



Shaping the insurance
domain in the metaverse



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Introduction

Pre pandemic, the digital adoption rate was significantly low. However, because of multiple restrictions during the pandemic, the adoption rate increased considerably, bringing about a forced but effective digital transformation.

Due to the rapid advancement and adoption of low/no-contact technologies during the pandemic, the metaverse and web 3.0 were brought to the forefront.

Sectors like finance, retail, manufacturing, fashion, healthcare, automotive and research are trying to increase their potential by improving their customer experiences using the metaverse and web 3.0 technologies.

The web 3.0 era is facilitating the next generation of the internet – comprising a data-driven, decentralised web – along with artificial intelligence (AI), machine learning and high-speed quantum computing with 5G technology – built using blockchain. These emerging technologies are focused on decentralised and permissionless systems that would eliminate the need to involve third parties and enable users to have more control over all content or assets created by them – a few examples are cryptocurrencies, non-fungible tokens (NFTs) and decentralised finance (DeFi).

As data stored on the blockchain cannot be modified, this technology is highly secure and effective in adding an additional layer of security to transactions using a public key. The public key is shared with the person making the transaction to enable actualisation of the transaction by entering a long and secure password. Sectors such as healthcare, fashion, retail and cinemas can thus leverage this technology to protect their data.

Web 3.0 allows people to have ownership of their assets using blockchain technology, and this ownership is verified on a decentralised peer-to-peer network.

A popular feature of this technology is the use of cryptocurrency – a digital currency and NFTs, which act as a certificate for the authenticity of digital goods.

The use of cryptocurrencies and NFTs in the metaverse allows the ownership of goods and services and enables tracking of purchases and sales. Thus, these digital assets are as valuable as those in the real world.

With the increasing adoption of digital assets, the possibility of cyberattacks on these assets has also increased. Therefore, consumers are turning to insurance companies to protect their digital assets against cyberattacks.



Insurance in the metaverse

The metaverse poses some challenges to insurers. As NFTs and digital real estate are intangible assets bought using cryptocurrencies, it may prove difficult for claimants to prove financial losses related to the same, as there is uncertainty regarding the ownership and valuation of such assets in cryptocurrency.

Therefore, setting premiums will be challenging for insurance companies until the complete risk associated with such assets is understood. For corporate clients, there is a possibility that transfer vehicles will be used as a substitute for insurance.

New obstacles could disrupt the insurance sector in the metaverse and possibly benefit from oversight and lack of regulations. Thus, it is important to analyse the following questions using Porter's five forces model:

- Could non-traditional actors provide insurance services?
- What role could AI play?
- Will platform providers eliminate competitors from the space by restricting their access to the platform or charging rent for using the same?
- What kind of regulations would be required in the metaverse?



