MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
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Faculty of Management and Business
Department of International Economic Relations, Business & Management

Bachelor's Qualification Work

The Metaverse and its influence on international business

(based on Paramount)

Bachelor's student of the 4th year study
Field of Study 29 – International Relations
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Abstract

This thesis examines the transformative impact of the Metaverse on international business, with a specific focus on Paramount Pictures. The Metaverse, an emerging virtual reality space, is about to revolutionize the way businesses operate globally. Through an analysis of Paramount Pictures and other companies, this work explores how the Metaverse facilitates new forms of content creation, consumption, and distribution, thus impacting traditional business models and international market dynamics.

Paramount Pictures' engagement in the Metaverse, including their virtual initiatives and strategic partnerships, illustrates a significant shift towards digital interaction that transcends geographical boundaries. This study highlights the company's adaptation to Metaverse technologies, such as virtual reality (VR) and augmented reality (AR), which enable immersive experiences that are redefining consumer engagement and content monetization.

The research methodology includes a combination of theoretical frameworks and practical case studies, analyzing the economic activities of Paramount Pictures and their integration into the Metaverse. The findings suggest that while the Metaverse presents numerous opportunities for growth and innovation in the entertainment industry, it also poses challenges, including technological adoption and the management of digital rights.

In conclusion, the Metaverse is set to significantly influence the landscape of international business, with implications for global communication, marketing strategies, and cultural exchange. Paramount Pictures serves as a prime example of how traditional businesses can evolve within this new digital era, leveraging the Metaverse to enhance their international presence and competitiveness.

Keywords: Metaverse, International Business, Digital Transformation, Paramount Pictures, Virtual Reality, Augmented Reality.

Анотація

Ця робота досліджує трансформаційний вплив метавсесвіту на міжнародний бізнес, зосереджуючись конкретно на Paramount Pictures. Метавсесвіт, новий простір віртуальної реальності, готується кардинально змінити способи ведення бізнесу на глобальному рівні. За допомогою детального аналізу Paramount Pictures, ця робота вивчає, як метавсесвіт сприяє новим формам створення, споживання та розповсюдження контенту, таким чином впливаючи на традиційні бізнес-моделі та динаміку міжнародних ринків.

Залучення Paramount Pictures до метавсесвіту, включаючи їхні віртуальні ініціативи та стратегічні партнерства, ілюструє значний перехід до цифрової взаємодії, яка переступає географічні межі. Це дослідження підкреслює адаптацію компанії до технологій метавсесвіту, таких як віртуальна (VR) та доповнена реальність (AR), які забезпечують досвід, що змінює залучення споживачів і монетизацію контенту.

Методологія дослідження включає теорію та практичні кейси, аналізуючи економічну діяльність Paramount Pictures та їхню інтеграцію в метавсесвіт. Метавсесвіт пропонує численні можливості для зростання та інновацій у розважальній індустрії, але він також ставить перед собою виклики, включаючи адаптацію технологій та правові питання.

На завершення, метавсесвіт має значний вплив на сферу міжнародного бізнесу, глобальні комунікації, маркетингові стратегії та культурний обмін. Paramount Pictures служить прикладом того, як традиційні бізнеси можуть

еволюціонувати в нову цифрову еру, використовуючи метавсесвіт для посилення їх міжнародної присутності та конкурентоспроможності.

Ключові слова: Метавсесвіт, Міжнародний бізнес, Цифрова трансформація, Paramount Pictures

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"____" _____20_____

TASK
FOR BACHELOR'S QUALIFICATION WORK OF STUDENT

Artur Bonazzi
(Name, Surname)

1. Topic of the bachelor's qualification work
The Metaverse and its influence on international business (based on Paramount)
Supervisor of the bachelor's qualification work **Gordiienko Tetiana, PhD in Economics**,
(surname, name, degree, academic rank)
Which approved by Order of University from ***"25" September 2023*** № 25-09/2023-5к
2. Deadline for bachelor's qualification work submission ***"25" April 2024.***
3. Data-out to the bachelor's qualification work The bachelor's qualification work explores the influence of the Metaverse on international business, centering on Paramount, with the aim of examining how its emergence and development affect global economic landscapes, regulatory frameworks, technological advancements, partnership formations, and risk management strategies in international business contexts.

4. Contents of the explanatory note (list of issues to be developed) Explore the Essence and Landscape of the Metaverse. Investigate the Methods of Metaverse Research. Analyze the Internationalization of the Entertainment Industry through the Metaverse. Assess the General Characteristics and Economic Activity of Paramount Pictures. Examine the Types and Forms of Collaborations and Partnerships pursued by Paramount Pictures in the Metaverse. Evaluate the Costs and Benefits of Implementing Metaverse-Based Strategies by Paramount Pictures. Propose Strategies for Improving Paramount's International Business through the Metaverse. Identify Transformations and New Markets Created by Metaverses for Paramount Pictures. Assess the Risks Associated with Metaverses for Paramount Pictures and Develop Methods for Mitigation.

