MARKET INSIGHT

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Redmayne Bentley

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Web 3.0: The Metaverse

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WEB 3.0: THE METAVERSE

JAMES ROWBURY | INVESTMENT RESEARCH LEAD

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Without wishing to deliver profound prophecy, we have taken the somewhat brave leap this month of choosing to discuss a concept that is so infantile, we still have little idea of its ramifications. Put simply, the Metaverse (aka Web 3.0) is a new iteration of what we call the internet; a virtual world in which users can interact with each other using a 3D environment. Users can access this new world through conventional PCs, or (perhaps more terrifyingly) virtual reality headsets.

I would not blame you for scoffing at the idea. 'What has this got to do with business and my investments?' I hear you ask. Well, having heard this term (usually coupled with talk of crypto currencies) being thrown around the investment community over the last year, I must confess my reaction was much the same. Was it that I felt this was just another step towards humanity's disconnection from reality? Or was it that I thought it was another fleeting fad that would not be persuasive enough to draw in users?

Both are likely true, but it was earlier this year when Facebook's founder, Mark Zuckerberg, announced the company would be changing its name to Meta Platforms that made me sit up and listen. You have to ask yourself, would a near-trillion-dollar company with possibly the most powerful customer engagement tool the world has ever seen, gamble its entire existence on a buzzword? (**See: Facebook Moves Into The Metaverse**)

It's unlikely, and it got me thinking what people thought about the internet before social media and smart phones. As a noughties teenager, I remember well the days when even accessing a PC computer was reserved for the one hour a week in IT lessons at school, which was too young to be predicting the power of an online world. I can only imagine it was met with apathy by most – email in the workplace was a useful new form of communicating, but that was probably about it. Nevertheless, while writing this piece, I was reminded of a fascinating 1999 BBC Newsnight interview with the late David Bowie discussing the potential of the internet with a bemused and highly sceptical Jeremy Paxman (a quick Google search will unearth the video for those interested):

David Bowie: "The potential of what the internet is going to do to society, both good and bad, is unimaginable"

Jeremy Paxman: "It's simply a different delivery system though? You're arguing about something more profound."

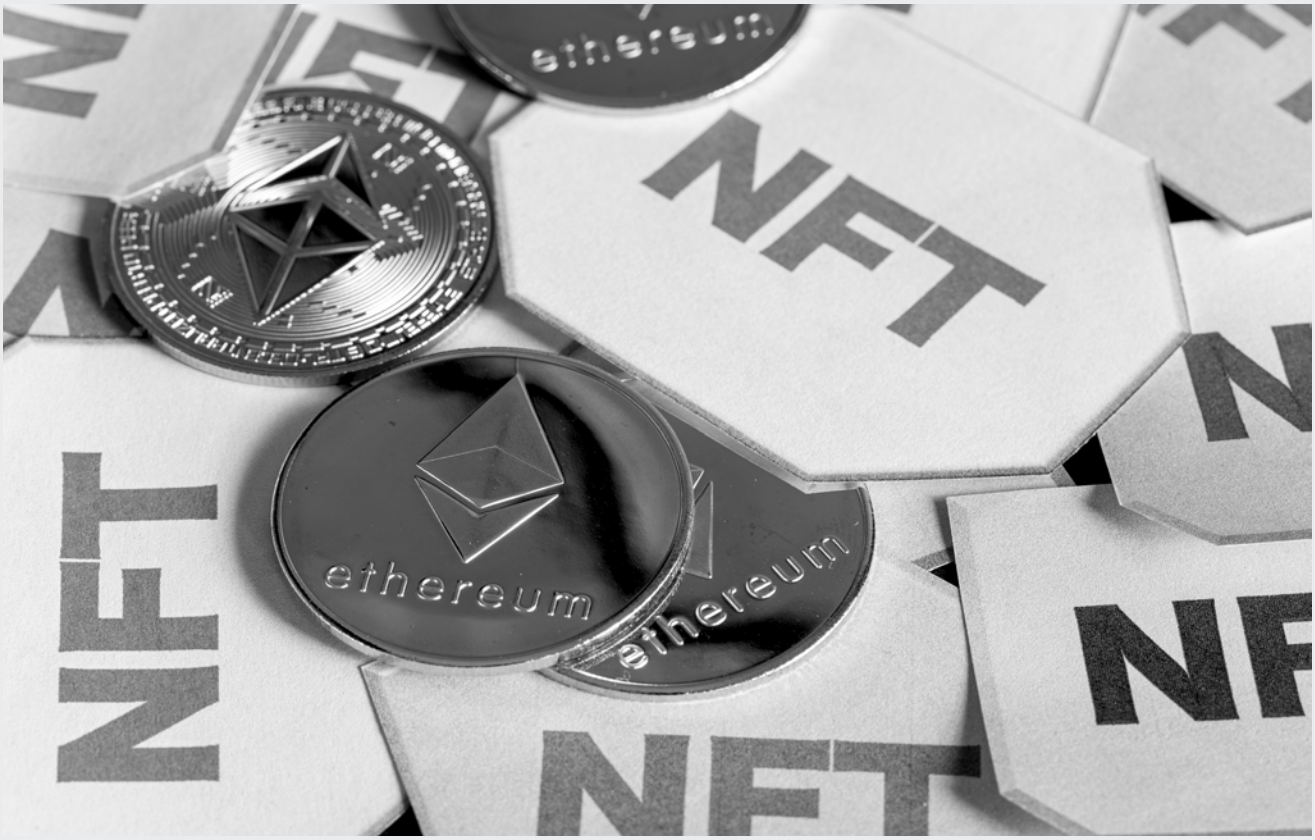
David Bowie: "Oh yeah, the actual context and state of content is going to be so different to anything we envisage at the moment. Where the interplay between the user and the provider will be so in simpatico it's going to crush our ideas of what mediums are all about"