Figure 1: Porter's five forces model

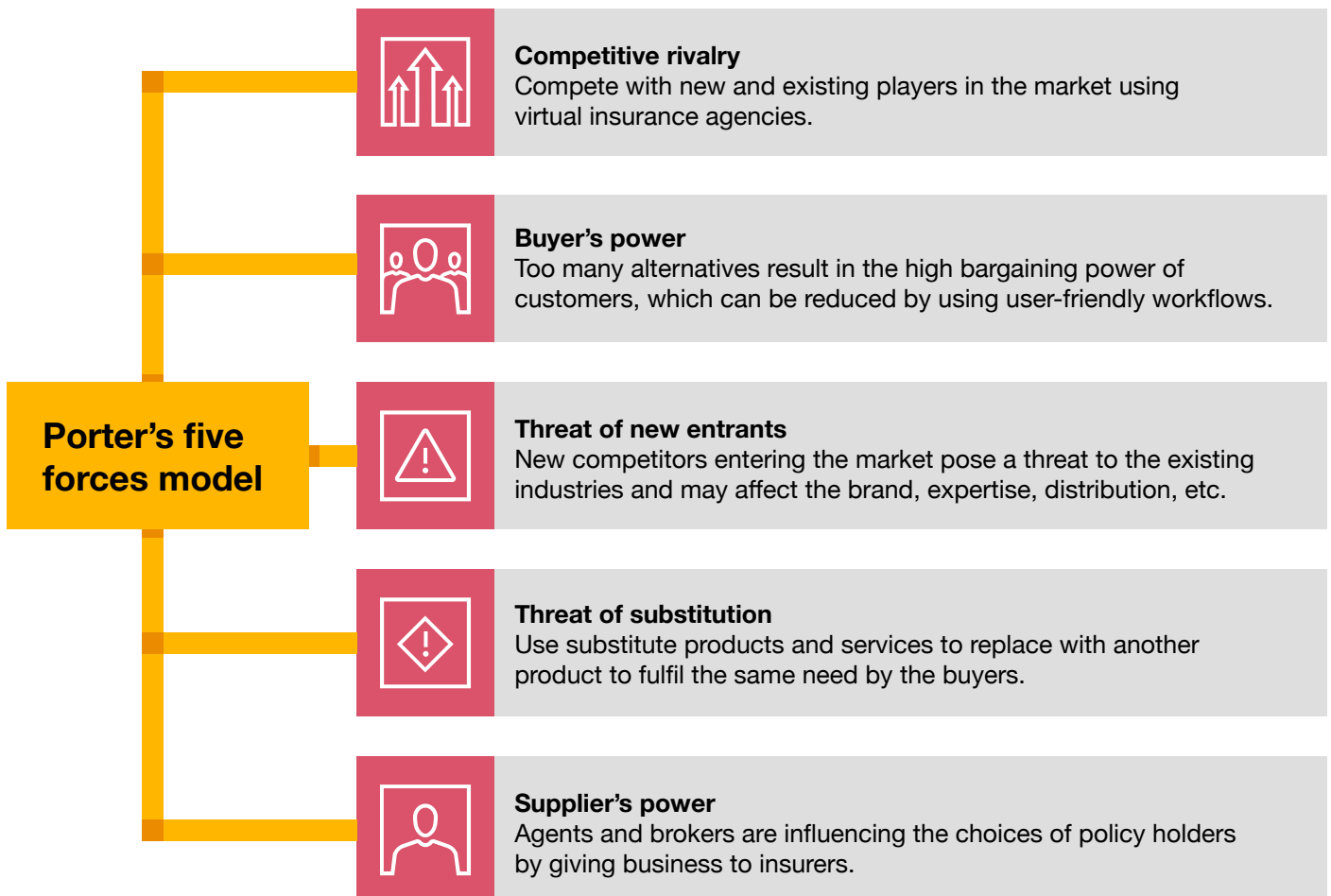
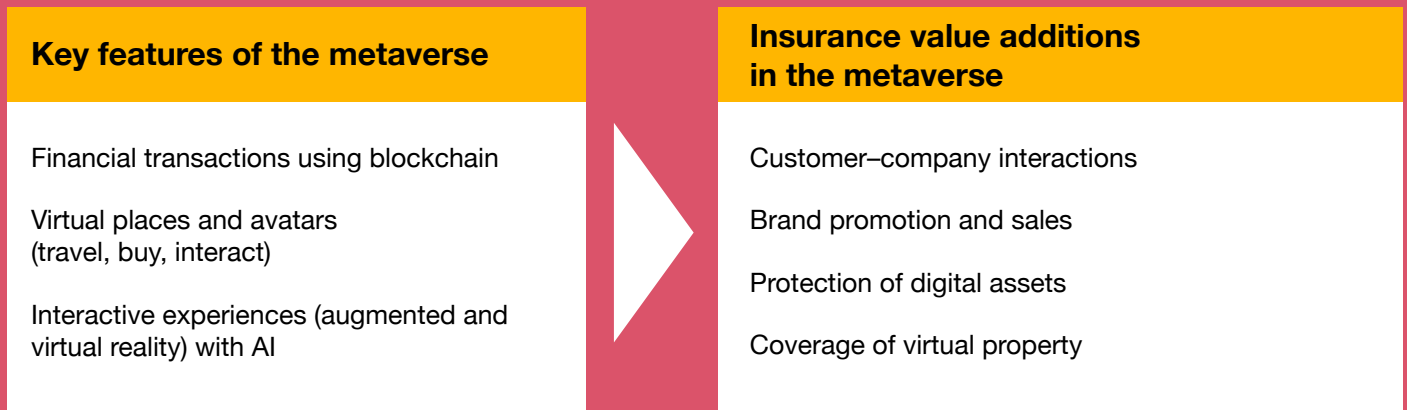


Figure 2: Need for insurance in the metaverse



Since the metaverse is basically a simulacrum of the real world, risk management in the metaverse is similar to that in the real world. The metaverse can act as a platform for insurance companies to explore various opportunities and benefit from them by overcoming challenges encountered in the real world.