5. List of graphic material (with exact indication of any mandatory drawings)
Metaverse Competitive Landscape, Metaverse Competitive Landscape, Metaverse Competitive Landscape, Scientific papers that research Metaverse by business function area, Metaverse studies based on business function areas, Globalization in the Metaverse, Revenue, operating income and EPS of Paramount, Revenue in advertising and subscription of Paramount, Paramount global and subsidiaries consolidated statements of operations, Paramount Stock Performance in the last 10 years, Paramount dividend information, Metaverse departments in major studios, Asia Pacific Metaverse Market, Global Metaverse Market, Metaverse market segmentation by region,

6. Date of issue of the assignment

Time Schedule

№	The title of the parts of the qualification paper (work)	Deadlines	Notes
1.	I part of bachelor thesis	*10.12.2023*	In time
2.	II part of bachelor thesis	*27.02.2024*	In time
3.	Introduction, conclusions, summary	*25.04.2024*	In time
4.	Pre-defense of the thesis	*30.04.2024*	In time

Student_____
(signature)

Supervisor_____
(signature)

Conclusions (*general description of the work; participation in scientific conferences/ prepared scientific article; what grade does the student deserve*):
The bachelor's qualification work offers a thorough analysis of the Metaverse and its influence on international business, particularly focusing on Paramount as a case study. It encompasses all essential components of scientific research, providing both empirical and theoretical insights into the topic. The paper adeptly explores the emergence and development of the Metaverse, highlighting its impact on global economic landscapes, regulatory frameworks, technological advancements, partnership formations, and risk management strategies in international business contexts. The practical recommendations presented are well-formulated and aligned with the main aim and tasks of the work. Overall, pending successful defense, the work appears well-positioned to earn an "excellent" grade.

Supervisor_____
(signature)

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INTRODUCTION

My scientific work delves into the Metaverse, its origin, cultural, socio-economical and psychological impact, opportunities and threats. The importance of the subject is hidden in the economical and social potential that this technology carries. Metaverse is not simply an abstract place that exists in the virtual realm, it is a whole new way of consuming and creating digital content. It is a new platform for businesses and people to interact with each other and tools used in this new system are not completely different from what we use nowadays, but they signify the next step in the technological game, a new way of living that we are moving to. My goal is to understand the potential that these tools carry, to get behind the scenes and explore ways in which these tools can be used by businesses and consumers, research the impact and ways of mitigation of its risks, and understand how new technology will shape the world.

My research is based on Paramount Pictures film production company to provide details on how Metaverse-related technologies shape the company. Paramount Pictures is a global media production company which is the reason why I chose it as a showcasing example in my work. As Metaverse is mostly all about virtual content and way of its consumption and creation, Paramount Pictures is an ideal research candidate since it is an international media company that is constantly investing a great amount of its resources in emerging markets and there is a lot of creative ways in which technology can be used in the film industry on different stages of production, including pre-production, production and distribution. Moreover, I will assess the economic activity of the enterprise to understand the challenges and opportunities of modern film production companies. Eventually, I will integrate my research with the economic assessment to outline possibilities for film productions in the Metaverse.

Since the concept of the Metaverse is hazy and recent, there is not a lot of research, articles and publications out there on the Internet that cover the topic completely. Many of them do not provide distinct information based on solid facts and

mainly contain speculative information, highly influenced by the public. The reason behind it is that Metaverse, really, is not here yet and we still largely use methods of Web 2.0 Internet. We are slowly moving to new ways of consuming and creating content covered in the Web 3.0 concept, but we are not there yet. Modern society is amidst change, a new door is open, but the one we are coming from is not yet shut. Therefore, my research method would be largely hypothesized and theoretical as new technology appears on the market at a pace that's never seen before, at least in our lifetime. However, as much as possible, I will rely on reliable sources of information and make conclusions based on multiple arguments and real data.

In the first chapter I will cover a brief history of the term Metaverse, explain its essence and provide examples of different projects that have an element of Metaverse in them. Additionally, I will present products available on the market that have an element of augmented or virtual reality as I will break-down the possibilities they unfold for consumers and creators as well as I will introduce different companies that show interest and advancement in the emerging industry. Later on I would discuss the research methods in depth as I would cover the perspective of the participant and collective mind in this phenomena as well as the psychological and business-related research approaches. Finally, I would conclude the first chapter with globalization strategies for the Metaverse, hypothetical and existing tools that are available to target and reach potential customers. Based on previously-made research, I would analyze what lifestyle consumers would have to find possible entry points for businesses.

I will open the second chapter with a financial analysis of Paramount Pictures where I will assess its performance and areas of challenges and opportunities in a modern film industry. Progressively, I would research its initiatives and collaborations in the Metaverse-related projects, outline breakthroughs and achievements. As a conclusion for the second chapter, I would speculate on estimated costs of those collaborations and initiatives since the actual data is not disclosed to the public.

In the third chapter I would research numerous possibilities that Metaverse offers for the entertainment industry, including the rise of virtual production. I would assess risks associated with the Metaverse for media production companies and give

information on the expansion in the metaverse, supported by data of the current market status of the Metaverse

Finally, I will conclude my work with a glimpse of what awaits us in the future. As well as I would summarize key points of my research.

CHAPTER 1: THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF THE METAVERSE AND ITS INFLUENCE ON INTERNATIONAL BUSINESS

1.1. The Essence and Landscape of the Metaverse

The metaverse is a yet hypothetical, virtual, interconnected, and immersive digital universe where people can interact, socialize, work, and play through digital avatars or representations of themselves (Zuckerberg, 2021). It's a concept that combines elements of virtual reality, augmented reality, and online multiplayer games, creating a shared, persistent, and evolving virtual space where people can communicate, create and trade digital assets. The term "metaverse" is derived from "meta-" (meaning beyond or transcending) and "universe".

Blockchain plays a crucial role in facilitating transactions within the Metaverse. Essentially, a blockchain is a network of interconnected computers that share a common database, and once a record is in the blockchain, it becomes highly resistant to alteration. The network consistently verifies that all copies of the database are identical, ensuring its integrity.

