Establish an exchange for cryptocurrency-based derivatives

The cryptocurrency exchange per se is an exchange wherein a cryptocurrency is exchanged with other cryptocurrencies or even Fiat currencies. The main issue with cryptocurrencies is their lack of liquidity. Numerous examples can be mentioned how this lack of liquidity harmed the investors. In a nutshell, a security is characterized as liquid when a significant change in the volume of its transactions does not alter its price volatility significantly which in turn results in significant changes in its price. The example of bitcoin is illustrating, it has exhibited drawdowns in its price which are unacceptable for liquid instruments.

One of the main purposes of incorporating derivatives in the cryptocurrency exchange is to better inform the participant about expected trends of the underlying cryptocurrencies. Let us assume the example of an arbitrary cryptocurrency XYZ. XYZ upon its inception has exhibited a certain price pattern. The only information that the investor has is that historical price pattern per se, not the opinion of the most informed people in the cryptocurrency space of how XYZ is going to perform in the future. With the incorporation of derivatives in the exchange this information is going to be provided. In the price of the options for instance, the opinion of the most informed people, the market makers, is going to be reflected with respect to the volatility. There are many examples in the securities’ history where the pattern of the volatility abruptly changed causing most of the times huge drawdowns in the price of the underlying assets. Most of the times this change in the volatility came as a surprise because of the lack of other source of information other than the historical data. With the incorporation of the derivatives however, the source of information will be expanded for the investors, thus reducing the uncertainty of the outcome of their investment.

In addition to the information that the price of the derivatives provide to the investors, they provide also Market Completeness. A market for an asset class is not complete and does not have the tools to flourish in the long term if it does not allow its players to effectively and cheaply manage their risk exposure. Every portfolio of securities in order to be considered safe, it has to be able to replicated by a portfolio of different securities. This procedure is called hedging and its use is imperative in order to prevent the effect of adverse market trends. As an example we are going to exhibit the “Hedging procedure of a plain vanilla European Call Option” which can be hedged with a long position in the underlying asset and a short position in the risk free instrument. This means that if an investor takes one direction in one portfolio, they have to take the opposite direction in the hedging portfolio so to avoid the idiosyncratic as well as the systematic risk of the former portfolio. E.g., if an investor takes a long position on the underlying, in order to hedge themselves against a drawdown, they will take the opposite position of the hedging portfolio, that is they will take a short position on the Vanilla European Call Option on that Portfolio and along position on the Risk free Rate Instrument.

In addition to the Plain Vanilla European Call Option there are many more simple yet powerful derivatives and these are derivatives instruments such as futures, swaps, and options. A very interesting case is the futures contract which permit the investor to lock their ingoing or outgoing cash flows in the future with certain price, thus by eliminating the effect of erratic price behavior of the underlying. Assume the case of a firm that operates in a USD prevailing environment. This firm has the need to periodically purchase goods from companies that accept Bitcoins. The former needs to find a way to hedge itself against fluctuations of the exchange rate between USD and Bitcoin. Therefore, they can enter into futures contracts wherein the purchase price of Bitcoin in USD will be predetermined. That is the counterparties are obliged to buy or sell in the contract determined price at a particular date in the future, regardless of the price that the underlying will have in that particular date. Hence we see the importance of the existence of Futures contracts in the Cryptocurrency exchanges as well.

We saw above two examples that derivatives help the investors. The first one is through the options with which informed investors indirectly provide opinion about the future performance of the underlying instrument and the Futures contract with which someone lock their future ingoing or outgoing cash flows against fluctuations in the price. Generally, there are three groups of players with distinct incentives that are active in the financial derivatives markets:

• Hedgers: an investor who is looking to reduce his risk exposure into an asset class by taking an opposite position to the risk he is otherwise exposed to. See the example mentioned with a call option and its replication with a position in the underlying and with a position in the risk free instrument. Another example would be an investor holding a long stock position and buying a put option for protection against downward price movements. The goal is to reduce risk.

• Speculators: a speculator is someone who hypothesize about future movements of an asset and takes a derivative position accordingly, without most likely owning the underlying asset. The goal is to maximize profit by taking a position.

• Arbitrageurs: in order for a market to be efficient, players should trust the pricing is an accurate reflection of the equilibrium between supply and demand for that instrument. Arbitrageurs exploit market imperfections and inefficiencies to their advantage, which in turn increases the trust and efficiency of the market for that asset class, as well as increasing its liquidity. The goal is to maximize profit without taking a position.

Our goal as Linker Coin is to provide liquidity in all the instruments trading in the market. A necessary condition to provide liquidity is to supply the investors with as much accurate information as possible to make correct market decisions. Though the introduction of derivatives the pricing will be more transparent as the markets will:

1. Reflect the opinion of the experts
2. Give to the investors the opportunity to replicate one portfolio with another portfolio thus giving the investor the opportunity to compare.
3. Give to the investors the opportunity protect themselves from adverse price movement through put options or through futures contracts.

It is therefore obvious that it is imperative to have all of the three groups ( Hedgers, Speculators, Arbitrageurs) present in the Crpytocurrency Exchange in order for the Cryptocurrency market to thrive. Without a functioning derivatives market, it is virtually impossible to hedge a position, let alone arbitrage away price inefficiencies. In fact, and probably rightly so, the cryptocurrency asset is currently perceived as a vehicle to “make a quick buck” and run away with the profits. Furthermore, a functioning derivatives market is the bedrock on which healthy exchanges of any asset class are built upon. Specifically for the cryptocurrency space, this would allow the investors to:

• Hedge the significant volatility that has been typical so far for this asset class.

• Hedge the cash positions in digital currencies, which so far has been difficult to do.

From a market dynamics perspective, it would be naïve to expect the pricing of cryptocurrency-based derivative instruments to behave in the same way that their counterparts based on stocks, interest rates, or currencies do. As an example, based on some initial research and on the recent market exuberance with regard to cryptocurrencies, it seemed appropriate to include a confidence gage in the beta pricing model for European option – like derivative. The Linker Coin vision is to provide a venue to foster transparency, price discovery, and risk transfer capabilities for crypto-based derivatives.

In the aftermath of the global financial crisis of 2008, the expression “financial derivative” has acquired a negative connotation, mostly for the wrong reasons. It is overly complex derivatives, which did not serve an economic purpose and had rich fees embedded in their valuation that caused the collapse of the financial system. It is now helpful to take a step back in order to fully understand the rationale of the vision of Linker Coin. The cryptocurrency space is still at a very early stage and a tremendous amount of research, experience, and trial and error is needed to reach a steady state where confidence is high and liquidity is guaranteed. Linker Coin proposes to be the pioneer and hence initial liquidity and price provider for Linker Coin and other crypto-currencies. We are currently conducting research for the benefit of the crypto-assets ecosystem, to allow it to flourish and develop.