable². Bitcoin is a cryptocurrency that functions on blockchain technology.

Blockchain “is essentially a distributed database of records or public ledger of all transactions or digital events that have been executed and shared among participating parties”³. Computer node technology is used to confirm transactions within the blockchain. Blockchains can run using different algorithms, and thus are not uniform. Bitcoin’s blockchain uses proof-of-work⁴, Peercoin uses proof-of-stake⁵ and NEM uses proof-of-importance⁶.

The use of blockchain technology has substantially evolved since Nakamoto published the Bitcoin whitepaper. The technology is used for various tasks such as; remittance, voting, registering title deeds, managing healthcare records, trading cryptocurrencies and numerous additional activities. The most significant and relevant aspect of blockchain technology is its unlimited potential to accommodate new and traditional financial markets.

One traditional financial market that can be accommodated by blockchain technology is equity trading. Traditional markets transact multi-trillion dollars’ worth of equity on a regular basis. The manner in which the traditional system functions is lethargic, and there are too many intermediaries between issuers and investors.

The collection of too many parties in the assembly line leads to delayed deliveries of the equity, high costs and high inefficiencies. Blockchains are decentralized and encrypted, they offer a cost-effective solution that not only saves money, but also time and labour compared to traditional equity markets.

2 <https://bitcoin.org/bitcoin.pdf>

3 <http://scet.berkeley.edu/wp-content/uploads/BlockchainPaper.pdf>

4 <https://bitcoin.org/bitcoin.pdf>

5 <https://peercoin.net/assets/paper/peercoin-paper.pdf>

6 https://www.nem.io/wp-content/themes/nem/files/NEM_techRef.pdf

NEM Blockchain and Equity Markets

The NEM blockchain in particular is one technology that offers solutions to the problems encountered in the traditional equity markets. The technologies incorporated into the NEM blockchain include; multiple ledgers to manage multi asset transactions, namespaces for unique registrations, smart contracts in the form of transaction management and the ability to implement private chains⁸.

These technologies allow for equities that would normally be exclusive to traditional electronic trading platforms, to migrate to blockchain based trading platforms. The exchanges built on blockchain permit peer-to-peer trading that is quick, secure, direct and inexpensive for both issuers and buyers. Peer-to-peer trading eliminates some of the players such as custodians, brokers, clearing houses and share registrars⁹.

The peer-to-peer equity ecosystem still retains some concepts and players from the traditional markets such as; payment processors, banking systems for eventual fiat conversion, participants (issuers and users), stock exchanges, public companies and a central identity and ledger management systems¹⁰.

Equities in the traditional financial markets are identified and tracked using ISIN. Equities traded on blockchain based exchanges are identified and tracked using the International Blockshare Identification Number (IBIN).

8 <https://nem.io/wp-content/themes/nem/files/RadicalizingEquityMarket.pdf>

9 <https://nem.io/wp-content/themes/nem/files/RadicalizingEquityMarket.pdf>

10 <https://nem.io/wp-content/themes/nem/files/RadicalizingEquityMarket.pdf>

International Blockshare Identification Number (IBIN)

The International Blockshare Identification Number, alternatively referred to as IBIN, is an identification number for equities that seek to be listed on blockchain based exchanges. When issuers' equity is listed on blockchain based exchanges, they undergo a process called cryptonization. Cryptonization is the materialization of equity on the blockchain.

Before the cryptonized equities can be listed they need an IBIN, which is the blockchain equivalent of ISIN. IBIN consist of 13 alphanumeric characters that are unique to the respective equity, exchange traded commodities and other cryptonized assets.

The IBIN structure consists of a two-letter code, nine-digit numeric identifier and a single check-digit number together with a blockshare identifier. The two-letter code identifies the issuer's country of origin. The middle section, nine-digit numeric identifier, is the International Blockshare Identification Number that identifies the equity. The single check-digit plus the blockshare identifier are for security and blockchain identification purposes. Every IBIN ends with the letter B to indicate that it is equity traded on the blockchain.