Within the Metaverse, users can engage in activities like buying, selling, or upgrading virtual assets, including properties, weapons, and character skins within this virtual space. An interesting fact is that, as per a report by the BBC, individuals and businesses have already invested $2 billion in Metaverse real estate! (Influencer Marketing Hub, 2023).

One essential component of the Metaverse is non-fungible tokens (NFTs), which have played a significant role in driving its growth. NFTs represent unique digital assets, which can take the form of images, videos, or in-game items. The ownership and history of NFTs are recorded on the blockchain, allowing for the trading of these digital assets. Some NFT collectors view these items as cultural collectibles, while others regard them as investments (Influencer Marketing Hub, 2023).

This emerging type of internet application is progressively altering the way

individuals lead their lives and conduct their professional activities. It is broadening the possibilities within the digital economy and exerting a deep impact on the physical world. The Metaverse's development primarily stems from the rapid advancement and widespread utilization of emerging technologies such as virtual reality (VR), augmented reality (AR), artificial intelligence (AI), and blockchain. These technologies have offered essential technical support and opportunities for creating the Metaverse, facilitating its implementation across diverse contexts and industries (MDPI, 2023). This kind of technological variety has a potential of bringing Metaverses to the next stage of the Internet with new features and experiences (Dr. Laeeq, K, n.d.).

The origin of this concept dates back to 1838 when scientist Sir Charles Wheatstone introduced the idea of "binocular vision." This technology involves merging two distinct images, one for each eye, to craft a unified 3D image. This pioneering concept paved the way for the creation of stereoscopes, a technology reliant on the illusion of depth to generate images. Remarkably, this same principle remains a fundamental component in contemporary VR headsets.Fast forward to 1935, when American science fiction writer Stanley Weinbaum authored the book "Pygmalion’s Spectacles." In this narrative, the protagonist embarks on adventures in a fictional world utilizing a pair of goggles that not only offer vision but also incorporate elements of sound, taste, smell, and touch. Morton Heilig is credited with inventing the VR device, known as the Sensorama Machine, in 1956. This machine replicated the sensation of riding a motorcycle in Brooklyn by amalgamating 3D video, auditory elements, scents, and a vibrating chair to fully immerse the observer. Heilig also secured the first patent for a head-mounted display in 1960, fusing stereoscopic 3D visuals with stereo sound. During the 1970s, MIT introduced the Aspen Movie Map, enabling users to embark on a computer-generated tour of Aspen, Colorado. This marked the initial instance of using VR to transport individuals to distant locations. In the early 1990s, Sega introduced VR arcade machines like the SEGA VR-1 motion simulator, which became popular fixtures in arcades. The term "metaverse" was initially mentioned in Neil Stevenson's novel "Snow Crash" in 1992. Stevenson's

metaverse was a virtual realm where characters sought refuge from a bleak totalitarian reality. In 1998, Sportsvision pioneered the broadcasting of live NFL games with a yellow yard marker, and this concept of overlaying graphics onto real-world views rapidly spread to other sports broadcasts. The concept of the Metaverse can be traced back to science fiction, most notably, the film "The Matrix" (1999). This work introduced the idea of an immersive and persistent virtual reality that kept people from the real world taken over by robots. Subsequently, in 2010, Palmer Luckey, an 18-year-old entrepreneur and inventor, crafted the prototype for the Oculus Rift VR headset. This groundbreaking device, with its 90-degree field of vision and utilization of computer processing power, brought interest in VR. Ernest Cline published "Ready Player One" in 2011, offering readers a glimpse into a wholly immersive world that served as an escape from reality. The book gained immense popularity and was adapted into a film by director Steven Spielberg in 2018. In 2014, Facebook acquired Oculus VR in a $2 billion agreement. Mark Zuckerberg, the founder of Facebook, announced that Facebook and Oculus would collaborate to expand the Oculus platform and cultivate partnerships to expand the collection of available games. The year 2014 also witnessed significant developments in the XR (extended reality) domain, with both Sony and Samsung revealing plans to create their VR headsets, while Google unveiled its inaugural Cardboard device and Google Glass AR glasses. Google's Cardboard device served as an affordable cardboard VR viewer for smartphones. Microsoft's HoloLens headsets made their debut in 2016, marking the advent of mixed reality, which encompasses both augmented reality (AR) and VR. HoloLens allowed users to produce holographic images, integrate them into the real world, and manipulate them via augmented reality. In the same year, the worldwide phenomenon of Pokémon GO emerged, with individuals across the globe roaming their neighborhoods in pursuit of virtual Pokémon using augmented reality. In 2017, IKEA, the Swedish furniture giant, ventured into the metaverse arena with their innovative Place app. This application enabled users to select furniture pieces and visualize how they would appear in their homes or offices. In 2020, Apple incorporated Lidar (Light Detection and Ranging) technology into iPhones and iPads, enhancing depth scanning for improved

photography and augmented reality. This development also laid the groundwork for forthcoming mixed-reality headsets (Marr, 2022).

