

Ahedgefund Developments: AI for Hedging in the Cryptocurrency Market

Economics, like pretty much all processes run by a man, has become increasingly virtual and digital. Separate areas – once revolutionary and breakthrough – such as exchange trading, insurance, and banking, are now conservative. The principles of their work have not changed for centuries; moreover, they have become increasingly regulated. Attempts to link these spheres with such an innovative and promising sector as cryptocurrencies and their circulation face many problems and mutual distrust.

The previous year brought a tremendous influx of both institutional and novice unqualified investors to the cryptocurrency market, which required the development of a hedging system for the risks associated with high volatility of cryptocurrency. The volatility of cryptocurrencies or extreme volatility of shares of the companies associated with cryptocurrencies is often explained by human emotions, rather than by reasonable factors and objective analysis.

Each investor who uses cryptocurrencies and tokens faces the risk of a sharp change in the exchange rate or the issuer's default. Cryptocurrencies are considered one of the riskiest investments. Therefore many investors are looking for tools to hedge the risks. [Ahedgefund](#) offers a clear and necessary solution proven by the traditional stock market for many years, namely credit default swaps.

[ICO Ahedgefund Sagl \(Lugano, Switzerland\)](#) is organized to create a platform for hedging risks, as well as assessing the risks of sharp falls in the rates of major cryptocurrencies and the formation of *smart insurances* on this basis. The fund's work will consist of operating the system, selling insurance to investors, and compensating losses in the event of insured events.

Furthermore, Ahedgefund's operation will create the hardware and software core of a future artificial intelligence system with much broader capabilities. The use of the most modern mathematical apparatus in the sphere of valuation and accurate pricing of credit default swaps, developed on the basis of classical works by Black F., Scholes and M Merton, R in the field of structural models, and Jarrow, R. and Turnbull, S., Duffie, D. and Singleton, K. Hull, J., and White, A – in the field of reduced form models ([Black F., Scholes M., The Pricing of Options and Corporate Liabilities, Journal of Political Economy, pp. 637-654, 1973](#); [Merton, R. On the pricing of corporate debt: the risk structure of interest rates, Journal of Finance, 29, 449-470, 1974](#); [Jarrow, R. and Turnbull, S., Pricing options on derivative securities subject to credit risk, Journal of Finance, 1, 53-85, 1995](#); [Duffie, D. and Singleton, K. \(1999\). "Modeling Term Structures of Defaultable Bonds." Review of Financial Studies, 12\(4\), 197-226](#); [Hull, J., and White, A. Valuing credit default Swaps I: No counterparty risk, Working paper, 2000.](#)) is our foundation and allows us now to see the skeleton of the future complex.

Permit me to relate the facts describing the current state of affairs in the hedging market of cryptocurrency, and some of our advantages:

- The existing intellectual systems are highly specialized, and their application is rather narrow. It includes diagnostic expert systems based on heuristic algorithms (a classic example is programs that beat a man in chess, yet are unable to answer basic questions);

- The experience of companies working in this field is rather modest and is limited to application in separate processes moving along a single algorithm. It includes the creation of a shell – its saturation with knowledge – test – repeat the first steps to achieve statistically confidential results close to expert.

- At the moment, the launched system does not have even close analogs, and will be applied in the cryptocurrency area – one of the most technologically advanced for today;

- The developers have close contacts with academic circles of the Akademgorodok (<https://en.wikipedia.org/wiki/Akademgorodok>), where works on the creation of artificial intelligence are actively carried out. In addition, and there is a vast scientific school of followers of Nobel laureate Leonid Kantorovich (https://en.wikipedia.org/wiki/Leonid_Kantorovich), the author of linear programming method and economic models development, the modern prototype of neural networks in management and planning of economic processes;

- When developing Ahedgefund, we apply the most modern mathematical apparatus using fuzzy logic methods and fuzzy sets theory;

- The available systems with AI algorithms are costly to develop. Ahedgefund's close interaction with the participants of cryptocurrency market will allow creating the necessary shell and continuously saturating it with information on historical data, as well as conducting training with the involvement of experts and use of real market situations.

Artificial intelligence is what companies should master regardless of their scope and size. It is the main point of qualitative and quantitative growth of any business; it is only necessary to set the task correctly.

