**How Big Data Helps to Analyse Venture Capital Risks**

Venture capital is a type of investment that implies high risk and high return on investment in the case of success. It is usually a long-term investment that takes two and more years to yield profits. Traditional venture capital is capital invested in companies at the initial stage of their existence when the idea is only starting to take some actual shape, i. e. at the stage of a start-up. In more clear terms, it is an investment in a company before it launches its initial public offering (IPO).

Venture capital investment should be done with diversification of capital and there are several different strategies according to which venture capital can be invested. Those strategies commonly differ in how much funds, usually in percent, are invested in one start-up and in how many investments are made. Then there is a difference in the approaches towards making the investment decision; it includes analysing the idea, the project’s team, the popularity of the project’s idea, economic factors and much more.

Making the decision on venture capital investment is a complex thing because many factors can influence the success and failure of the project. Venture capital risk analysis is an extremely challenging task for one person, especially so if someone is just making the first steps in this kind of investment. That is why there are analytical agencies working in venture capital investment whose task is to see promising start-ups at an early stage and weed out those that will fail. They employ different methods of assessing projects’ sustainability and possible investment risks.

With the technological advancements in information technologies it is becoming increasingly possible to take into account more data that has impact of the investment prospects of a project in its future. Computerised analysis of big loads of data is called big data analytics and is oftentimes abridged to big data.

The heyday of a new investment paradigm – ICO (initial coin offering)— that came with blockchain and cryptocurrencies made a noticeable impact on venture capital due to a higher accessibility of ICO compared to IPO and much fewer rules that a start-up needed to comply with to offer its virtual asset to the public. Initially, ICO and the projects using it were perceived as something uniquely blockchain-based and thus revolutionary and new. But as time went on, more projects started to use ICO as a new fundraising method without making use of the blockchain technology in their products. Thus, the main general effect of ICO has so far been a growth in numbers of start-ups attracting venture capital through ICO.

The popularity of ICO on the growing cryptocurrency market lead to a high investor interest towards ICO projects. However, with the downfall of the cryptocurrency market, ICO has been divested of its main advantage over traditional venture capital that was in the initial prospects ICO promised regardless of what was the project launching it. But still the popularity of ICO has not been very much down after the cryptocurrency market changed its course for a bearish one. It means that there are many projects using ICO as their fundraising method, which in turn means that investing in them should now be done more cautiously then before since the market is not in its growth stage.

In order to take weighed decisions on venture capital investment – be it a traditional start-up using traditional fundraising tools or a project with a virtual token or coin – an accurate investment risk assessment should be done. Big data analytics is of much help in investment risk assessment because it helps to embrace a lot of data and provide accurate results in quite a short while without employing labour force.

Recently, artificial neural networks have started to be more frequently used in big data analytics because they turned out to be able to interpret raw data well and build their own assessment criteria using real historical data. Also, they are adaptable to changes and can alter their assessments to reflect the changes in reality. The capacity of artificial neural networks for data analysis is really huge and they have a good potential to be more vastly used for analysis of different sorts of data including investment risks.

Thus, whether a start-up launches an ICO or uses more traditional fundraising methods such as venture capital funds there is not much difference in reality. The same principles and factors are at work and the analytical methods and techniques are already there. We are just going to have greater analytical capacities that will allow us to run analysis on greater amounts of data that should lead us to obtaining more accurate results.

In Neironix we are working toward that goal and developing a system that could process big data to produce reliable inferences on venture capital risks and provide global analytical data on the object of analysis. The system to be built in Neironix should be able to run analysis on 75 or more parameters that affect the sustainability of a project.