In recent years, the technology industry has made significant steps in bringing the Metaverse to life. Companies like Meta, Epic Games, and Microsoft are heavily investing in virtual and augmented reality technologies. Meta's Oculus VR devices and the development of a robust virtual social platform is a prime example of this dedication. “The gaming metaverse industry is expected to grow at a CAGR of 38.2%, from $36.81 billion in 2022 to $710.21 billion by 2027. Meta Reality Labs has already invested $10 billion in the metaverse. Goldman Sachs, a renowned global investment bank, has forecasted the metaverse as a potential $8 trillion opportunity. Many other experts have made similar predictions, stating that the metaverse holds immense market potential in the multi trillion-dollar range. The metaverse may be worth $1.528 billion by 2029 due to a surge in interest during the pandemic. That's way up from $47 billion in 2020. The global AR, VR, and MR market will roughly reach $250 billion by 2028. Several prominent tech companies like Microsoft, Autodesk, Nike, Block, and Shopify see the metaverse as an unprecedented opportunity to expand their reach. Metaverse AR & VR hardware is estimated to earn US$1.17 billion in 2023. From 2023 to 2030, the market is projected to grow by 15.36% yearly to $3.19 billion. By 2024, there will be over 34 million VR headsets installations worldwide. The metaverse global market value will reach $82 billion by 2023 and then experience an exponential increase to $936.6 billion by 2030.” (Influencer Marketing Hub, 2023).

Table 1.1

Metaverse Competitive Landscape

Online game makers	**Design Software Vendors**	**Social Networking**	**Gaming, VR & AR hardware**	**Live entertainment**
Roblox	Unity	Facebook	Facebook	Live Nation
Epic Games	Epic Games	Tencent	Lenovo	Theme Parks
Microsoft	Adobe		HP	Sports Teams
Activision Blizzard	Autodesk		Logitech	
Take-Two	Ansys		Acer	
Tencent			Valve	
NetEase			Razer	
Nexon				
Valve				

Source: (Influencer Marketing Hub, 2023)

Facebook, the largest social media platform, announced its transition into Meta on October 28, 2021 (Meta, 2021). Ever since the term Metaverse gained its popularity. However, there is no specific definition of what exactly Metaverses are and it is still considered to be an emerging technology (Ravenscraft, 2023). Some claim that Metaverses is a technology that has an element of augmented reality, some say it's a 3D Internet which combines our physical reality with augmented and virtual worlds (Mileva, 2023). MetaMandrill defines the metaverse as a fusion between the physical and digital realms, achieved through the application of diverse technologies and software. This definition underscores that the metaverse is a dynamic universe that

coexists alongside the physical world, continuously active as a persistent system. It consists of a collection of virtual worlds, each possessing its distinct characteristics, ecosystems, and social environments. The metaverse can take the form of an immersive virtual reality experience, where you step into a digital universe, or it can manifest as a mixed reality, where digital entities are integrated into the physical world through augmented reality. Various tools, including VR headsets, hololens, game consoles, and apps, serve as gateways to the metaverse. This space is ever-expanding due to its inherently limitless nature. Ultimately, MetaMandrill's interpretation of the metaverse indicates the importance of interactivity. All of the aforementioned elements are open to exploration and manipulation by individuals within the metaverse. Users can engage in unique interactions, discover distinct digital items, and make their mark on the virtual worlds they explore (Metamandrill, n.d.).

XRToday adopts a dual perspective on the metaverse. On one hand, they place significant importance on the foundational elements of the metaverse, which encompass virtual reality (VR), augmented reality (AR), and blockchain technologies, including the implementation of non-fungible tokens (NFTs). XRToday portrays these elements as the fundamental building blocks that, when combined, give rise to something far more extensive and profound than the individual components. This concept is akin to the idea that Earth is composed of distinct components, yet the experience of living on Earth transcends any single element when considered as a whole. They also underscore the pivotal role of humanity in shaping the metaverse. In describing the metaverse, XRToday characterizes it as follows: "Think of it as social media in its current form but in a more integrated and immersive fashion." (XRToday, 2023) It represents a novel world where content creators and designers can operate within an innovative economy powered by metaverse crypto, all the while propelling technology to new heights. ChaptGPT and similar AI services are making a significant impact on the tech industry, including Metaverse. Major technology companies are incorporating this technology to provide effective solutions for businesses. Within the Metaverse, conversational AI is already finding its place in the technology stacks. Companies are offering prompt AI services to help create content for immersive

platforms. For example, NVIDIA provides AI content creation tools through its Omniverse suite. Furthermore, companies like VirtualSpeech are integrating Chat GPT to power immersive training platforms for enterprises. Enhancing the connection between the physical and digital realms demands a high level of computational sophistication. AI is crucial for numerous Metaverse experiences. It aids in natural language processing to ensure that our machines and robots can understand us. AI also supports computer vision and Simultaneous Location and Mapping (SLAM) technologies, which help machines comprehend our physical surroundings. Additionally, AI plays a pivotal role in avatar animation. Emerging tracking technologies allow headsets to translate user facial and body movements into avatar animations, even though hand, eye, and face tracking may not be flawless. Developers often utilize AI to fill in the gaps in animation where tracking technology falls short in capturing user movements.

Mark Zuckerberg, the founder of Facebook and Meta, asserts that the Metaverse is poised for substantial growth as he envisions it as the future of the internet for the next generation. He believes it will play a significant role in the digital economy. In the near future, he anticipates a shift in perception where people will increasingly regard Facebook as a metaverse-oriented company rather than merely a social media one. Additionally, Zuckerberg has acknowledged that the development of the metaverse will be a collaborative effort, emphasizing that no single company can build it in isolation (Associated Press, 2021).