Owing to the virtual interactions in the metaverse via avatars, there are several risks involved, which may lead to theft. For example, cryptocurrency worth USD 4.5 billion was stolen from an exchange, and two digital works from an initiative based on NFTs to create opportunities and raise funds for women were stolen from an open wallet.

Presently, the buying and selling of digital art on various platforms is unregulated and lacks legal jurisdiction. Moreover, if real estate in the metaverse is bought using real cash in the physical world, one needs to understand the risks these transactions involve. The asset or code for land bought could be stolen. In order to avoid this, it is important for insurers to reduce the risks faced by customers, for which they first need to understand the underlying risks and estimate the possible damage. Therefore, digital insurance is needed to insure such digital assets.

In the context of insurance, the below need to be considered:

- a. Organisations providing services in the metaverse need to be insured in the virtual world in the same way that they are in the real world.
- a. All commodities created in the new environment or world will also need to be secured to avoid misuse, as there have been cases where the amount that was stolen or defaulted on in the crypto world ran into billions.



A new approach to insurance

The insurance sector has been slow to adopt new technologies, and in the physical world, insurance companies rely on outdated methods such as paper documentation and cumbersome software applications to process customer information. However, owing to the high volume of transactions and insurance requirements, insurers are gradually adopting better products and providing services that will aid business growth.

The insurance industry can create a huge impact by leveraging emerging technologies to scale up business and save time and costs. Adopting new technologies will help insurers to approach financial records differently and help enhance security and privacy. Customer management will become easier, faster and more efficient – benefiting both insurers and reinsurers for claims, verification and transparency in payments, detection of risks, and streamlining of information and processes. Providing insurance services in the initial phase of metaverse adoption will help insurers to get ahead of their competitors and increase profits.

Interactions with customers in the metaverse

In this fast-paced world, there is a high demand for quick access to services and products. Digitisation of insurance creates and implements better services with better access, speed and user-friendly apps. Moreover, it helps insurance companies to connect with the customers easily.

As users interact in the metaverse using avatars, insurance companies need to find innovative ways to cater to their needs. Insurance can be provided in two ways – by insuring assets permanently or according to asset usage. Depending on the type of insurance required by customers, insurers have to develop new methods to meet their needs. There are various types of insurance and digital assets that can be insured through the metaverse – life, health, vehicle, homeowner, cyber insurance, etc.

Use cases

a) Open and hot wallets: Due to the high risk posed by open and hot wallets, it is essential for insurance companies to provide coverage to these in order to minimise losses for customers.

b) Personal information and digital resources: The metaverse is a vast virtual space. Existing and trading in the metaverse requires users to create avatars, and invest a considerable amount of time and money, all of which generates a large amount of data. Hence, it is important that this data is protected and insured against possible cyberattacks.

c) Virtual real estate: Users residing in the metaverse may own residential, business and commercial properties and invest in various digital assets. The ownership of such assets and virtual properties without insurance to various risks may lead to theft:

1. Platform operator will control the virtual property rights.
2. Decentralised autonomous organisations (DAOs), though useful, create more complexity.
3. Smart contracts are secure but also inflexible.
4. Exposure to various phishing scams might make users vulnerable.

In addition to providing claims for non-physical losses, insurance companies can offer mitigation products and risk management and reinsurance policies to protect such assets against malicious entities.

d) Insurance (service) providers connections with customers:

Customers in the metaverse can give inputs, ask questions and buy policies. Insurance companies can use the metaverse for marketing and raising brand awareness. Moreover, insurers can improve their presence and provide collaboration opportunities by opening virtual offices, thereby reducing the need for physical infrastructure.

Insurers can also boost customer acquisition by providing virtual reality experiences to customers and build new business models and strategies to experiment within the metaverse.

In the absence of physical constraints, insurance companies can adopt innovative ways for ad placements, making marketing and sales activities easier. Premiums can be paid using NFT-based insurance policies.

