Blockchain CheatSheet - Cryptoapplications

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§ Money and Crypto

Money

Purposes of Money:

- Unit of account comparing value to goods and services.
- Medium of exchange as a much efficient alternative of barter.
- Store of value to be retained in time partially instead of complete decay like food.
- Easy transfer of value.

> The easy transfer of value is the foundational idea behind Bitcoin.

Acquiring Cryptocurrency

- **Mining**: Participate in the network to validate transactions and mine new blocks.
- **Gifts or Payment**: Receive cryptocurrency as a form of payment or as a gift.
- **Exchanges and Modern Wallets**: Purchase cryptocurrencies using platforms that function similarly to stock brokers.
- **Initial Coin Offerings (ICOs)**: Invest in a new cryptocurrency project by participating in its initial offering.

Crypto Exchanges

Unlike traditional stock exchanges, crypto exchanges often adhere to strict Know Your Customer (KYC) policies due to the regulatory requirements associated with blockchain and cryptocurrencies.

It's important to note that these exchanges are not devoid of risks. Challenges include frauds, hacks, and subpar business practices. Careful consideration is required when choosing an exchange to ensure security and reliability.

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§ Stablecoins

Cryptocurrency Volatility

Cryptocurrency is renowned for being one of the most volatile types of assets out there. In fact, during the financial crisis of 2008, markets saw drops in value of up to 9% in a single week; which was an incredible event. But, believe it or not, that's nothing compared to the normal liquidity flow in cryptocurrency markets. If you're here reading this, you might already know about its unbelievable oscillations.

In order of complexity this are the four types of Stablecoins:

1. FIAT Collateralized
2. Real Asset Collateralized

FIAT Collateralized

The idea

FIAT Collateralized Stablecoins are designed to provide everyone with access to optimized transfers at any time, including low-fee transactions at unusual hours, like 02:00 on a Sunday morning. This approach partly addresses the issue of high volatility, such as that seen with Bitcoin exchanges.

Additionally, if the issuer of the stablecoins that you exchanged for the FIAT-pegged coins encounters financial difficulties, you should be able to recover your FIAT value.

Real Asset Collateralized

A prime example of this is Digix Gold (DGX) which 1DGX equals 1 gram of gold

- Uses the Ethereum Blockchain ERC-20 protocol.
- Maintains its own caveau in Singapore.
- Redeemable in batches of 100 or 1000 grams.
- Fees include transactions and deposit cost of the physical gold.

Other

- Swiss Real Coin (SRC): Backed by Swiss Real estate portfolio.
- D1 Coin ERC-20: Collateralized by diamonds.

Crypto Collateralized

This kind of Stablecoin works similarly to those pegged to a FIAT value but adds an intriguing twist based on the chosen cryptocurrency.

How it works
Suppose 1 Stablecoin (STB) = 1 SOL

1. **Initial Purchase**: When you buy STB, your transaction will cover more than the equivalent amount in SOL to include a margin for market fluctuations.

```
Needed: 50 STB
Buy: 75 SOL worth
In Wallet:
        - Total: 50 STB/SOL pending + 25 SOL
        - Breakdown: 50 STB and 25 SOL (the surplus SOL acts as a buffer)
```

2. **Collateralization**: At this point the SOL value becomes collateralized and if the value of crypto drops enough your SOL corresponding to the STB will get liquidated by the delegated Stablecoin *keepers* of the contract to buy STB to increase the stability of the system.

```
Liquidation Scenario: 50 SOL liquidated to sustain STB's peg
Actual Amount in Wallet: 50 STB and 25 SOL
```

3. **Value Increase and Selling**: If SOL's value increases and you decide to sell, you can convert your collateralized STB back into more valuable SOL or even fiat.

```
Increase: SOL +50%
Sell: 50 STB back into fiat or SOL, benefiting from the increased value
Resulting Balance: Gain from increased SOL value, plus remaining SOL
```

> If the system faces a significant threat or instability, a Global Settlement might trigger, returning the collateralized crypto to its original holders.

Non-Collateralized

This type of Stablecoin operates through internal mechanisms to ensure that its price remains stable.

How it works

- **Regulation Mechanisms**: The stablecoin's regulatory body might intervene in the market by creating or buying back coins to adjust the supply and stabilize the value.
- **Conversion into Bonds Tokens**: Purchased stablecoins may be converted into bond tokens, which temporarily remove liquidity from the market and stabilize the coin's value by halting yield generation.
- **Conversion into Share Tokens**: Alternatively, the purchased stablecoins can be converted into share tokens, distributing stored value among holders who prefer to maintain ownership during market fluctuations.