Some suggested examples of the metaverse are the video games such as “Second Life” (secondlife.com), “Fortnite” (www.fortnite.com) and “Roblox” (www.roblox.com). In “Second Life” people socially interact in the game through their digital avatar as the game lacks its traditional game objectives. Therefore, its primary focus is people’s communication. In platforms such as Roblox and Epic Games’ Fortnite, users typically play games but can also attend concerts and socialize through their avatars while Roblox provides an opportunity to create their own digital worlds to play and interact in. (Britannica, The Editors of Encyclopaedia, 2022). "Second Life” game became a platform where people can shop, work, play, learn and socialize

digitally. This game has its own economy and customizable world where people can communicate and trade freely with 1 million active users in 2007. The company says its volume of internal trade hit 650 million US dollars. Even though “Second Life” is outdated, overcomplicated and does not support VR, it is suggested to be the most accurate example of Zuckerberg’s Metaverse concept (The Wall Street Journal, 2022).

Second Life's history offers valuable lessons, not only for Mr. Zuckerberg but for others in the tech industry as well. During its peak, the platform garnered negative attention due to high-profile virtual riots, Ponzi schemes involving in-game currency, and issues related to child grooming. “Even in my brief exploration this week, I noticed some of the moderation challenges that Second Life grapples with. These challenges could become more pronounced if a metaverse were to become mainstream” (BBC, 2021).

Most successful virtual event to the present day was held in the video game “Fortnite”. Virtual concert was performed by rapper Travis Scott (Scott. T, 2020). “It is genuinely hard to describe what I just witnessed in Fortnite, but I’m going to try. It was an in-game concert that was meant to evolve on Marshmello show (Marshmello, 2019), and this time, it was rapper Travis Scott doing a performance titled “Astronomical.” To say it was larger in scale than last year’s concert can be taken quite literally. At the Marshmello show, everyone flocked to a stage where the DJ, in avatar form, spun beats, and there were cool things that happened like beat drops throwing everyone up in the air or disabling gravity altogether. Things only possible in a video game concert. The Travis Scott show? It took things to an entirely new level, and shows just how many light years ahead of every other game Epic is with live events like this (Forbes, 2020). “Travis Scott’s first virtual performance wasn’t just spectacular — it also broke a record. This evening developer Epic Games revealed that the concert, which took place inside of Fortnite, saw 12.3 million concurrent players participate. The developer says this is “an all-time record” for the battle royale game. The previous record holder was last year’s Marshmello concert, which topped 10.7 million virtual attendees" (The Verge, 2020).

Meta, as a standalone socializing platform, has unveiled "Meta Horizon

Worlds," an online video game (horizon.meta.com/). In a YouTube video by Jon Bradley (Bradley, 2022), players are shown seamlessly interacting within user-designed virtual realms, where their digital avatars convey their real-life emotions, thanks to the Meta Quest 2 device's sophisticated tracking capabilities. While it's true that the game currently lacks certain features and falls short of full realism, it undeniably delivers a profound user experience. This experience is poised to evolve into a deeper and more immersive virtual environment in the future. Even in its current stage of development, it serves as a pivotal intermediary in the realm of VR communication, exhibiting qualities that give the impression of a polished and finished product.

Not every virtual project can claim the same level of success. Take, for example, Decentraland (decentraland.org/), which positions itself as the ultimate platform for individuals to trade, explore, and create within a blockchain-powered virtual world where virtual land can be bought and rented (Decentraland, 2017). Regrettably, the entire project appears to be in a nascent stage of development and lacks practical utility. Meanwhile, it's striking that many virtual land slots carry price tags in the thousands of dollars range (Folding Ideas, 2023). This disparity raises concerns about potential exploitation of emerging technology by unscrupulous individuals seeking to profit at the expense of inexperienced investors with limited understanding of the underlying technology.

Nevertheless, in a remarkable technological showcase featured during Mark Zuckerberg's interview with Lex Fridman on the Lex Fridman Podcast in September 2023 (Lex Fridman Podcast, 2023), some truly groundbreaking innovations were unveiled. Mark Zuckerberg demonstrated an extraordinary conversation between two individuals, facilitated by his cutting-edge Meta Quest 2 Virtual Reality device, which can be explored further at (www.meta.com/ca/quest/). What's truly mind-boggling is that digital photocopies of Lex and Mark were employed to create lifelike avatars, and the entire interview occurred within the confines of a dimly lit room, even though the participants were physically situated in different states. The level of immersion was such that it gave the participants the uncanny sensation of engaging in an in-person

dialogue, transcending the boundaries of physical separation.

The standout feature of Meta's VR technology lies in its ability to discern and mirror human emotions with astonishing precision. The interview showcased their virtual conversation, bringing to life the smallest nuances of human expression, from the subtlest eye wrinkles to the intricacies of mouth and ear movements. This level of detail in emotion replication pushes the boundaries of what's achievable in the realm of virtual reality.

The interview itself was a deep dive into the fascinating world of Metaverses, exploring themes like the integration of artificial intelligence within these digital realms, ethical concerns, safety considerations, and privacy issues within the Metaverse. Zuckerberg also provided a glimpse into the forthcoming Meta Quest 3 VR headset that has been released recently on October 10, 2023 for the public, which promises to grant users the remarkable ability to seamlessly blend the virtual and real worlds. It's a product that holds tremendous promise for the future of immersive technology. In his interview with Lex, Zuckerberg claimed that Meta Quest 3 could be the first VR mainstream device that will bring the development community to life and we will see more of people’s interactions in the Metaverse.

