

IndoCoin whitepaper

Abstract

INDOCOIN is a crypto-asset whose price is **hard-pegged** to the value of the Indonesian Rupiah. IndoCoin is issued by IndoCoin, an Indonesia-based startup. As a Tip-3 token built on Everscale technology, INDOCOIN possesses the speed, security, transparency, and other desirable characteristics of the Everscale blockchain. This combination of Everscale technology and price stability relative to the Indonesian Rupiah has resulted in a digital asset that provides consumers with a stable store of value.

The main target users of INDOCOIN are Indonesian cryptocurrency traders who want to access global crypto exchanges. IndoCoin might collaborate with third-party market makers or independent traders in cryptocurrency exchanges to help ensure the INDOCOIN price mimics that of the Indonesian Rupiah. Branding and market education will also help in establishing market consensus among traders that the value of INDOCOIN tracks with that of the Indonesian Rupiah. However, the ultimate price of Rupiah Token in each cryptocurrency exchange will depend solely on the market forces of supply and demand.

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IndoCoin Vision

Throughout the history of mankind, money has played a key role in allowing people to effectively cooperate in the production of goods and services, which, in turn, has propelled economies and civilizations forward. Before the advent of money, people of early civilizations exchanged goods (such as livestock and agricultural products) that they had in abundance for those of which they did not have enough. This proved cumbersome and inefficient, as goods are perishable and there was no standard "unit of value." To solve this problem, civilizations around the world invented various forms of physical money - some of them were rudimentary cowrie shell coins (used in the Indonesian Batu Islands and West Africa), while others were more complex metal coins made of bronze, silver or gold. As civilizations developed and formed a global economic system, humanity invented even more convenient forms of money: paper money, credit/debit cards, contactless payment cards, and even various digital forms of money.

In recent years, we have seen the growing adoption of QR code-based payment systems in Indonesia. These payment systems are operated by digital wallet providers such as Go-Pay and OVO. While these services are extremely convenient for Indonesians to transact locally, there are two drawbacks to this approach. First, all balance sheets and financial transactions that have ever taken place on these platforms are stored centrally, meaning that a sophisticated malicious attacker could potentially infiltrate and manipulate these balances and transactions. Second, as closed platforms, money held by any service provider can only be used by users and merchants within the system, preventing important use cases such as cross-application settlements, cross-border money transfers and international transactions.

We believe that distributed ledger, or blockchain, technology will take the next step in the evolution of money. In the same way that the Internet has enabled the limitless and instantaneous movement of information, blockchain technology will allow us to exchange value and transact with each other in the same way: instantly, globally, securely and at low cost.

Some of the main advantages of cryptocurrencies are: low transaction costs, international limitless transferability and convertibility, secure ownership and exchange, pseudo-anonymity, real-time transparency, and immunity to the problems of an outdated banking system. Common explanations for the current limited mainstream adoption of cryptocurrencies include: erratic price fluctuations, lack of mass market understanding of the technology, and a high entry threshold for users who are not tech savvy.

In this white paper, we will focus on applications where fiat value is stored and transmitted using cryptographically secure open source software and distributed ledger technology, i.e. real cryptocurrency.

Our implementation has the following advantages over other fixed peg cryptocurrencies:

- INDOCOIN runs on the Everscale platform, a decentralized, cheap and fast blockchain.
- INDOCOIN can be used just like any other cryptocurrency, i.e. in a p2p, pseudo-anonymous, decentralized and cryptographically secure environment.
- INDOCOIN can be integrated with merchants, exchanges and wallets just as easily as any other cryptocurrencies.
- IndoCoin uses a simple yet effective reserve management approach that greatly reduces counterparty risk as a custodian of reserve assets.
- The issuance or redemption of INDOCOIN will not be subject to any price or liquidity restrictions. Users can buy or sell as much INDOCOIN as they want quickly and at very low fees.
- INDOCOIN will not face any market risks such as Black Swan events, liquidity shortages, etc. as reserves are backed on a one-to-one basis and independent of market forces.
- Implementing one-on-one INDOCOIN support is easier for non-technical users than provisioning methods or derived strategies.

At all times, the balance of fiat currency in our reserves will be equal to (or greater than) the number of coins in circulation. This simple configuration is the easiest solution to ensuring price parity between the amount of INDOCOIN in circulation and the underlying fiat currency held in reserves.

Technology Stack

Choosing the technological foundation of a project is critical to its development because, as far as blockchains are concerned, each of them has its own design, level of sophistication and developer activity. We chose Everscale for one simple reason: this blockchain was created specifically to work with high-load systems like massive messenger applications. This

design is also suitable for systems with a large number of transactions, which applies to payment and transfer systems. Choosing the right technology ensures that transaction costs are low, transactions are fast, and the blockchain can withstand an influx of customers.

