

Sci-fi becomes a reality

60 seconds with the portfolio manager

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This marketing communication is intended for non-professional investors.



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Johan Van Der Biest, Felix Demaeght and Nathaniel Wejchert explain the metaverse and how they identify companies associated with it.

What is the metaverse?

The metaverse is where the digital world and the physical world meet. To be more specific, it is a shared 3D virtual reality world where people can interact with each other in the form of avatars.

Let's take as an example a remote meeting with colleagues, where part of your team is at home in Frankfurt and the rest in Barcelona. In the future your avatars will all be able to meet together in a virtual office. You could just as well adapt this example to a hike around Lake Como with friends or a visit to the Tate gallery in London without having to queue up for hours or be bothered by other tourists.

What until recently seemed like science fiction, is now becoming a "virtual" reality!

Why invest in a metaverse strategy?

From computing giants such as Samsung, Intel and Microsoft to luxury firms such as Balenciaga, Dolce & Gabbana, Estée Lauder and LVMH, several sectors of the economy have already invested the metaverse.

According to a McKinsey study, the size of the global metaverse market could reach around \$5 trillion by 2030⁽¹⁾. Even before 2030, the virtual and augmented reality market is expected to achieve double-digit growth, according to Grand View Research⁽²⁾. The market for NFTs and digital certificates of authenticity is projected to grow at a rate of 34.5% from 2024 to 2030⁽³⁾.

The metaverse could act as a catalyst for the entire tech industry. We believe this is a paradigm shift.

Where do you find the best examples of companies involved in the metaverse?

Streaming, blockchain, cybersecurity, augmented reality, virtual reality, education, cinema and travel are some examples of activities contributing to the development of the metaverse.

We think of them as two main categories:

- Backbone: innovative technologies that make the metaverse possible; IT/storage/connectivity, data and content security,

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- Application: practical applications of the metaverse in daily life;
- o For the consumer: music, travel, etc.;
- o For industry: simulation software, digital mobility, etc.;



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60 SECONDS
WITH THE FUND MANAGER

(1) Value creation in the metaverse | McKinsey (2) VR Market Size and Share Report 2023 (3) Source : Grand View Research (NFT Market Size and Share Report 2023)

The stocks mentioned in this marketing document may or may not be held in the portfolio of the strategy mentioned.

o For education: medical applications, distance learning, working from home, etc.;

o For retail: virtual stores, etc.

These key areas offer significant potential for growth and development. In other words, the metaverse is opening up a new world of investment opportunities.

How do you select the companies in which you invest?

A first thematic filter allows us to build our "investable" universe. Companies are sorted into one of the two categories above: Backbone or Application. As the metaverse is a relatively new concept and many companies are only just beginning to address it, it is difficult to identify relevant companies based on revenue alone. We use Alphasense, a third-party search engine powered by Artificial Intelligence, to screen companies with an obvious connection to the metaverse, mainly based on their technological relevance, their spending intentions or their stated ambition to adopt the metaverse concept.

We then conduct an extra-financial analysis to better understand risks related to $\mathrm{ESG}^{(4)}$ (Environmental, Social & Governance) criteria. Specifically, we pay particular attention to major controversies related to the metaverse theme:

- Harassment, hate speech, etc. mainly for consumer applications;
- Personal data.

To manage these risks, we have decided to favour the industrial sector over consumer applications.

Furthermore, the strategy also aims to exclude companies with the lowest ratings based on our proprietary ESG methodology.

As with all of our thematic strategies, we also assess the exposure of company activities to major sustainability themes as well as assessing their stakeholder management. We exclude companies that do not adhere to the 10 Principles of the United Nations Global Compact, as well as those who engage in controversial activities such as armaments, tobacco, thermal coal and other activities we consider to be unsustainable.

The portfolio is built from a selection of securities based on five fundamental criteria combining



financial and extra-financial analyses: management quality, growth potential, competitive positioning, profitability and financial leverage. Stock-picking and portfolio construction benefit from discussions between managers and other Candriam equity management teams, as well as the contribution of the risk management department, and Candriam's expertise in managing thematic strategies. The 3 managers average 14 years of experience.

What makes Candriam different and what are the advantages of a metaverse strategy?

Candriam has more than 25 years of thematic expertise, as well as more than 25 years of ESG investing experience.

Another point is that we have decided to be very vigilant in terms of controversies, particularly involving personal data protection. This is why we have chosen to invest in companies offering industrial rather than consumer applications.

Finally, the metaverse may be still young, but it is already clear, in our opinion, that its growth heralds a new technological revolution. The technological innovations developed for the metaverse will shake up or even revolutionise the education, healthcare, communications and entertainment sectors. The potential and opportunities are enormous and we want to make them more accessible to our clients.

Candriam is therefore concentrating most of its investments in the following sectors:

- Education: the metaverse will allow interdisciplinary learning and the practical application of theory. It makes learning more interesting. Properly implemented, it could revolutionise how we approach learning in schools. We believe the metaverse is the future of education.
- Health: the metaverse will offer real added-value during live surgical operations. Superimposing a virtual image of the part of the body being operated on over the actual patient will enable surgeons to track the

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⁽⁴⁾ The ESG analysis described above for companies is applied to at least 90% of the strategy's investments excluding deposits, cash and index derivatives.

incisions and movements they planned when preparing for the operation.

- 3D modelling and simulation: "digital twins" (5) will allow product designers and engineers to explore unlimited sustainable innovation possibilities. More broadly, these technologies allow OEMs to reduce the impact of their products at the design stage, more cost-effectively and with minimal risk, by using virtual

simulation, data analysis and enhanced collaboration between designers, engineers and production operators.

We believe that the metaverse will bring about dramatic changes in numerous sectors of activity – and that we have the experience to seize them.

(5) A digital replica of an object, process or system that can be used for a wide range of purposes. Example: Ericsson and Nvidia are working together on a project to roll out 5G. Nvidia (example of a portfolio value) has created a digital twin of a city, incorporating traffic, the location of trees, etc. This allows Ericsson (example of a portfolio value) to optimise the location of 5G sensors for more efficient reception.

The main risks of the strategy are:

• Risk of capital loss:

There is no guarantee for investors relating to the capital invested in the strategy in question, and investors may not receive back the full amount invested.

• Equity risk:

Some strategies may be exposed to equity market risk through direct investment (through transferable securities and/or derivative products). These investments, which generate long or short exposure, may entail a risk of substantial losses. A variation in the equity market in the reverse direction to the positions can lead to the risk of losses and may cause the performance to fall.

• Foreign exchange risk:

Foreign exchange risk derives from the strategy's direct investments and its investments in forward financial instruments, resulting in exposure to a currency other than its valuation currency. Changes in the exchange rate of this currency in relation to that of the strategy may negatively affect the value of assets in the portfolio.

The risks listed are not exhaustive, and further details on risks are available in regulatory documents.



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Information on sustainability-related aspects: the information on sustainability-related aspects contained in this communication are available on Candriam webpage https://www.candriam.com/en/professional/sfdr/.

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