Notably, Meta Quest recently published a captivating video on YouTube. In this video, two individuals wearing the Meta Quest 3 VR device while playing the piano, where they were able to witness digital holograms of musical keynotes materializing as they played, creating a harmonious melody. This innovation demonstrated the incredible potential of Meta's VR technology to transform the way we engage with and perceive the world around us (Meta Quest, 2023).

In summary, this interview and Meta's technological breakthroughs are nothing short of astounding, offering us a glimpse into a future where the boundaries between the virtual and the real are blurred, and where emotions and experiences can be replicated with great detail.

Though the dawn of the new internet era closely tied to the Metaverse brings forth a profound wave of philosophical, ethical, and safety considerations. The act of engaging with digital replicas of individuals has sparked a debate in this emerging

landscape. On one hand, there exists skepticism that conversing with a digital copy may be devoid of authenticity, perceived as "not real" or even "fake." This viewpoint stems from a traditional perspective that tends to devalue digital interactions, often viewing them as lacking the depth and genuineness that characterizes face-to-face exchanges.

However, as technology advances, the boundaries between the digital and the physical worlds are becoming increasingly blurred. In this convergence, we find a conflict of two distinct worldviews. On one side, there are those who remain skeptical about the authenticity of digital interactions, often dismissing them as non-human and inauthentic. On the other side, a growing segment of society perceives the Metaverse as a powerful tool for enhancing human interaction and experiences. This perspective recognizes that these interactions are not only physically visible but also emotionally tangible. In the Metaverse, users can experience the various emotions and connections that mimic real-life interactions, forging a sense of authenticity that challenges the traditional notions of "fake."

In essence, this marks a pivotal moment in our collective understanding of human connection. It's a juncture where the virtual and physical worlds coexist, and where the lines between authenticity and artificiality become increasingly hazy. The Metaverse presents an opportunity to expand and enhance human interaction, opening up possibilities that were once the stuff of science fiction. As we navigate this transformative era, the philosophical, ethical, and safety questions that arise will serve as guideposts in shaping the future of the Metaverse, as we begin to understand the very essence of what it means to connect in a digital age.

However, the Metaverse that Zuckerberg talks about is still yet to come. The Metaverse of today is simply a developing concept. But if the Metaverse would exist today in its fullest form, what would it take to start an enterprise in it? Creating a business in the metaverse requires a unique set of skills, including a deep understanding of 3D design, virtual world development, and community management. It's also important to be flexible and adapt to the changing nature of the metaverse landscape. As this space continues to evolve, there will be new opportunities and

challenges, so staying adaptable and innovative is key to success.

Finally, is the Metaverse a good thing? The Metaverse represents a space where users can efficiently learn, create, play, communicate, and collaborate with anyone, transcending geographical boundaries and opening up new opportunities. It fosters human connections, transcending language and location barriers, while also creating potential for business environments where we can establish new economies based on shared value distribution. Moreover, Metaverse companies claim that this transition signifies the dawn of a new era where individuals can craft experiences within an increasingly accessible landscape. Nevertheless, there are potential concerns associated with the Metaverse, such as the potential for crime in a decentralized world. It is depending upon us as a species and as a global community to harness the potential of the Metaverse for positive ends. By concentrating on a Metaverse that is inclusive and accessible to all, it can be a force for good. This new technological innovation is but another tool for a brighter future, and how we use it ultimately rests in our hands (XR Today, 2023). It is obvious that the Metaverse technology is at the prime stage of its growth and globalization. However, the potential it holds is yet to be discovered as it shapes the way we communicate with each other. Meanwhile, companies all around the world continuously invest in this emerging technology and in new markets it unfolds.

1.2. Methods of Metaverse Research

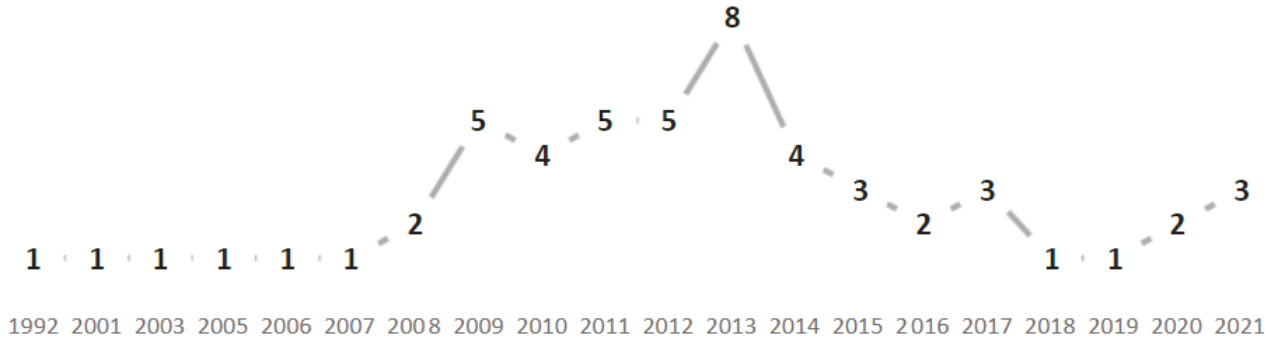
Being a new phenomena, Metaverses require a new approach for their study. As metaverse encompasses a variety of edge-cutting technology, it requires understanding of each technology that contributes to this emerging market. As previously mentioned, metaverse is a joint of VR and AR technologies, blockchain, cryptocurrencies, AI, Internet and software as we know it. Moreover, if we are talking that Metaverses are poised to be an enhancement of real life communication and community, research is not limited to the technological aspect of the phenomena. If we look at Metaverse as if we look at the society that functions in a virtual world, we would need a more

profound research that would encompass applicable aspects of human life. We might look at the Metaverse as if it is a business, society, technology, tool to enhance our daily life or a simple concept. Essentially, it is what we make out of it.