Everscale Technology

Everscale is a 5th generation PoS blockchain with a native EVER token. Everscale's architecture focuses on addressing the trilemma of security, scalability, and decentralization.

A key feature of Everscale is the ability to dynamically divide into flows, depending on the load, each of which forms its own chains of blocks. This ensures parallel execution of operations, which allows the network to achieve a total execution speed of more than 1,000,000 transactions per second with low transaction costs and 4-second finalization.

Stablecoin Design

Four general approaches exist for a price-stable token strategy:

- Fiat-collateralized: Fiat assets in reserves collateralize tokens and thus provide price stability by pegging token value to reserved fiat value;
- Crypto-collateralized: Crypto assets in reserves collateralize tokens and provide price stability pegged to the value of those reserved crypto assets;
- Algorithmic non-collateralized: Software economic models aim to provide price stability without relying on underlying collateralized assets;
- Hybrid: A blend of the three basic approaches above

In our case, we will use the fiat-backed model, as it, in our opinion, is the most stable at the moment. Also, this will not be a “shocking” innovation for participants in the classical financial system, but just another step in its development.

The number of INDOCOINs in circulation will be equal to the amount of money received in the deposit account in IDR, minus the redeemed funds. Thus, there can be no liquidity gap in the event of a bank run, and every INDOCOIN user can be absolutely sure that they can always exchange INDOCOIN back for IDR.

Advantages and strengths of INDOCOIN

- INDOCOIN is built on the Everscale blockchain, which ensures the security and immutability of Everscale transactions.
- INDOCOIN follows the Tip-3.1 token standard, which means it's very easy to integrate and natively compatible with existing Everscale-based applications.
- All transactions are carried out according to the rules of a smart contract, which effectively eliminates human error.
- Transactions are fast and cheap and the price of transactions will not rise in parallel to increases in network load.

INDOCOIN transaction fees

- As part of the Everscale blockchain, all transactions on the Everscale network require the transaction initiator to pay "gas" fees in the form of Everscale (EVER), Everscale's own blockchain crypto asset. This "gas" cannot be paid in INDOCOIN. However, one day this trade-off may be resolved if we add a third party provider.
- The gas fee required by the Everscale blockchain is roughly estimated to have a typical transfer cost of around 0.005 EVER, which is \$0.0007 or IDR 10 at the time of writing.

INDOCOIN Mechanism

The mechanism for creating INDOCOIN tokens consists of a few simple steps.

INDOCOIN creation

In order to create INDOCOIN tokens, you need to make an IDR deposit to your IndoCoin bank account and indicate your Everscale network address where you want to receive the INDOCOIN. After receiving the deposit, the smart contract will automatically create the required number of INDOCOIN tokens and send it to the address of the client who made the deposit.

IDR redemption

Any INDOCOIN holder can receive IDR to their bank account by providing their details and sending INDOCOIN to a special address and writing a specific comment for the transaction. After sending the INDOCOIN, the IDR will be credited to the specified account as soon as possible.

Main Applications

In this section we'll summarize and discuss the main applications of INDOCOIN across the blockchain ecosystem and for other consumers globally. We have broken up the beneficiaries into two user groups: Individuals and Business.

Remittance and Global Payments

Over the past half century, mobile digital wallets have appeared all over the world. These apps allow people to make person-to-person and person-to-merchant payments using their mobile phones. These mobile wallets have become widespread in all countries where they are provided by banks, mobile telecom operators and technology companies. Each of them aims to make consumer payments smoother. However, almost all of them exist as thin layers of software built on top of an outdated banking and card payment system.

Our task is to get rid of unnecessary layers, the seemingly infinite number of transfers between banks—for each of which you need to pay a commission: a commission for a cross-border transfer, a commission for currency conversion, a commission for urgency. We offer a simple solution — if you use IDR: if you want to keep money in this currency and transfer it to your friends or relatives, just use INDOCOIN. It can be obtained in any country as long as you have IDR or cryptocurrency. Now all transfers can be made in a couple of steps, with a minimum commission and in just a few seconds without having to pay anything extra to expedite the transfer.

Crypto Exchanges

Exchange operators understand that accepting fiat deposits and withdrawals using legacy financial systems can be difficult, risky, slow and expensive. Some of these problems include:

- Determining suitable payment systems for your exchange.
- Engaging with banks to coordinate compliance, security and confidence building.
- Prohibitive charges for small transfers
- Poor and unfavorable currency conversion fees.

By offering pegs, the exchange can save itself from the above difficulties and get additional benefits such as:

- Allowing users to deposit and withdraw fiat from the exchange more freely, quickly and cheaply.
- Outsourcing the risk of holding fiat money to INDOCOIN by simply managing the cryptocurrency.
- Easily adding other pegged fiat currencies as trading pairs to the platform.
- Protecting customer assets solely with accepted crypto processes.

