

Gaining investor's trust in new technologies

The buy and hold strategy that reached high popularity in the 1970s might not be an appealing investment strategy in the new millennium. The Global Financial Crisis or the recent COVID-19 market turmoil reduced the wealth of many investors even by a half and reminded us that investing in financial markets is a risky business. It also underlined the limitations of conventional, asset allocation-based risk management strategies. The traditional buy and hold strategy turns out not to be acceptable both to retail and professional investor. So how to forget about capital drawdowns of more than 50% from financial crises of 2007-2009? How to trust that financial markets are a proper place to invest savings?

There's been enormous advancements in new technologies in recent times. Affordable GPS-enabled devices, widely accessible free user-generated content, social networking and mobile phones to just name a few. But the pace of changes has been increasing with the practical uses of artificial intelligence that enter the market: text, voice and image recognition, autonomous cars or medical diagnosis. It's incredible how fast the new technology is marketized nowadays and how easily it gains a trust from customers.

In the age of challenges that meet the investment industry why not give the new technologies a try to rebuild the trust to financial markets? Isn't this the perfect time to verify how state-of-the-art advancements in artificial intelligence may improve effectiveness of investment? This research is to address these questions.

First, it will widen the knowledge of using market inefficiencies, in particular – market anomalies, with advanced machine learning tools. For instance, can we find overperforming stocks with artificial intelligence? Second, using market anomalies and artificial intelligence techniques, is it possible to build autonomous investments that are low-cost, widely available, and achieve investment results that outperform market indices?

Second, this study is expected to open an academic discussion on applying machine learning to investment portfolio construction. Currently, most market practitioners still rely on fundamental analysis, in which a team of market professionals carefully select companies for a portfolio. This approach is costly and, unfortunately, often inefficient. The low effectiveness of active investments has triggered an incredible growth wave in passive investments, where investors counting on low management costs accept investment results similar to those of stock exchange indices. The greatest popularity of passive investments is among mass investors who cannot afford to pay an outstanding manager. Unfortunately, this situation accelerates the growing wealth gap, as the richest achieve higher returns than those who are less wealthy. Artificial intelligence and the automation of investment processes that goes with it can stop this process. Investment strategies based on machine learning can be both cheap and effective. This study aims to develop a publicly available science that uses the latest developments in artificial intelligence to provide tangible benefits to the average investor. The development of science in this area is expected to provide a leveling of investment opportunities and eliminate one of the causes of the widening income gap between the wealthiest and the rest of the world.

Let's us check whether new technologies with the most advanced machine learning techniques can change the way we see investment opportunities in financial markets.