



Ben Rogoff Fund Manager

Ben joined Polar Capital in May 2003. He is lead manager of Polar Capital Technology Trust plc and is a Fund Manager of the Polar Capital Global Technology Fund and Polar Capital Automation and Artificial Intelligence Fund.

The metaverse matters - but what is it?

The metaverse is an extraordinary place. It is a place where there is no Covid, where there are no Russian tanks, oil isn't \$100 a barrel, technology stocks only go up (sic) and interest rates never do.

Definition

Simply described in 2021 by Mark Zuckerberg, the CEO of Facebook/Meta as "the next chapter for the Internet", there is no agreed definition of the metaverse. It could be the "digitisation of everything", "a new platform for the digital age" or, for the hyperbolic, "the potential to disrupt almost everything in human life". A more useful definition might be "a collective virtual shared space, created by the convergence of virtually enhanced physical reality and physically persistent virtual space, including the sum of all virtual worlds, augmented reality, and the internet".

The lack of an agreed definition reflects both its nascency and its potential scope; like trying to define God, or happiness, it really depends on who you ask.

Past to present

The first time the word 'metaverse' was used was in the 1992 novel Snow Crash by Neal Stephenson, a dystopic novel about people who escaped the real world by travelling on the metaverse. While technology inevitably trails science fiction, the pandemic saw remarkable metaversal moments including rapper Travis Scott playing to more than 12 million people live within computer game Fortnite while more than 100 million people used Teams to collaborate and Zoom became a verb.

Why has Zuckerberg, for one, committed a huge amount of investment towards developing the metaverse with particular focus on virtual (VR) and augmented (AR) reality?

There are a plenty of reasons but, from experience, are the very best incumbent technology companies the right companies to take a new metaverse forwards? As the clear social media winner today, Meta has much to lose should the mobile internet give way to a more immersive platform. Conversely, while nobody knows the timeline the metaverse prize is likely to be substantial with figures between \$36bn (the total value of the AR/VR market by 2025) and \$170bn (spent in app stores dominated by Apple and Google) being thrown around. Interestingly, Facebook does not have an operating system to host its own app store so is a likely Meta target.

A new digital goldrush

The size of the prize, together with the asymmetric risk associated with 'missing it' has seen many companies declare an early interest in the metaverse, including Microsoft and NVIDIA. There are also a number of 'real-world' companies including Disney, Nike, Adidas, Sotheby's and even JP Morgan planning to become metaverse-ready by filing trademarks, buying virtual land and/or acquiring non-fungible tokens (NFTs).

Awards & ratings



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This virtual land grab is a sideshow compared to cryptocurrency (worth \$3trn in November 2021) and NFTs (a \$40bn market last year). Much of this crypto/NFT frenzy can be attributed to the metaverse as crypto has the potential to become its system of money while NFTs might allow the metaverse to be imagined as objects that know all other objects exist. Despite excitement surrounding blockchains and a more decentralised ownership of the web (in contrast with today's centralised, closed ecosystems run by Big Tech) opinion remains incredibly divided about the prospects for a decentralised technology stack with both Elon Musk and Jack Dorsey pouring scorn on this vision.

There is also the elephant in the room which is that the metaverse is intrinsically tied up with the idea of a virtual refuge from some dystopic world. As we re-emerge from a pandemic, do we really want to escape the real-world via a headset and haptic glove or would we rather be outside playing football?

Investment opportunities

Immersive or 3D interfaces are likely to remain a key focus so we expect the battle to become a metaverse gatekeeper to be waged through hardware. While some (admittedly with a vested interest, such as the CEO of Unity) believe AR/VR headsets will be "as common as games consoles by 2030", mass adoption of the metaverse will need a significantly better immersive experience that is cheaper if it is going to drive mainstream adoption.

While VR technology has a long way to go, what about AR? To date, the vision of building "a world we want to live in, and not escape from" (per the CEO of Niantic) has largely been confined to smartphone-based games such as Niantic's Pokémon Go (2016) which enable digital objects to interact with real-world surfaces using spatial data.

However, for AR to become immersive will require wearables which is not new and comes with plenty of core technology challenges to solve. Early hype associated with the likes of Google Glass essentially came to nothing as the technology proved too difficult to deliver. Tim Cook, CEO of Apple might be right that the technology "doesn't exist" for quality AR glasses today. However, he (and others) will not want to miss this large potential market given the success Apple has already had in watches and AirPods.

While interfaces are likely to remain the most obvious metaverse litmus test, we are significantly more interested in the infrastructure investment opportunities that could present themselves. Meta has already committed to spending \$10bn this year and expects to spend more "for several years". The volume of data required is enormous and therefore computational requirements is larger than anything currently in place and will have to scale up to support vast numbers of users and ensure they can interact and enjoy the same game state, at least, as today. Simply put, the metaverse will need enormous amounts of storage, compute power, graphics processing, memory and massive connectivity for the necessary latency.

Artificial intelligence (AI) is likely to be instrumental in the creative process, helping create photorealistic 'digital humans' such as avatars and power real-time voice translations to large groups of people, each speaking a different language. It will be difficult, if not impossible, to create an engaging, authentic, and scalable metaverse without AI.

We are also likely to remain focused on gaming as an on-ramp to the metaverse. Today, Fortnite has 6-12 million current players; Minecraft has 110 million monthly active users; more than 40 million people engage with user-generated content on Roblox every day.

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Conclusion

The metaverse is years away and therefore can easily be dismissed as little more than a buzzword. However, in time it could represent the next stage of the internet, not just in a 'successor to the smartphone' sense but as a logical next step for humankind and how we are connected. The pandemic showed we can be apart and together at the same time which is the foundation/vision of the metaverse. Unlike the internet where you can be online but completely alone, the metaverse aims to deliver the scale, shared experiences and enjoyment of, say, online gaming into myriad new domains for the betterment of humankind.

While there are some metaverse buildings block in place today, there are debates still to be had – there is still much to do. However, we should still resist the temptation to dismiss the metaverse because while our children may be digital natives, we are all virtual pioneers now, thanks to the accelerated adoption of virtual alternatives during the pandemic.

Despite its dystopian billing, the metaverse feels every bit the 'successor state' of a post-pandemic internet.

Ben Rogoff

Fund Manager, Polar Capital Global Technology Fund

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