It is important to understand that research methods for the Metaverse are highly hypothetical and speculative due to the nature of the Metaverse as of now. The amount of data is limited to the small niche market there is right now. There is a limited number of devices available on the market, including Meta's recent Meta Quest 3 and Apple's new Vision Pro that became available for sale in early February 2024 (www.apple.com/apple-vision-pro/). As of now these devices mainly have software for entertainment purposes, however we can see that the purpose of those devices is slowly shifting towards work, education and communication activities, especially with the new Apple's Vision Pro. New technological advancements allow us to have more data to work with in the Metaverse and assess socio-economic performance and impact on the society as those devices and products become more popular and accessible on the market. Though the research is limited to the extent of development of technology and its market as of today.

Fig. 1.1

Number of research paper in Metaverse



Source: ResearchGate (2023)

Fig 1.2

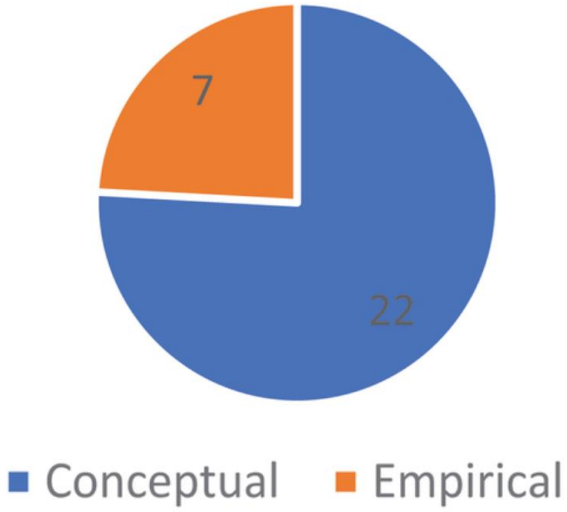
Metaverse trends from past 5 years

Source: Google Trends

The amount of research made on the Metaverse-related technology and its popularity was not significant until the moment when Facebook changed its name to Meta in 2021 and there was an increase of research papers published during 2009 - 2014 that is related to increased popularity of Oculus Rift VR headset and mainstream game of that time “Second Life”. Recent boom signified a new era of the Metaverse that gives us more data for the research.

Fig 1.3

Metaverse research documents by type



Source: Taylor & Francis Online

The research of the Metaverse is lacking actual empirical basis. It is due to the limited amount of technology and actual data available. Therefore, research of the Metaverse will remain highly conceptual and theory-based, so let’s break it down into different categories.

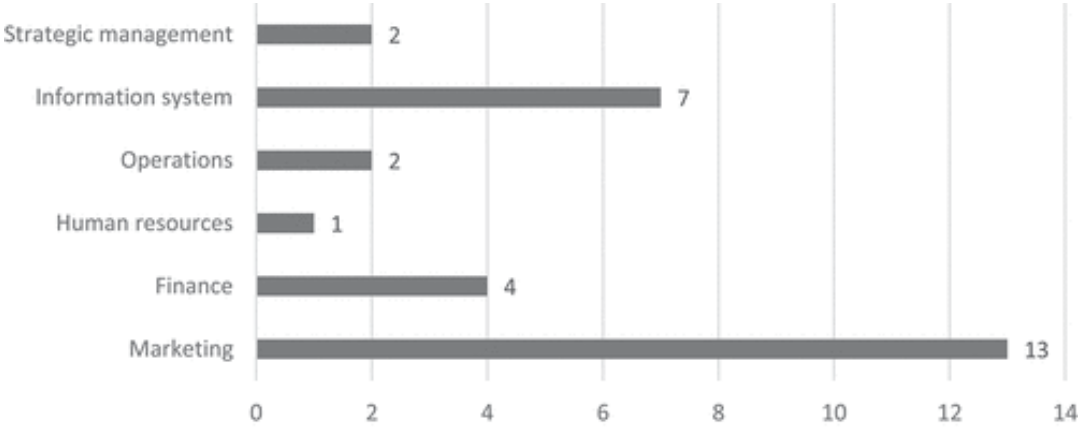
If we are to look at the Metaverse as a concept, the summary of articles and literature that has been provided in the first subchapter is probably good enough.

However, if we consider the Metaverse as a functioning society where people live and communicate with each other in virtual space, we need to change the very way we look at it. We need to see that each society consists of individuals or people where each one of us is a creator of our own experience. Whether we realize it or not, we seamlessly transcend our simple human behavior into whatever kind of technology there is available. It doesn't matter whether it is a Metaverse or something else, it is simply our making regardless of the tool that we use. Therefore, basic socio-psychological and law studies that are widely used in daily life can be applied to study human behavior and address legal issues in the Metaverse. Everything that is "human" appears to be a part of the Metaverse by its very nature, since in the Metaverse we, as humans, are both the creators and observers of the creation.

