

METAIN CASE STUDY – REAL ESTATE INVESTMENT TRUSTS (REITS) TOKENIZED BLOCKCHAIN

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1. Application: MetaIn

Investing in Real Estate has long been the most secure option. Also considering the ROI (return on investment) which currently in South East Asia real estate is one of the highest in the world and has still room to grow for the years to come. Yet, there is no solution for the international investors to access these markets.

The Market size of South East Asia Real Estate is 1,6 trillion USD (2021) . There is no Real Estate Blockchain project that follows REIT regulations correctly and fully regulated. South East Asia has the fastest growing-value Real Estate in the world.

METAIN (Metain, 2022) promises to give the world the first ever Framework to bind Assets in the real World within the Crypto World. METAIN provides asset backed NFTs that are pegged into real-world assets and rely on the South East Asia real-estate market. Their speciality is the NFT that represents the real-world asset under Real Estate Investment Trust (REIT) regulations. The functions of the NFT are fully legal and as decentralized as possible.

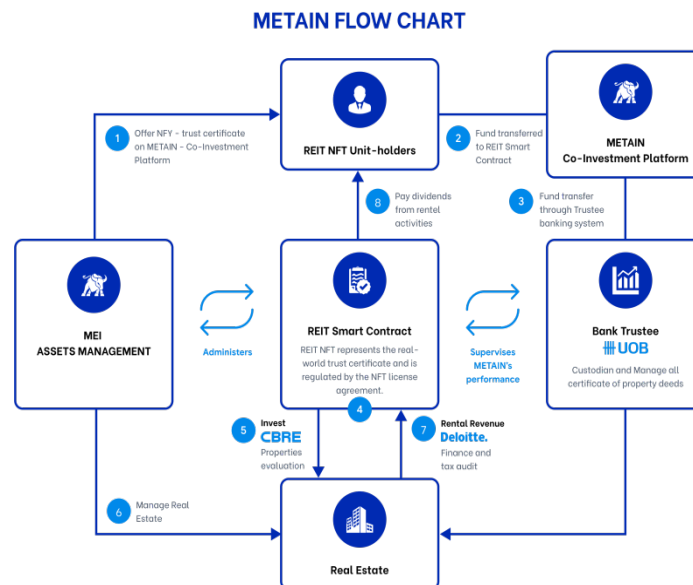
<p>CRYPTO-ASSETS</p>	<ul style="list-style-type: none"> • Are the result of advances in cryptographic methods and distributed ledger technology. • An asset that lacks any underlying claim. • “Unbacked crypto-assets”: Not backed by any collateral or managed by a trustworthy operator. • Purely speculative in nature, and hence highly volatile.
<p>STABLECOIN</p>	<ul style="list-style-type: none"> • To address the risks of unbacked cryptos, “stable coins” have emerged, with their value linked to one or more low-risk assets. But if left unregulated. • Can be low risk but not riskless, and cannot guarantee redeemability at par at any time. • Do not benefit from deposit insurance or do they have access to central bank standing facilities.
<p>METAIN CO-INVESTMENT PLATFORM</p>	<ul style="list-style-type: none"> • Co-investment platform brings earning to NFTs and stable coin holders with compelling interest is estimated 15-25% & a high liquidity, riskless & stable. • METAIN provide asset-backed NFTs that are pegged into real-world asset and rely on the South East Asia real-estate market.

2 Architecture & Design

Design architectures of Metain Real Estate Investment Trusts (REITs) convert illiquid real estate asset portfolios to fractions which represent the investors' share in the property, allowing unit holders to earn dividends from real estate investments without having to actually manage or finance any asset themselves. REITs are specific to real estate, offering a safe and diverse mode of investment. However, due to the number of intermediaries involved and regulatory compliances, setting up and managing REITs entails significant cost and managerial experience. Therefore, unless one has the necessary capital and assets, REITs may not be a viable capital-raising mechanism.

