

INC: Fiat currencies on the blockchain

$$INC = INR$$

1₹ ≈ 1₹



**INC use
for redemption into
fiat currency INR**

White Paper

Abstract

Indiya Coin is the first crypto-asset which price is intended to mimic the value of India Rupees. INC inherits the speed, security, transparency, and other desirable characteristics of the Blockchain. The price stability relative to Indian Rupees resulted in a digital asset that provides consumers with a stable store of value. The main target customers of INC are Indians cryptocurrency traders who want to access global crypto exchanges. Indiya Coin might collaborate with third-party market makers or independent traders in cryptocurrency exchanges to help ensure INC price mimics India Rupees. Branding and market education will also help in establishing market consensus among traders that the value of INC tracks Indian Rupees. However, the ultimate price of INC Token in each cryptocurrency exchanges will depend solely on market forces of supply and demand. INC Token has no contractual obligation to perform buy back of INC from its holders and does not represent the indebtedness to the INC holders.

A digital token backed by fiat currency provides individuals and organizations with a robust and decentralized method of exchanging value while using a familiar accounting unit. The innovation of blockchains is an auditable and cryptographically secured global ledger. Asset backed token issuers and other market participants can take advantage of blockchain technology, along with embedded consensus systems, to transact in familiar, less volatile currencies and assets. In order to maintain accountability and to ensure stability in exchange price, we propose a method to maintain a one-to-one reserve ratio between a crypto currency token, called Indiya Coin, and its associated real world asset, fiat currency. This method uses the blockchain, Proof of Reserves, and other audit methods to prove that issued tokens are fully backed and reserved at all times.

Summary

In this paper, we are going to propose a INR-pegged stablecoin, legally dealt as a Prepaid Payment Instrument in India. Starting from Bitcoin and Ethereum, there are thousands of rising payment methods via cryptocurrencies leveraged by blockchain technology from around the 2010s, but large fluctuating prices have been the cause of difficulty in buying and selling goods. From this point of view, several projects appeared featuring USD-pegged stablecoins with fiat money and cryptocurrencies used as collaterals. As opposed to that, INR-pegged stablecoins have been far from practical use. Indiya Coin (hereinafter referred to as INC), will expand the target of customers for cryptocurrency payment in buying and selling goods, for the public use as a Prepaid Payment Instrument.

History of Money

Over the vast history of mankind, money has been a key invention that enables humans to effectively cooperate in producing goods and services, which in turn propels the economy and civilization forward. Before the existence of money, the people of early civilizations would barter goods (such as livestock and agricultural produce) they had in surplus for the ones they lacked. This proved to be cumbersome and inefficient, as the goods are perishable and there is no standard 'unit of value'. To solve this issue, civilizations around the globe invented various forms of physical money - some were rudimentary coins made of cowrie shells (used in Indonesia's Batu Islands and West Africa), while others are more sophisticated metal coins made of bronze, silver, and/or gold. As civilization and the global economy system advanced, mankind invented even more convenient forms of money: paper money, credit/debit card, contact less payment card, and even various digital forms of money.

Problems with Crypto Assets

Ever since Bitcoin was born in 2008, blockchain - utilized payment system have been controversial and experimented all over the world. Never the less, because of the large price fluctuation, they are still considered difficult to spread as a common use. The value of the Indian Rupees in dollars fluctuated by about 5% between early 2020 and 2021. On the one hand, the Bitcoin value in dollars fluctuated by about 400% within the same period, which is definitely a big obstacle as a general payment method

Introduction

Bitcoin is one of the earliest cryptocurrencies, but it is not yet widely accepted as a settlement currency in daily life. The primary cause of this is its high price volatility, which results in losses for at least one party involved in a transaction, especially in transactions that take a long time to complete. This uncertainty has made using Bitcoin costly and impossible in practice. Bitcoin creates strong market demand, which in turn generates sharp movements in its price; therefore, its scale of supply and use cases are limited. Yet, it is the transaction scale and use cases that determine the value of a currency. INC resolves short-term price fluctuations and cyclical price risks with its responsive monetary policy and mintage mechanism. The following content will explain the INC protocol in detail and how it stabilizes the price and grows the transaction scale.