Quite prophetic for the tail end of the 1990s, which gives some credence to the idea that we must remain open minded to these technological changes. After all, this interview must have been viewed with great cynicism at the time, and perhaps excused as the creative imagination of an eccentric artist. Nevertheless, I think it offers a lesson that we shouldn't shun the power of technology and never assume it will remain static.

If the last two decades are anything to go by, it would be foolish to assume the Metaverse is just another vision of the far-flung future… or one that we can ignore for now and worry about later. On the contrary, it exists in some mediums already. Primarily, online platform Decentraland has 300,000 monthly active users (growing 10x in the last few months) who are forging their own virtual lives in the Metaverse. Users can access content, buy real estate and shop for goods using virtual currency on the Ethereum blockchain (**See: Building Blocks: The Metaverse**).

If this all sounds silly, take a look at Sotheby's (yes, that's the 300-year-old London auction house), which has a virtual art gallery and auction house in Decentraland, recording an eye-watering US$7.3bn of virtual art sales (aka NFTs) and US$100m in revenue for the business. Or perhaps Nike, which has already submitted several trademark applications to sell virtual apparel in this alternate world (**See: Meta-Street**). These are giants of their industries with brands that are tightly interwoven into the fabric of our society. If they are taking this seriously, shouldn't we?

Perhaps, though as I said at the start of this, we are not here to deliver prophetic musings, merely report to you a theme we are seeing shape conversations about the future of many sectors we invest in: technology, gaming, retail, and property, to name a few. At the very least, we hope the next few pages go some way to explain the potential of this new tool. I'll let you make your own mind up on whether this is the start of a revolution or just another pair of Google glasses heading straight to the graveyard of crazes.



STOCK FOCUS

FACEBOOK MOVES INTO THE METAVERSE

While the potential for a Metaverse had long been envisaged through sci-fi media such as Snow Crash and Ready Player One, such visions were often dismissed as nothing more than predictions of a distant future reality. This all seemingly changed very quickly in late October 2021 when Facebook acted in perhaps the boldest manner by abandoning its well-established brand in favour of a new look.

The group's rebranding to Meta Platforms has already gone a long way towards legitimising the possibility of a Metaverse in the not-too-distant future. In the eyes of CEO Mark Zuckerberg, the Metaverse forms a set of virtual spaces where people can work, play, learn, shop, create and explore with other people who aren't in the same physical space. Upon completion, Mr Zuckerberg stated that users will be able to conduct pretty much every aspect of everyday life within the Metaverse, portraying a maximalist view of what the Internet is to us today.