REITs Tokenization is a mechanism to tokenize on-chain and/or off-chain assets on a Blockchain (or other distributed ledger technologies). The tokens thus created and recorded on the Blockchain can be used for varied purposes – some of which are to raise funding by undertaking an STO (or any other variant of a coin offering) or to enhance the efficiency of the supply chain by using tokenized commercial documents (bills of lading etc.).

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Metain REITs Tokenized (Emurgo, 2022) Economic Incentive Designed by bringing the earning of co-investment platform to NFTs and stable-coin holders with compelling interest as estimated 15-25% , high liquidity, riskless and stable. Moreover, Metain provides asset-backed NFTs that are pegged into real-world assets and rely on the South East Asia real-estate market.

As shown on Metain REITs Flow Chart, peer 2 peer network (Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System, 2016) is structured utilizing trust through a rule enforcement model where peer 2 peer data shared validated through nodes executing a smart contract, rules are implemented in the smart contract as protocols, enforcement of pre-defined rules within a smart contract and storing the validated data on an immutable ledger.

Since Metain REITs run the system within Cardano Blockchain Ecosystem, the consensus mechanism being used is Delegated Proof of Stake where network participants have the right to delegate the production of new blocks to a fixed number of delegates. Users determine which

delegates will validate new blocks via a democratic voting mechanism in which votes are weighted by the amount of tokens locked up in platform crypto wallets.

Metain REITs used tokenized technique instead of traditional encryption where there is no mathematical link between the original data and the encrypted values, which can be discovered using Cryptanalysis techniques. And these make the token cannot be reversed back to its original value by any mathematical operation. To convert a token back to its original value, it's required to access a secure lookup table. The table and the data are stored encrypted in a secure location behind firewalls and kept in a hardened database. Since tokens are made with the same structure and data type as the original data which ensures that tokenized data will not break application functionality. Moreover tokenization also removes the privacy aspect from the data.

Metain Smart Contract bridging the asset acquisition data and trustee validation to establish trust (Cardano, 2022). MEI Asset Management will administer the Real Estate Asset and offer NFY trust certificate on the Metain co-investment platform. As data validation within Smart Contract, CBRE will evaluate the property investment and Deloitte for rental revenue finance and tax audit. The asset validations then will link to dividends amount from the rent activities. Moreover, to establish more trust, UOB as Bank Trustee which as custodian and manage all certificates of the property will supervise Metain's performance. From this point, there are 3 points of collaboration between Asset Administrator (MEI Asset Management), REIT's Validator (CBRE and Deloitte), and Asset Custodian Management (UOB – Bank Trustee).

Metain used a fundraising hybrid mechanism which combines Secured Token Offering and Real Estate Investment Trust. This mechanism will bring the investment in illiquid on-chain or off-chain assets which added functionality of programmable governance. Moreover these bring advantages such as high liquidity, regulatory clarity, listed funds are liquid, diversified portfolio,

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immutable proof of ownership, security, and transparency, and automation, reduced settlement times and better governance, and programmable tokens ensure automated compliance and versatility.

As part of Governance, Metain REITs used Legal and Business Layer as part to establish trust via CBRE and Deloitte as Validator and UOB as supervised and asset custodian. Moreover, as part peer 2 peer technology Metain used data layer, execution layer, communication layer, incentive layer, service layer, and application layer. Consensus layer will be performed by the Cardano ecosystem.

Metain establish trust and transparency by managing, evaluate, and audited by 3rd parties including Bank Trustee partner who administered and managed the trustee assets by keeping them in-house, Property Valuation Agency who evaluates and analyzed the value of the real estate and makes educated guesses about how much profit each will make, and Finance & Tax Audit by Big 4 Agency who responsible for providing reasonable assurance that the financial statements are free from material misstatements and prepared according to an accounting framework.