Digital assets such as Bitcoin is too volatile

We have seen that throughout history, money can take various forms and shapes. Every asset class that can act as money needs to fulfill three main functions:

1. as a means of exchange
2. as a standard unit of account
3. as a stable store of value

The Bitcoin boom and bust in 2017 - 2018 period have shown us that the prices of non-collateralized crypto assets are notoriously volatile. Even today, we believe that for the foreseeable future, Bitcoin and similar crypto assets are likely to remain more volatile than well-managed national currencies or gold. Such volatility might be interesting for speculative investors and day traders, but it makes the asset unable to be a stable store of value. For money to exist in the blockchain, we need an alternative class of asset that can maintain a relatively stable value.

Blockchain as the future medium

Today, we live in a world of unprecedented change and innovation. For the last 20 years, the rise of distributed computing network called the internet has enabled billions of humans to connect and share information instantly and securely, with zero consumer cost. In the last 2 - 3 years, we have seen the rising adoption of QR Code-based payment systems in India. While these services bring tremendous convenience for Indians to transact locally, there are one weaknesses of this approach. First, all of the balance records and financial transactions that ever happened on these platforms are stored in a centralized entity, meaning that a sophisticated, malicious attacker could potentially infiltrate and manipulate those balances and transactions. We believe that distributed ledger technology, or blockchain, will bring the next step in the evolution of money. Just as the internet allowed for borderless and instantaneous movement of information, blockchain technology will allow us to exchange value and transact with one another in the same way: instantly, globally, securely and at low cost.

Designing Crypto that is suitable for Indians

Indiya Coin (INC) is the first crypto-asset which price is intended to mimic the value of Indian Rupees. INC combines the speed, security, transparency, and other desirable characteristics of the Blockchain. Indiya Coin might collaborate with third-party market makers or independent traders in cryptocurrency exchanges to help ensure INC trades at value close to Indian Rupees. Branding and market education will also help in establishing market consensus among traders that the value of INC tracks Indian Rupees. However, the ultimate price of INC in each cryptocurrency exchanges will depend solely on market forces of supply and demand. Indiya Coin has no contractual obligation to perform buyback of INC from its holders and does not represent indebtedness or debenture to INC holders.

Benefits and Strengths of INC :

- INC is built on the blockchain, which gives it the inherent security and transaction immutability of Indiya Coin.
- INC follows token standard, which means it is very easy to integrate and inherently compatible with many existing applications.
- All transactions are executed according to the rules of smart contract, which eliminates human error.
- The security of INC smart contract has been audited and verified, INC is ready to be listed for all exchanges around the world

Trade offs of INC

-As with all tokens, transaction confirmation follows the speed of network (about 1 - 3 minutes).

This is much faster than Bitcoin, but still slower than ideal user experience.

-As part of the blockchain protocol, all transactions in the network requires the transaction initiator to pay "gas" fees in the form of the native crypto-asset of the blockchain. This "gas" cannot be paid in INC or any other tokens. However, this trade-off may one day be resolved with side chain/sharding technology.

-The gas fees required by the blockchain network varies depending on the load / congestion of the network. As a rough estimate, typical transfer costs around which is 10 Indian Rupees at the time of writing

Currency Peg

The INC protocol is committed to meeting the needs of consumers for stable digital currency by enabling INC to be used for electronic payments. To achieve this, the INC protocol will be pegged to the INR - the fiat currency of India - to establish a stable, decentralized, and tamper-proof INC-INR system. The protocol will uncover the nature of currencies and bridge the gap between digital assets and their practical applications.

Multi-fiat peg monetary policy

A stable-coin mechanism must answer three key questions:

- How is price-stability defined?
 - Stability is a relative concept; which asset should a stable coin be pegged to in order to appeal to the broadest possible audience?
- How is price-stability measured?
 - Coin price is exogenous to the blockchain, and an efficient, corruption-resistant price feed is necessary for the system to function properly.
- How is price-stability achieved?
 - When coin price has deviated from the target, the system needs a way to apply pressures to the market to bring price back to the target

Ongoing Stablecoins Designed to Achieve the Stable Price

As mentioned above, in order to introduce the payment method with blockchain for the purpose of the smooth payment, it's difficult to use the unstable cryptocurrency such as Bitcoin for the general use. In light of that, we invented and issued a INR-pegged stablecoin as a Prepaid Payment Instrument. On the blockchain platform, there are three kinds of stablecoins;

- (I) stablecoins collateralized by fiat money,
- (ii) stablecoins collateralized by cryptocurrency, and
- (iii) stablecoins with no collateral.