While rebranding efforts have helped legitimise the Metaverse as an idea, the task of bringing the idea to reality still requires significant investment. The greatest obstacle that prevented the Metaverse from becoming mainstream years ago was the subpar standard of virtual reality (VR) and augmented reality (AR) technologies. For wide-scale adoption to occur at the level envisaged by Mr Zuckerberg the demands from users will focus on the quality of the technology: such technologies

need to be both comfortable and easy to use to allow these virtual worlds to play a central role in everyday life. At present, while the quality of these technologies has demonstrated rapid progression over the past decade, the greater challenge remains in finding a way to compress these supercomputers into lightweight frames that will allow for long-duration use. Meta's reality labs are sparing no expense in achieving such objectives, with US$5bn per year allocated to Metaverse-related development.

The expansion into the Metaverse is set to change the revenue model of the business. In its current capacity, Facebook operates as a network with brands paying a fee to display adverts to users across the network. Core advertising revenue delivered US$28bn in the third quarter of 2021 and has long been the dominant revenue stream for the business. Moving forward, Meta expects hardware to account for an increasing portion of revenue due to the sale of VR/AR headsets that will allow users to gain access to the Metaverse. However, unlike many present-day hardware businesses, the focus will be on selling hardware at affordable prices to maximise participation within the Metaverse, as this will compound the value of the digital economy inside. Within this digital economy, advertising will retain a similar role to the platform as it does today with companies paying a fee for advertisement space, but the expectation is that commerce within this digital world will represent the greatest change to the current revenue model.

The expectation is that the Metaverse will provide users with the opportunity to engage in commerce akin to the free-to-play gaming models of today such as Fortnite, which generates revenue by selling virtual goods to players to use within the game. For example, users will be able to express themselves through their avatars by purchasing digital goods such as clothing and other items that they then own and can utilise throughout the Metaverse. Facebook will take a fixed cut of each transaction that will contribute directly towards its revenue. The greater the size of this digital economy, the greater the revenue opportunity.

While there appears to be a strong economic justification for this change in direction, the move has not been without criticism. Firstly, many have found the timing of the move curious to say the least. Ever since the Cambridge Analytica scandal in 2018, there has been a negative buzz around the Facebook brand, as regulators have taken a greater interest in the operations of the business and users have grown to hold greater levels of distrust due to a series of data breaches. Given that the Metaverse business is currently in its infancy, many believe the move to be premature, providing credence to the view that the rebranding has been accelerated to distance the business from damaging headlines.

Secondly, the current Facebook model is a closed centralised network. However, as Mr Zuckerberg has reiterated, to maximise the economic potential of the Metaverse there will have to be a sense of interoperability and portability. The view is that the Metaverse will represent what the internet is to us today, thus it is not a single product one company can build alone. Such principles are far adrift from the current closed monopolistic focus of the business and this may hamper the business' transition to the Metaverse.

"Moving forward, Meta expects hardware to account for an increasing portion of revenue due to the sale of VR/AR headsets that will allow users to gain access to the Metaverse."

Finally, as proven throughout history, while large companies are typically well positioned to envisage the potential for disruption, they are often poorly positioned to capitalise on it. For example, in the 1980s when IBM saw the potential for the personal computer revolution, it chose to outsource to Microsoft, in the process creating a competitor that would eventually drive its demise. Due to the demands of the legacy business, Meta could find itself in a similar position, and thus, investors may also look towards smaller companies better positioned to capitalise on disruption.

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INSIGHT

META-STREET

The world of shopping seems to constantly evolve, and it is up to businesses to stay ahead of the innovation curve or simply get left behind. Look at the countless fatalities of the collapse of the high street and we can see that companies such as Debenhams and Arcadia-owned Topman have had one thing in common: a failure to adapt to changing consumer preferences.

Back in the heyday of physical retail, innovation was performed through simply selling new products to consumers, either upgrades of existing items or completely new products. This was a relatively easy process and one that could be performed by each and every manufacturer and retailer, regardless of their size.

However, things have changed since then and consumers now expect a wider variety of options, competitive prices, and online delivery options, all in conjunction with the relatively recent concept of 'experiences'. JD Sports has managed to deliver this more successfully than many of its competitors in the UK by offering exclusive products from Nike and Adidas through its physical and online offering, as well as performances from live DJs in its stores in order to keep consumers coming back.