As part of Blockchain Technology, Metain performs Smart Contract Audit which is an extensive examination and analysis of a smart contract's code that is used to interact with a Blockchain. This process is conducted to discover errors, issues, and security vulnerabilities in the code in order to suggest improvements and ways to fix them.

Moreover, Metain has converted the integration of Blockchain and Smart Contract as part of Decentralized Autonomous Organization (DAO) to give investors more voting power to decide on multiple activities such as investment strategy, exit strategy, dividends pay, marketing activities, human resources, etc. This will ensure everyone has a clear record of every transaction, which could be converted to a record of voting decisions. The voting power can be used to affect a variety of decisions that are habitually reserved for the leaders of the organization.

The big question is related to the collaboration between Blockchain consensus and Smart Contract as part Metain DAO. Since utilizing hybrid fundraising mechanism models (STO and REITs) in some circumstances will take more energy consumption. The collaboration of the mechanism Smart Contract Protocols and Delegated Proof of Stake consensus mechanism will bring to more likely Centralized instead Decentralized.

Metain has very good plans for their project and they have fully designed their platform, combined with a few deliverables and regulations making it easier to invest in Real Estate, especially for the Cardano community.

They begin with building dApp on the web as a way to reach out to potential investors and to the Cardano community informing them about the project, and the status of the current state of the project and sharing information about the plans they have for the future.

Second, they are working on creating the first REIT NFTs on Cardano that can be used as an investment and traded afterward in their platform or outside, where they assure from 15-30% NFT APY.

Metain also has a need for third-party trustees in order to secure investors' interests and for fairness and other partner companies for finance and tax audit and properties evaluation.

They also offer custody and insurance of property deeds, which again are helped by the partners and/or third-party trustees.

Their architecture also includes smart-contract which will also help in creating and executing NFT license agreements.

If all of the above is successfully created and implemented they will start selling REIT NFTs, enable REIT NFT exchanges and ecosystem in South East Asia and strive to be the most reliable and accessible investment.

Most of the code, above 80% is coded in Solidity and the rest in JavaScript, although they are using node.js and TypeScript for some parts.

3 Questions

1. What are Metain’s main risks that could prevent delivering the project successfully?

Their answers are related to the main risks that could prevent delivering the project successfully and risk mitigation proposed are way too abstract. In a new market like that there are way more risks. It looks a lot like made-up fast. Simply abstract claims will certainly not hold true over time. We will give the highest APYs. Some people might easily understand, but on the other side we need to acknowledge that most people do not understand crypto. We could not even be entirely sure of what the state “understanding” in crypto means.

2. What is the budget breakdown?

The budget breakdown is way too abstract and not explained thoroughly, also it looks unstable. This is how their budget breakdown is explained, following bulletpoints’ sentences represents MetaIn quotes:

- “\$0 – Founding members’ working hours, 10,000 hours. All 5 founding members have been working for Metain full-time since the beginning of December 2021.
- Hire a Haskell programmer to work with Plutus platform for 6 months (\$30,000). Salary of an experienced Haskell programmer is about \$5000 monthly and we will sign a 6-month working contract first. Of course, the programmer will continue with us later but by then we will have the funds to pay the salary.
- Train in-house programmers with Haskell programming for future maintenance (\$10,000). A full Haskell programming course for a programmer costs \$5000 for 28 hours on-site training, and we will have 2 of our best to learn.

- Audit by CertiK (about \$8000). This covers only Smart Contract security audit.
- Reward for Bug Bounty Hunter program (Total up to \$10,000). We will award \$5000 in ADA for a critical bug found.
- Individual investors using ADA coin to pre-order REIT NFT will get 5% cash-back reward. (Limit up to \$35,000 and max \$150/ADA payment address). This program serves as incentive to the use of ADA and will bring even more crypto investors to Cardano platform.
- Project's community building for Cardano in 6 months (\$7000). This covers the salary of a community manager and moderators, and other costs such as advertising, seeding, Social Network fees, etc.