Exchange users know how risky it is to hold fiat currencies on an exchange. With the rise in the number of insolvency cases, this can be quite dangerous. As mentioned earlier, we believe that using pegs exposes exchange users to less counterparty risk than holding fiat permanently on exchanges.

A separate advantage for decentralized exchanges is that they currently cannot create trading pairs with fiat currencies, which makes direct trading for IDR impossible. In this case, INDOCOIN can be used for trading pairs with the Indonesian currency without any additional implementations from decentralized exchanges.

It is also easier to arrange OTC trades to exchange IDR for any other cryptocurrency or real world asset or anything else, thereby avoiding lengthening the chain of exchanges and taking on additional risk.

Individuals

There are many types of individual crypto users in the world today — from traders looking to make daily profits, long-term investors looking to securely store their bitcoins, tech-savvy shoppers looking to avoid credit card fees or maintain their privacy, philosophical users looking to change the world, those looking to simply transfer payments around the world effectively, and those in third world countries looking for access to financial services for the first time, to developers seeking to create new technologies. We believe that for each of these people, INDOCOIN can be useful. With this currency users can:

- Make transactions in IDR/fiat currency, pseudo-anonymously, without any intermediaries

- Take advantage of cold storage of IDR/ fiat value by protecting your own private keys
- Avoid the risk of holding fiat on exchanges and easily move crypto to and from exchanges
- Avoid having to open a fiat bank account to hold fiat value
- Easily enhance applications that work with Everscale to also support INDOCOIN.
- Do anything that can be done on an individual basis with Everscale.

Business

Merchants want to focus on their business, not payments. The lack of global, low-cost, ubiquitous payment solutions continues to plague merchants around the world, both big and small. Traders deserve more. Here are some ways IndoCoin can help them:

- Providing product price in Indonesian rupiah/ fiat value
- Preventing chargebacks, reducing fees and increasing privacy
- Delivering new services with fiat-crypto features
- Enabling micro tips, gift cards, etc.
- Anything you can do with Everscale as a merchant can be done with INDOCOIN.

Business Model

IndoCoin is supposed to be a sustainable growing business, so it is important to focus not only on technology, but also to build a solid business model.

Conversion Fee

There are no fees for those who want to convert their IDR to INDOCOIN. In general, anyone can exchange their IDR 1:1 for INDOCOIN.

You can also convert your INDOCOIN back to IDR and get fiat money into your bank account. Such an operation will cost 0.5% of the amount (may change in the future).

This solution allows you to receive a regular income from the turnover of funds, and also prevents spam attacks on the conversion mechanism.

Treasury Management

Since INDOCOIN is fully backed by stablecoin fiat money, there are fiat reserves that can be used in the money market.

In order to ensure that the amount of collateral is not volatile and INDOCOIN will be fully backed, only the number of financial instruments strictly limited by our risk policies can be used. Priority will be given to securities that are quoted in IDR. Specifically, these can be termless bank deposits and debt instruments with a short maturity and a reliable counterparty (note: Indonesian government bonds).

Compliance and Risk Management

IncoCoin solves this problem by providing a stablecoin structure that includes “real world” asset reserves. Each stablecoin token corresponds to a real asset that is reserved by a member of the IncoCoin network issuing it and verified and audited by IncoCoin.

In the collateral method, market risk exists because the price of the asset used as collateral may move in the opposite direction to the price of the asset it backs/pegs. This will cause the total value of the collateral to be less than the total value of the issued asset and the system will become insolvent. This risk is mitigated by having the custodian close the position before this happens, i.e. when the price of the collateral equals the price of the pegged asset, the collateral is liquidated (sold on the open market) and the position is closed. This is an excellent and proven approach that is used in many traditional banking and financial markets. However, as we have seen with the global financial crisis, there may be situations where the acceleration of such events causes a "liquidity crunch" and thus the collateral cannot be liquidated quickly enough to meet trading obligations, subsequently resulting in losses. Since the cryptocurrency markets are so small and volatile, the likelihood of such an event is much higher. In addition, the overall approach suffers from other liquidity and pricing constraints, as there must first be a sufficient number of users posting collateral to create pegged assets.

In the derivative approach, the price of an asset is fixed by using one of several derivative strategies, such as: swap strategies, covered and uncovered options strategies, and various futures and forward strategies. Each strategy has its own strengths and weaknesses, which we will not discuss here. In summary, each of these anchoring processes itself has the same “market risk” characteristics as the above collateral method. It should be noted that these

two methods are not mutually exclusive and are often associated with a specific trading, hedging or risk management function in legacy financial institutions.

Finally, please understand that we believe that some combination of the above approaches can make for a safe, secure, and generally risk-free asset collateral/pegging process; however, at the moment this is not a direction that we consider possible to ensure liquidity and price stability. In addition, we believe that the inventory-based approach will always exist and will complement these other approaches as the entire industry grows. As technology advances, we will evaluate and incorporate any available benefits while maintaining a 100% repayment guarantee.