The Metaverse has the potential to combine all such characteristics into one immersive experience. Much like online retail, the Metaverse is expected to offer consumers the ability to browse and shop from almost any company, all from the comfort of your own home. However, the Metaverse brings convenience, choice and experience together in a package that not even e-commerce can offer. The ability to virtually 'walk into a shop' combines the best aspects of retail and internet commerce, allowing customers to try on clothes, speak to

customer service representatives and have the items delivered straight to their door, all the while reducing instances of shoplifting and the cost of a physical presence for the shop. The pandemic has given rise to an explosion of non-traditional assets, with Bitcoin perhaps being the most obvious example, but talk of the technology that it runs on and the ability to hold and use a decentralised currency plays quickly into the hands of the Metaverse. Many have grown tired of the outdated and tightly controlled traditional forms of payment, leaving a gap in the market for innovative payments methods. Blockchain, the technology that many cryptocurrencies rely on, provides a secure, decentralised record of crypto transactions across a vast database that stores information electronically and among the nodes of a computer network. In essence, this provides a virtually unhackable database as it is stored across millions of computers in multiple countries. This safety has led many to question whether such technology could be used in and for the Metaverse, given its digital presence.

Donahoe, help Nike take "another step that accelerates its digital transformation".

There is of course the question surrounding government regulation of not only the Metaverse itself but also the many components used in its running. Regulators across the globe, but especially in the US, have failed to keep pace and recognise the rapid adoption of such assets and therefore risk either consumer safety or a rapid regulatory clampdown which could harm business investment. Many can be excused for a lack of understanding, however, failure to recognise the potential for a further change to shopping could ultimately hurt both consumers and businesses as well as regulators.

Still, the Metaverse as a concept for use in daily life still remains a question. The idea of putting on a VR headset for hours a day is not something that many people relish and, while the technology has come far in recent years, it is still

Apart from the obvious example of Meta Platforms (previously Facebook), other such companies known for their innovative approach to business have started to prepare for a potential shift in retail habits. Nike, the US sportswear giant, has filed seven trademark applications around the creation and sale of virtual branded footwear and clothing as it plans to protect its intellectual property in the new age of shopping. Amongst the trademarks are some of Nike's most recognisable brands and slogans, including 'Air Jordan', 'Just Do It' and 'Nike'. The company even went a step further, recently purchasing virtual sneaker maker RTFKT which will, according to its CEO John

a niche area. The social aspect of meeting in person and shopping at a physical store is something that many people still prefer and see as a luxury they would not want to give up.

Still, Meta is investing billions into the idea of future generations relying on the Metaverse for everything from education and shopping to dating and media and with companies now piling into the space from luxury goods to sportswear manufacturers, the investment needed is certainly starting to be provided. ■

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TOPIC OF THE MONTH

BUILDING BLOCKS: THE METAVERSE

Imagine being on a trip to the museum. You step off the city's public transport system and are instantly immersed in a verdant green landscape dotted with buildings, hearing conversations in a melting pot of languages, and watching as two people close by bond over wearing the same dress. Nothing out of the ordinary so far, except the method of transportation was by portal, the people are avatars (customisable digital representations of people), and the city is Genesis City, Decentraland's first digital world and a harbinger of the Metaverse. Though in the digital realm, the Metaverse still requires foundations to be built.

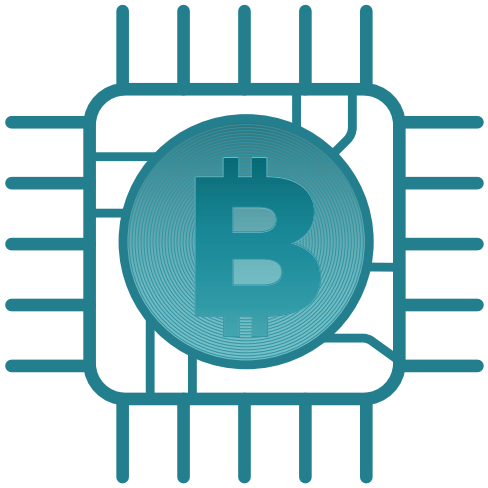
The Metaverse. A much-vaunted concept, this refers to the 3D internet – a virtual network of 3D worlds where every object and person is connected. Ownership of every object would be identified and verified, people would have virtual personas for work and leisure that can be distinct from, though linked to, their personal selves and represented by avatars. Importantly, the true characterisation of a Metaverse is one of decentralisation. Whereas today data is stored on central servers, which concentrates power in those who control the servers, it would be stored in a distributed fashion across a network of 'nodes' that prevent any one individual or institution from exercising undue influence or control over its operation. By being decentralised, the Metaverse would strictly uphold property rights, allowing a virtual economy to form, from purchasing plots of land in Decentraland to buying digital Nike shoes for your avatar to wear.