Proof-of-Solvency

One desirable outcome of a stablecoin is convergence between the tokens issued and the INR exchanged for their creation. The amount of tokens issued and in circulation can be observed on the blockchain, however, verifying the underlying INR balance to demonstrate proof-of-solvency requires examination by a trusted party. For assurance, we propose that the audit committee or an independent registered public accounting firm to regularly examine and attest to the underlying INR balance in accordance with the attestation standards.

When 1 INC < 1 INR (under 1 Rupee)

When the price of 1 INC is continuously under 1 INR on average for a long time period at decentralized exchanges like Uniswap, the issuer tries to increase the secondary distribution price, by depositing to the DEX more than the amount required more than 50% of Unused Base Date Balance, or receiving a financial institution guarantee as required.

At the moment, we deposit 200% of the amount and 10 million INR. Once the deposit sum is increased, we will notice after the deposit via our website or other media. Thereby, if we should go bankrupt, bankruptcy remoteness is still effective, which is why we think we can protect the rights of INC users, but we cannot guarantee the principal.

When INC > 1 INR (over 1 Rupees)

When the secondary distribution price of 1 INC is over 1 INR, we believe the price will be stable approaching 1 INR by our continuous selling at a ratio of 1 INC to 1 INR. Besides, regardless of above when the average price of the secondary distribution has been over 1INR for a long time and we deposited over the amount required by the DEX (hereinafter referred to as excessive deposit, including financial institution guarantee), in order to prevent the decrease in capital efficiency due the excessive deposit, the portion of the deposit might be withdrawn, the amount determined by us that the average secondary market price is not less than 1 INR within a range of 30% or less.

When the large parts of initially issued INC is distributed in the market

We will 100 million INC initially, but there might be some possibility that the amount of INC cannot meet the market needs because of the increasing INC needs. After the predetermined percentage of INC has been supplied to the market, we will proceed to the next phase and additional INC will be issued to maintain the appropriate amount of INC to meet demand.

About price maintenance mechanism

INC is a Prepaid Payment Instrument and basically 1 INC is equal to 1INR. Through the price maintenance mechanism, users are released from the payment method leveraged by blockchain with the traditional price fluctuation risk, and able to use as a payment for the procurement of goods.

Defining stability against INR fiat currencies

The existential objective of a stable-coin is to retain its purchasing power. Given that most goods and services are consumed domestically, it is important to create cryptocurrencies that track the value of local fiat currencies. Though the INR dominates trade and forex operations, to the average consumer the Rupees exhibits unacceptable volatility against their choice unit of account. Recognizing strong regionalities in money, INC aims to be a family of cryptocurrencies that are each pegged to the world's major currencies.

Open Market Operations

Central banks around the world openly buy or sell bonds in the secondary markets. In essence, the central banks are trading base money for bonds: they deposit base money through purchases and withdraw it through sales, thereby adjusting the supply and demand of the base money and stabilizing its value. The INC-INR Reserve adopts a mechanism that functions similarly to OMO. Through buying or selling INC and reserve assets, including TRX, BTC, USDT, and INC on CEXs or DEXs, it manages to keep INC's price stable.

The INC will announce each of its OMO publicly to the market to positively guide the market perception. The core purpose of the open market operation of the INC-INR Reserve has been and will always be to maintain INC's price stability rather than profit from trading. The proceeds generated from OMO, if any, will go to the reserves for efforts to stabilize INC's price and further the growth of INC's ecosystem.

Problems with the Users who Already Have Cryptocurrency

There are a few problems when people who have some cryptocurrencies want to exchange them for goods and service experiences. First of all, they have to go through a cryptocurrency exchange to have access to services with cryptocurrency, and pay high fees for the Indian Rupees there. Furthermore, it takes a long time for them to achieve the whole process of the payment for a service; they are supposed to exchange cryptocurrency to INR, complete the deposit into their account. These are also the huge part of the obstacles of cryptocurrency's distribution as a payment method.

Problems with the Users who Start Using Cryptocurrency

There are many ways to hold cryptocurrency in India, but they contain several problems respectively. One typical case is mining and currently plenty of companies are mining by spending a huge amount of costs on equipment investment, thus for the most individual it's not an exaggeration to say there is no spot, as of January 2021. Besides, purchase at cryptocurrency brokers and exchanges includes several matters. For instance, the users are forced to wait for the process of KYC and in the period they cannot buy and sell. In addition, they cannot be evaluated as a proper way to trade in markets open 24 hours a day, due to the frequent system maintenance. Moreover, some exchanges' fees are so high that the users have a heavy burden, which is obviously a problem.