Additional Mechanisms

Some stable tokens leverage the programming frameworks of existing blockchains to create a customized version of cryptocurrency by modifying the code to alter economic dynamics.

How it works

- **Supply Adjustments**: If the value increases, additional supply is introduced to moderate the price.
- **Mining Adjustments**: If the value decreases, mining rewards can be reduced, potentially to zero, to discourage excessive supply.
- **Fee Utilization**: Fees may be collected to buffer against value decreases and can be destroyed in scenarios where the value increases excessively, helping to maintain stability.

> Non-collateralized stablecoins often carry a 'fictitious' value as they are not backed by tangible assets or traditional collateral, relying instead on algorithmic market interventions to maintain their peg.

§ Initial Coin Offerings (ICOs)

Investors

Initial Coin Offerings movements can be cause by a couple of factors

Wales Manipulation:

"...the rising price has on its own generated additional buying enthusiasm, attracting purchasers who see the rise as validating an investment thesis. As 'bandwagon' investors join any party, they create their own truth—for a while."

Buffett not talking about bitcoin – he was talking about gold in 2012.

> Big investors may very well manipulate the market with this truth.

Bandwagon Investors:

The ones ho sees price increase and buy high contributing to a certaint extent to the continuation of the rising prices and then inevitably sell low.

> I mean we are here to not be them.

Value Criteria

1. **First gen/Gold 2.0**: As transaction mechanism.
2. **Distributed Computational Tokens**: As powerful technologies.
3. **Utility Tokens**: As an asset extension of technologies.
4. **Security Tokens**: As tokenization of existing values as shares, bonds or other assets.
5. **Fungible Tokens**: With mutable value based on use case.
6. **Non-Fungible Tokens**: Well...
7. **Stablecoins**: Easiest to give value by nature.

ICO Trends

We certainly can understand that ICOs will not stop as long as there will be new innovative technologies to invest on.

§ Fraudulent Crypto

I want to infuse this section with a personal informal touch because it's deeply personal. I've seen friends fall prey to these schemes, targeting me or even my family multiple times. Thankfully, my understanding of manipulation tactics and emotional control has helped protect us. I really can't stand those who leverage emotional weaknesses to exploit power.

NO PONZI SCHEMES

No work should go unpaid if it's generating money. Don't expect returns on work you've done for free.

NO SURREAL RETURNS

Do the math before investing time and money. It's inherently impossible to have premium prices or guaranteed profit in exchange markets.

NO EMOTIONAL/HYPE DRIVEN MEETINGS

Emotion can obscure reality. While emotions are a fundamental aspect of human experience, they can cloud judgment.

Like on a scale, emotion can lead to the ruin of reality perception; the more you drive towards emotion, the more likely your vision will become blurred.

These meetings are often meticulously crafted theaters designed to manipulate you. Common features include:

- **Late Evening Meetings**: Your defenses are lower when you're tired.
- **Fast Talk**: Rapid-fire delivery of large numbers and complex calculations leaves little room for critical thinking.
- **Leverage mob influence**: Often actors can be present to give a more credible atmosphere. These "actors" or fully manipulated individuals will try to lead you toward their ideals.
- **Try to engage emotionally**: They talk about common societal weaknesses using impactful images to efficiently penetrate your defenses, as these are more immediately assimilated by a tired mind.

NO STRANGERS ABOUT MONEY

Search names and people, reputations and identity often they use fake images and names to simulate credibility by creating fictional characters that you could never question or consult.

RED FLAGS

The presence of any of these features should be considered a red flag. Stay vigilant and question everything.

§ Evaluation Framework

"We got to look at Initial Coin Offerings carefully, be prepared, avoid mistakes, to invest sharp"

Following we have a little application that i build in Rust programming language (Technology used by Solana) which helps you better evaluate ICOs with a comprehensive explanation sheet.

(This is inspired by a checklist vetted by venture capitalists and improved by Dr. Harvey R. Campbell)

App

click on title

Sheet

click on title

(This is a simplified checklist inspired by a version vetted by venture capitalists and improved by Harvey Campbell.)

Suggested Follow-up

Blockchain Cheat Sheet - Overview

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