When assessing any construction, the door is a prudent place to start. The development of access point devices (devices needed to access the Metaverse) has come a long way, and it is crucial that they are of a high standard before mass adoption. Since its acquisition of Oculus in 2014, Meta has been innovating in this field. The company owns the IP to a technology that solves an eye-focusing issue that has plagued Virtual Reality (VR) from the start, causing blurry vision, eyestrain, and visual fatigue. This will allow consumers to wear VR headsets and stay in the Metaverse for extended periods of time. Improving the mobility and convenience of access point devices is also key, and removing clunky controllers is an apt way to do that. With its acquisition of Ctrl Labs, Meta is developing a wristband that transmits electrical signals from the brain into computer inputs, which would also significantly increase The Metaverse's verisimilitude.

But once through the door, it is the interior that counts, which is to say, the design of The Metaverse's virtual worlds. This is a field where an expansive ecosystem of human capital has already developed through the video game industry, where realistic graphics, physics and interactive worlds are in hot demand. Beyond the graphics, successful world design involves empowering users and enabling them to lead the world's development. A contemporary success story comes in the form of Roblox, which superficially operates like a Metaverse world. Roblox is a platform that gives its users easy-to-use creation tools, who then develop game modes and areas for social experiences. An in-game currency is used to exchange goods and services, and creators are rewarded for creating experiences with high user demand, with Roblox users earning US$329m from the platform's economy in 2020.

Decentraland is a true Metaverse: being run on the Ethereum blockchain it has no central authority, and the rules of the world are subject to change conditional on consensus by its userbase. The complex world demonstrates the importance of creating the right incentives for decentralised control to thrive, with its users balancing growing the world to sustain user interest and therefore asset values, while curbing growth enough to preserve existing asset values.

A vital component of the Metaverse will be individual digital property rights. Users will need to securely own the right to their digital persona, their digital plots of land, possessions, and assets. More commonly associated with a strange and confusing trend of selling, but not exactly selling, pictures online for millions of dollars are NFTs, or non-fungible tokens. These are the cornerstone of this future and are a similar, but distinct and separate, segment of the technology. Since the token is non-fungible, it is unique to the individual who owns it, and not interchangeable with another item, making it scarce. A user's digital identity, and nearly all objects, will come as an NFT with a unique 'private key' that is needed to own it. This value has been seen by Warner Music Group who are beginning to develop avatars and wearable NFTs (or digital clothes and accessories) for its artists. The technology could also enhance royalties by attaching NFTs to a song and claiming royalties on every sale of the NFT, irrespective of who owns it.



Central to weaving the story of decentralisation together is the blockchain. This is the decentralised database, or public ledger, that maintains a secure record of transactions. Information is stored in 'blocks' once it is verified by all nodes in the network and, once each block reaches storage capacity, it closes and is added to the end of a chain of closed blocks. These can never be edited and create the transaction record. In the Metaverse, this is the mechanism that ensures transactions and digital ownership are verifiable by checking both parties have the promised assets to exchange in the ledger. Having distributed 'nodes' makes the network free from central control and, by extension, means individuals control their own assets and possessions.

As a nascent technology with abundant potential, investors should focus on what features will stay the same in the Metaverse. Decentralisation and the community-led model centred around blockchain technology and NFTs appear to be the winning model, but investors should keep in mind the unexpected twists, turns, and uses a technology can take. In periods of technological transition, the winning companies and accepted truths of today can quickly become displaced by those of tomorrow. It is best to be receptive to new ideas in this environment and remember that the best way to learn something new is to experience it first-hand - the first step is always the hardest. ■

Redmayne
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