Similar to ISIN, IBIN is not a ticker that identifies equity on exchanges. Ticker symbols representing the same cryptonized equity can be different depending on where they are traded. IBIN is the only shared denominator that identifies cryptonized equity and traded blockchain offerings. The ticker symbols are placed after the IBIN number.

For example, Vision, a graphic design company, is registered in Japan and it's listed on Y-Exchange and S-Exchange, both are crypto asset exchanges. Vision's ticker symbol on Y-Exchange is VS1. Vision's ticket symbol on S-Exchange is VS2. Vision will be identified as JP1234567890B VS1 on Blockchain Y-Exchange and it will be identified as JP1234567890B VS2 on S-Exchange. IBIN is the only shared denominator that identifies cryptonized equity and traded blockchain offerings on different blockchain exchanges. IBIN doesn't issue ticker symbols, ticker symbols are issued by the exchanges.

An IBIN can't be issued twice, this is due to the process of random production. IBIN is randomly and uniquely generated, so the same numbers can't be reproduced twice. The issuers that fail to meet the application criteria will have their temporary IBIN blacklisted and blocked.

The Importance of IBIN

The introduction of IBIN is the first of its kind in the blockchain industry.

The significant considerations to be highlighted include:

- IBIN is the first tracking number for cryptonized securities and blockchain built offerings.
- It creates an identity for equities which allow them to have different tickers in multiple blockchain based exchanges.
- IBIN creates more than an identity for equity, it creates legitimacy and becomes a reference point for the different equities.
- Legitimacy in the eyes of participants at the different exchanges because they have been issued a tracking number.
- A reference point because only IBIN will stay the same as the tickers change.
- IBIN makes it simple and effortless to track equity worldwide.
- Because tracking cryptonized equity is simple, it reduces costs for participants in exchanges and brings convenience to the general public.
- Issuers list on different exchanges, IBIN brings order in the crypto market that would otherwise be chaotic.
- IBIN acts as a 'black box' by allowing the information of cryptonized assets to be readily available.

The Future of IBIN

The future of IBIN is unlimited and broad, because innovators find new uses for blockchain technology every day. IBIN can and will be utilized on crypto-assets that we have not seen or imagined yet. Here are some of areas in which IBIN can play a vital role:

- IBIN can be the sole identifier of crypto assets including cryptocurrencies.
- Crypto assets can use IBIN for rating purposes in order to inform the markets.
- IBIN can connect the different blockchain financial ecosystems.
- Different blockchain based exchanges can share information amongst each other through IBIN.
- IBIN is the gateway to bringing more companies into blockchain based exchanges.
- Just as Coinmarketcap.com provides price listing for cryptocurrencies. [ibin.io](https://www.ibin.io) is a central place to track the performance of different cryptonized assets with an IBIN from various exchanges.

IBIN and ISIN

	IBIN	ISIN
— Identity number for equity		
— Identity number for equity on the blockchain		
— 12 alphanumeric characters		
— 13 alphanumeric characters		
— Act as a ticker on exchanges		
— Built on blockchain		
— Shared denominator for identifying equity across various exchanges		
— Applicable in different exchanges		
— Alphanumeric numbers don't change even in different exchanges		
— Same identity number can be reissued		
— Numbers are computer-generated in a complex formula		
— Country of origin is identified in the alphanumeric characters		
— Single-check digit number		

Yes 

No 

IBIN and ISIN

	IBIN	ISIN
Blockchain identifier		
A source of equity information for news outlets		
Used to track equity		
Used for clearing and settlement		
Numbers are issued globally		
Numbers are issued by national associations		
A bridge between crypto asset market and the traditional financial market		

Conclusion

IBIN is the blockchain equivalent of ISIN. It is a 13 alpha-numeric identity that exists to identify and track cryptonized equity. Issuers that seek to list on blockchain based exchanges must have an IBIN in order to be registered. Issuers must register on the IBIN website (ibin.io), in order to get their own unique cryptonized corporate number. Obtaining an IBIN makes it convenient for participants to track the various cryptonized equities with different tickers globally.