3. What are their sustainable development goals?

While they are proposing SDG goals and subgoals they are using a product “REITs” which have proven to increase the income and wealth gap between rich and poor. No further explanation given from their site.

They offered links as explanations but those turned out to be really short and with a lack of much-needed details to prove the points they are making such as :

<https://emurgo.io/security-token-offerings-an-explanation-by-cardano-partner-emurgo-how-emurgo-is-planning-for-stos/>

The above link represent an example of our pre-mentioned issue with their explanations. In particular in the link we can see an external article (therefore no explanation from MetaIn developers) about Security Token Offerings which is just proving somehow that ICOs are soon to be out of market because of being scam schemes.

4. Why is REITs a good investment?

Once again we can find a link of an external article as a proof of lack of consistency in the explanations which are always very abstract:

<https://www.forbes.com/sites/bradthomas/2021/08/24/are-reits-safe-todays-inflation-reminds-investors-of-the-1970s/?sh=423121463149>

Moreover they didn't say anything about conflicts of interest for example for the audit by Certik and Bug Bounty Hunter program.

Furthermore, how they haven't described how they are making the property establishment and the sales.

4 Conclusion

The Tokenization matter is a phenomenon which is widely increasing, it's a superb feature carved out from the Blockchain World and that is bringing us towards the future of investments and a more democratized way of displacing wealth. We've analyzed the market's competitor of the Metain Co-Investment project and thoroughly checked the current offer that the platform has to offer and we came together to the hereafter stated conclusions.

Let's start from market competitor analysis and let's see where Metain currently stands:



The chart is an exhaustive resource to summarize the market analysis performed; we included 2 key factors in our model, the credibility and the accessibility of the project. Thanks to this we could assess where MetaIn is going to be positioned on the market as per current evaluation. The

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project is at a very seed stage, not much information has been shared, if not the intended strategy of tokenizing real estate for an accessible buy-in minimum investment (10 USD). There is no white paper issued yet or a detail of the governing law that will be guaranteeing the legal binding of the company toward a mitigation of the investor's risk. Moreover, at the moment only one Venture Capital committed to invest but no business model have been shared, therefore is hard to predict the potential profitability of the investment and the project as an overall. This gave us the impression that the credibility of this project must still prove itself even though the potential that the technology and the concept shows are of a great potential.

Finally, the token that it's declared to be on the pipeline for Q3 2022 while the achievements stated as passed in Q1&Q2 2022 is yet to be known, like the Lightpaper release and the smart contract audit. The token itself should be the digital representation of units within a collective investment scheme. The creation of the just mentioned fund should be a matter of company licensing via authority of surveillance while the Fund Units should be issued as DLT Rights.

The issuance of the DLT Rights requires the following:

- (i) Entering into an agreement regarding the registration of the DLT Rights on a distributed ledger between the issuer and the first holder of such DLT Rights (the Registration Agreement) and
- (ii) registration of such DLT Rights on a distributed ledger.

We believe that this project has all the potential to disrupt the market of referment (South Asia) but at this very moment with the information provided by the Co-founders and the other stakeholders we retain it to be too early to judge how the project will evolve but we'll surely continue monitoring the situation and be ready to potentially move-in if we'll evaluate the right

moment has finally come. As per our point of view, the current roadmap gives opening only to Angel Investors which could be deeply involved in the understanding of the business model and the investor's eligibility criteria as in our vision a better and deeper clarity would be needed to create a larger involvement of a community which could surely further support the future platform.

In conclusion, this project leaves a lot of open and uncovered questions that potential investors may look at. These questions, as the one mentioned in the previous chapter, could be crucial not to let this project be perceived as a new scam and therefore leaving out room for potentially interested market player which would be ready to chip-in some capital for the further development.

Although the idea of the project is in truth with a great potential, they need to work much more on answering to many open doubts and issue arising from the project itself, by doing so the MetaIn could really be a successful story for the future of the Real Estate market.

5 References

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