Contract Specification

The specifications of the Indiya Coin require a network that allows for the development of decentralized applications (including smart contracts) that may be used to store and transfer value according to certain conditions set by the developer. The Blockchain network fulfills this criteria and has a technical standard for tokens, the 'INC contract' standard, which has experienced wide spread, adoption in India. As a result, there already exists a plethora of software and services that support compliant tokens and provide access to and usability for end users. Alternatively, if the INC were built as the native token it would take time for a similarly vibrant ecosystem of third-party developers and software to emerge. As a result, we have built the INC as an Blockchain Smart Contract compliant token on the smart network. Consequently, the Indiya Coin can be transferred on the smart network and stored in any Blockchain address.

Contract Security

The Indiya Coin system implements the following security features:

1) Offline Keys:

Keys that approve high-risk actions are stored offline in INC proprietary Cold Storage System.

2) Key Generation:

Keys are generated, stored, and managed onboard hardware security modules (HSMs). We only use HSMs, each a "signer," that have achieved a rating of FIPS PUB 140-2 Level 3 or higher [7].

3) Dual Control (Multi-signature):

High-risk actions require approval (i.e., digital signatures) from at least two signers. We utilize an M of N signing design, whereby $M=2$. This provides both security and fault tolerance.

4) Time Lock:

Even after approval, high-risk actions are locked for a minimum period of time before being executed. This provides a grace period to detect — and preemptively respond to — potential security incidents.

5) Revocation:

Pending actions can be revoked, allowing for the nullification of erroneous or malicious actions before being executed.

Contract Custodianship

For certain high-risk actions in the Indiya Coin system, we need an offline approval mechanism. We, therefore, require each smart contract in the INC system to look to a custodian for approval. A custodian may be another smart contract or a keyset (online or offline). A custodian may look to another custodian, which may look to another custodian, and so forth, thereby creating a chain of custody or "custodianship." For instance, a smart contract may look to another smart contract, which ultimately looks to a keyset for approval. If a smart contract's custodianship terminates to an offline keyset, an offline approval mechanism for its actions has been created.

Use Case

“Payment on Goods by Cryptocurrency Holder”

The users holding cryptocurrency can purchase items in a ratio of 1INC to 1 INR by relying on us, about purchasing by proxy on E-commerce websites when they want to buy something there and use cryptocurrency.

“Users who is going to Hold Cryptocurrency”

INC users are able to manage assets, exchange INC for tokens provided as liquidity on DEX along with INR and INC on their own authority and at their own risk.

“Use of Decentralized Exchanges”

INC users provide liquidity on a decentralized exchanges on their own authority and at their own risk. When INC liquidity is provided, people can exchange (swap) INC for all the tokens that can be traded on DEX without the issuers' approval.

The more INC is used for swap on DEX, the more INC, or other tokens liquidity providers can get as rewards.

“Use of Decentralized Lending Protocol”

INC is a token, which means technologically all the DeFi using tokens are available with INC. For example, one can lend INC through decentralized lending protocol, Compound at his or her sole discretion and risk. As INC is not traded in Compound, but once the Compound community approves of handling of INC, everyone can lend INC and get yield, or lend INC by paying yield.

“Arbitration by DeFi Users”

INC is a token, so INC holders can use all the DeFi based on tokens. DeFi is a developing market, thus there is a tendency for temporary price differences in products with the same value to occur. In such a case, people can choose arbitrage trading as a way to earn profits by selling the overvalued one and buying the undervalued one, and then buying or selling the opposite one when the price difference between the two narrows, under their own authority and responsibility.

“Buying goods of crypto artists”

INC is technologically usable as all the other Blockchain tokens. Buying goods by crypto artists who issue NFT (Non-fungible token) and conduct sales could happen, by swapping and getting INC such as on DEX.

When the issuer stopped issuing operation

Payment Services requires a refund when the issuer discontinues the issuing operation. The users can get a refund from us at a ratio of 1 INC to 1 INR.

When the issuer goes bankrupt

When the issuer goes bankrupt, INC becomes unable to use, but the balance held by the user continues to be recorded on the blockchain. The procedure for repaying money to users in bankrupt cyproceedings is to be followed.

Deposit of Security, Deposit for Issuance

Under the Payment Services, Issuers of Prepaid Payment Instruments for Own Business with the Unused Base Date Balance of 10 million INR are mandatory to deposit and protect the users with the an amount equivalent to at least one-half of the Unused Base Date Balance. When the issuers go bankrupt, deposit of security deposit for issuance will be refunded, which is called Refund Procedure. The users are entitled to priority reimbursement (share) from the deposit of security deposit for issuance according to the procedure.