Challenges faced by insurance companies in the metaverse

Figure 3: Risks posed by the metaverse

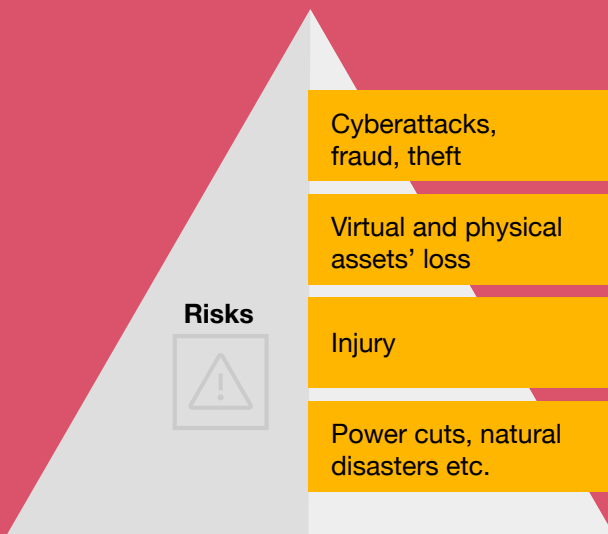
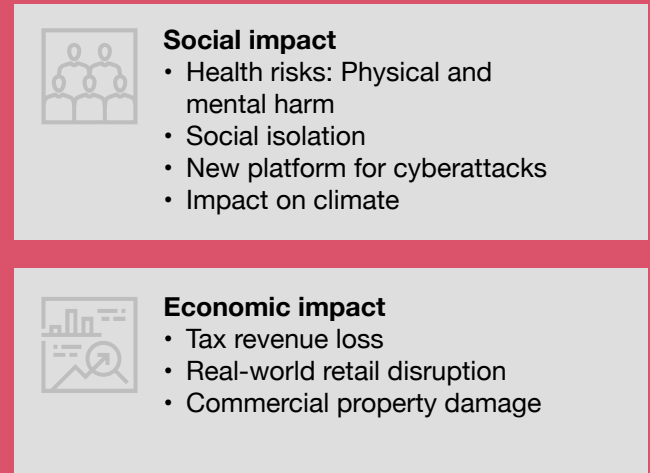


Figure 4: Social and economic impacts of the metaverse



- The technology required is bulky and not suitable for mobile access to provide immersive experiences.
- The huge network latency presents challenges in accessing the metaverse.
- The metaverse lacks connectivity across various domains.
- There is a risk of losing personal information, digital resources and data of insurance companies due to hacking by malicious third parties and other unexpected events.
- Insurance coverage for virtual properties is a major challenge for insurance companies as available data is insufficient for the valuation of virtual properties and assets, mitigation of losses and calculation of claims.
- Malicious use of avatars may increase the risk of damage to customers' reputations.
- Due to its immersive nature, the metaverse can become very addictive for users and excessive usage may have adverse effects on their wellbeing.
- Due to the insufficient legal framework on NFTs, there is a high possibility of copyright infringement.
- Standardising and maintaining the data quality of multiple companies and organisations is very difficult.

Recommendations for insurance in the metaverse

- Invest more on expertise – train employees to use the metaverse properly.
- Include new products and services such as
 - personal data protection
 - digital assets insurance
- Encourage collaborative awareness between insurance companies in the metaverse.
- Ensure consideration of legal jurisdiction risks, government policies and theft regulations while designing insurance policies.

Conclusion

The metaverse marks a leap forward in the evolution of the internet and it is here to stay. Similar to other industries, the insurance industry has also begun to adopt new technologies and is slowly venturing into the metaverse in order to boost customer retention and acquisition and address evolving customer needs. Organisations all over the world have started exploring various options to see how they can leverage the metaverse and expand their presence in the virtual world.

Considering the various industries that are quickly adapting to virtual reality, it is obvious that insurance will play an important role in the overall functioning of the metaverse. It will also provide a new avenue for insurers to explore and allow them to reach their customers in innovative ways. However, due to underlying risks present in the metaverse, it will be imperative for the insurers to assess these risks comprehensively and devise policies accordingly.



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Data Classification: DC0 (Public)

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HS/May 2023/28155