(Despite this, according to analysts of MIT Sloan Management Review, which is published by the business school of the Massachusetts Institute of Technology, the real introduction of artificial intelligence into work processes is far behind these expectations. Only 19% of companies understand the importance of artificial intelligence and have already implemented it. At the same time, three-quarters of respondents expect that artificial intelligence will allow them to master new business lines. Almost 85% believe that artificial intelligence will help their company gain a competitive advantage. The research is based on a survey of 3,000 company executives, managers, and analysts from 112 countries and 21 sectors of the economy. 35% of respondents are from the US).

The system built on AI principles Ahedgefund Sagl (Lugano, Switzerland) creates will be trainable, which will allow it to act like a person. At the same time, even the initial database of written algorithms, knowledge, and situations, will be incomparable with the human. The accurate risk assessment will ensure stable forecasts of cryptocurrency fluctuations, and the widespread use of hedging will stabilize the market by protecting it from the intentions of artificial speculative swing and

momentary fluctuations. In addition, the price of cryptocurrency is influenced by various factors of entirely opposite approaches – from innovative theories to the classical quantitative theory of money.

The market stability will allow setting prices for various cryptocurrencies in price ranges that are relatively normal for them. The launch of cryptocurrency insurance sales will reduce the level of emotional behavior, especially for novice investors or ‘sleeping’ holders, who are not interested in 24/7 playing in the currency market. Additional stability will be ensured by using open and publicly available transaction records in blockchain.

Giving sustainable qualities to such a modern, transparent and convenient tool as cryptocurrency will attract new participants and open up an opportunity for them to invest in long, truly global projects. At present, this is not possible due to the predominance of short-term interests. A whole concept known as manipulation of market or information and facts in the interests of players with short-term strategies has emerged. However, such a speculative layer is not capable of honestly assessing the opportunities and prospects that the technology of blockchain and financing of long-term projects in cryptocurrency opens.

The sharp changes in the market of cryptocurrencies, which are often caused by emotional behavior, manipulation, and chaotic outflow-inflow of newcomers due to the possibility of hedging, will give way to smooth trends. It is the smooth trends that accurately reflect the real state of the economy and the actual trends of changes in markets and countries.

In our opinion, most of the ICO ideas are quite superficial; they relate to the service and maintenance area, as well as to the creation of individual tools on this cryptocurrency market, while Ahedgefund is conceived as a long-term and, in many ways, a system-building project.

Ahedgefund core is the future of cryptocurrency, since, according to the majority of market participants, the developed technologies and algorithms of hedging should be created shortly in the image of the traditional stock market, where they have been used successfully for a long time. The essential difference between them is transparency, decentralization, and lack of bureaucratic structures or distortions in reporting, which took place in the infamous confidence crises both with Enron (Enron scandal) in industry or Goldman Sachs bankruptcy in the financial market of derivatives.

Ahedgefund is an infrastructural project in the sphere of cryptocurrency circulation. We propose a mechanism for stabilizing sweeping trends. The new market will receive an important tool for forming calm trends, which will reflect the real state of affairs in the sector of cryptoeconomics more accurately. Ahedgefund’s client is a beginner, or rather an institutional investor, who does not spend his nights on the stock exchange, but instead uses the fund as a trust – the trusting use and shifting of risks to the fund helps to save the accumulated means, insure and fix them.

We have already given an example of the Chicago Option Exchange experience (OWN) (the first regulated exchange accepting cryptocurrencies) with regards to the fact that the next day, the first bitcoin futures brought a rise in the price of bitcoin by approximately 10% – up to \$16,936. Similarly, on the eve of the launch of bitcoin futures

on one of the world's largest exchanges – Chicago Mercantile Exchange (CME) – the price of bitcoin approached the \$20,000 mark. This indicates the interest of market participants in the introduction of new tools for cryptocurrency market, and the bitcoin rate during the next few months gives hope for its stabilization.

Futures in Chicago undoubtedly increase interest in bitcoin, but they work 'around', not within it. Any asset – be it gold or goods – could have been in its place. Bitcoin futures is a derivative financial instrument for an asset, the circulation of which occurs in dollars, and not in cryptocurrency. Ahedgefund expands the scope of cryptocurrency in this area. It allows carrying out transactions in cryptocurrency.

The 'total computerization' was followed by the age of intelligent machines. In the coming years, artificial intelligence and robotics will change the world to a greater extent than personal computers and the Internet did in the last three decades. Cars will drive by themselves, and robots will take on the work of FedEx employees and that of builders, lawyers, accountants. The new era promises us great physical and computing capabilities. However, it once again raises the issue that first arose more than 50 years ago – who will control whom? In what direction should we develop them?