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Legal Position of Indiya Coin

INC is the Payment Instruments for Own Business issued by a company. INC is a currency-denominated asset so it is not a cryptocurrency legally. These days the market of the so-called DeFi (Decentralized Finance) is rapidly expanding, and there is a DEX (Decentralized Exchange, no middle man exchanges) in the market. INC holders are able to manage assets using such tools.

Items that cannot be purchased by proxy with INC

INC is one of the Payment Instruments for Own Business. Products that require sales permits, certifications, or licenses may not be available for purchase by proxy. example. Some foods, alcoholic beverages, medicines, pets, and other items whose resale is restricted by the law.

Various DeFi is available

INC is a token, so different kinds of DeFi on smart chain are usable with INC. For instance, one can lend INC through decentralized lending protocol, Compound. For your information, the use of DeFi is at the sole discretion and risk of each user, and we are not responsible for any damages caused by the use of DeFi. Please be aware of this in advance.

Disclaimer

Please be aware of and acknowledge the following risks before using Indiya Coin. INC shall not be liable for any loss or damage arising from or in connection with any of the following risks.

Risk about Financial Value of INC itself

INC is not issued as securities, financial instruments, or any other investment products under the Financial Instruments and Exchange Law, nor is it a cryptocurrency under the Payment Services Act, but a currency issued as one of the Payment Instruments for Own Business. Therefore, it is not guaranteed that it can be used for any purposes we haven't specified, and it cannot be used for settlement between users. Further more, since INC is issued in accordance with the smart chain standard, it is possible to dispose of INC on certain external services that accept the smart chain standard, but we do not recommend or guarantee this. INC users are required to use external services under their own authority and responsibility.

Risk of Losing INC due to the Loss of Private Key

Private key itself or a combination of private keys is required for the disposal of the users' INC, and the management of the private key shall be under their own authority and responsibility. The loss of the private key associated with the wallet where the user's INC is stored means the loss of the INC itself. Besides, loss of INC may be caused by phishing attacks, malware attacks, DoS attacks, consensus-based attacks, or other various types of attacks.

Risk associated with Smart Chain Protocol

INC is based on Smart Chain protocol, any protocol malfunctions may cause serious effect to INC, and there might be some possibilities that INC cannot be used temporarily in such cases. Additionally, it requires transaction fees (gas fees) to use INC and transfer money on the Smart Chain network, but the fees might sky rocket because of the cause we are not related to, like the congestion of Smart Chain network.

Risk of Change in Laws and Regulations, Risk of Taxation

INC is subject to future changes in laws, ordinances, guidelines, and other regulation or taxation systems related to INC. In addition, users shall make decisions as regards the necessity of filing tax returns and other taxation related INC under their own authority and responsibility.

Relationships between Users

Any transactions, communications, disputes, etc., that arise between users and other users or third parties in connection with our website shall be handled and resolved under the users' own responsibility, and we shall not be responsible for such matters.

INC (Indiya Coin) Governance

Important matters related to the issuance and circulation of INC to be sold are decided based on the discussions among the issuer's directors, regular employees, and experts on the advisory board. The advisory board includes lawyers, venture capitalists, international tax accountants, former CFOs of listed companies, blockchain company executives, consultants, and others, who share their expertise with the entire team. Smart Contract Auditor. INC is ready to be listed for all exchanges around the world

In our solution, fiat pegged cryptocurrencies are called "Indiya Coin". All INC will initially be issued on the blockchain via the Smart Chain protocol and so they exist as a cryptocurrency token. Each INC unit issued into circulation is backed in a one-to-one ratio (i.e. one INC is one INR) by the corresponding fiat currency unit held in deposit by India based. INC may be redeemable/exchangeable for the underlying fiat currency pursuant to Indiya Coin's terms of service or, if the holder prefers, the equivalent spot value in Bitcoin. Once a INC has been issued, it can be transferred, stored, spent, etc just like bitcoins or any other cryptocurrency. The fiat currency on reserve has gained the properties of a cryptocurrency and its price is permanently to the price of the fiat currency.

This white paper may be revised from time to time without any notice as the project progresses. We will publish any future versions and updates on our website, <https://indiyacoin.com/>. We only have a single website, and are in no way affiliated with other potentially similar-sounding sites.