From another hand, if we are to look at the Metaverse, as a business vehicle, our perspective would shift towards economy and business analysis, cryptocurrencies and digital assets. Essentially, the intended nature of the business is providing services or products and making sufficient income for its owner. In case if we consider the Metaverse as the business driver, we would research business models that it provides, variety of digital assets that can be sold and created in the Metaverse, communication channels with potential and existing customers, demand and supply, other factors that influence the life of business etc. Metaverse has a potential to attract new customers from the digital to physical world by creating virtual exhibitions, experiences and vice versa. Therefore, interconnectivity between the physical and virtual realms are a subject for research in the business world of Metaverse as well as other business sciences that are also applicable in the Metaverse.

Fig 1.4

Documents by business function area



Source: Taylor & Francis Online

As described in the figure above, the most scientific papers that research Metaverse are written in marketing, information systems and finance. The nature of Metaverse is based on virtual content and information, virtual currencies. It is not surprising that Metaverse is mainly described as a tool for marketing, information systems and finance in business. Once virtual content and currencies become embedded in our lifestyle, we would see a lot of businesses applying virtual content to market their product and we would buy and sell assets using digital currencies.

Fig 1.5

Metaverse studies based on business function areas

Information System	● Immersive Virtual Reality ● Benefits and drawbacks of metaverse ● Educational Metaverse
Human Resource	● Metaverse for Balancing the needs of private and public spaces
Operations	● Doing projects in virtual world ● Metaverse for transportation systems
Strategic Management	● Issues and consequences of metaverse ● Incremental transformation strategy
Finance	● Micropayment system ● New digital ownership ● Settlement choice in metaverse

	• Warning for bubbles
Marketing	• Retail • Customer engagement • Service adoption • Digital luxury branding • User acceptance

Source: Taylor & Francis Online

For businesses, the research and development department in the Metaverse would be primarily focused on how to efficiently reach their customers with virtual content, which kind of virtual content would be most suitable and ways to deliver it. Businesses would also consider researching optimization of operations via Metaverse-enhanced technology to make business operations and workplace effective.

Everything that is applicable in the so-called “real world” is applicable in the studies of Metaverses with a few exemptions which appear to be the technological limitations and opportunities it provides. Whenever we research the activities conducted in Metaverse, we need to make the following considerations: technological limitations and opportunities that the technology provides. Examples of such could be the limitations of physical communication between individuals, made-up immersive experience and their influence on the subconscious of the human being, distorted or altered perception of reality, motoric and sensorial patterns while experiencing the Metaverse, most recent technological advancements, AI’s role in the human experience etc. While AR and VR devices are the hardware of the Metaverse, the virtual world that integrates the elements of the digital society originates as a software in its nature. Software may vary in its form and experiences that it provides, it may use cryptocurrencies and may be powered by blockchain and could potentially include other technologies. All these are the subject of the research when it comes to researching the Metaverse, depending on the particular case and sought outcomes of the research. Qualitative and quantitative as well as cause and effect methods can be utilized in determining the relationships in cyberspace.

Another method of researching the Metaverse is an empirical one. In other

words, researching by experiencing it by yourself. There are a variety of devices and software you can choose from today that might provide you a different experience. But essentially, the most immense beneficial aspect of it is that you actually understand what this specific experience means to you. Actually experiencing something may provide you a more profound and fundamental understanding of the current technological advancements of this technology as a user or creator, its practical usage and ways it may enhance the experience of your life. Since each human being is a separate individual and each one of us has our own making, it is important to understand that empirical method is a subjective method that makes it variable, depending on each particular individual. If you are using this method, one has to understand the nature of subjectivity and be able to disintegrate him or herself from opinions to come up with your own conclusions.

More advanced empirical research in the Metaverse could include creating your own business or community in the Metaverse or developing your own software, creating content in the virtual worlds. As you embark on the creator's journey, it's very likely that you will encounter other creators and the synergy of all will allow a progressively more complex and fascinating outcome. Delving into creating a finished product using a new technology might be tricky, but will eventually provide the creator with the most profound experience, knowledge and understanding.

Since my scientific research is based on Paramount Pictures, I would use the study method that implies gathering data about the company itself. Based on the collected information and my personal experience on film sets, I would use the knowledge I have about the Metaverse and related technology to conduct an analysis of a company's potential in the Metaverse.

To sum everything up, there are lots to the Metaverse and the variety of forms, possibilities and shapes it can be is astonishing. What is important to keep in mind is, researching Metaverse is a convergence of researching related immersive technologies and society as a whole since Metaverse essentially is a digital, virtual community. Therefore, considering the complexity of society and the technology that induces virtual experiences, the research can never be profound enough to encompass

everything. Each research method and the research itself has to be adapted to the expected outcome. And finally, the scientist who is conducting the research has to experience the virtual society in his or her own life to make conclusions that are relevant.

1.3 Internationalization of the Entertainment Industry through the Metaverse

As mentioned before, Metaverse is a persistent virtual reality where people communicate. It has no physical bondage as to where it can go, except for technology. All you need to connect to the Metaverse is high speed internet and VR or AR device with corresponding software on it. Therefore, once something reaches the Metaverse - it is already international. So internationalization in the Metaverse is not the question, the real question would be - how to reach masses of people in the Metaverse, that is what is of an importance.

Additionally, as I am specifically keen into the entertainment industry, my primary focus would be the research of internationalization of content in the virtual experiences. Different kinds of content that could be present in the Metaverse, delivery platforms, its monetization and marketing. “There are approximately 14,000 AR apps in the Apple app store already. So as you can see, the metaverse is hot on our heels, and it looks like it will transform the human experience in profound ways. Most of all, I think it will enable companies to connect and communicate with new but also existing customers completely differently” (Sabine Scheunert, 2022).

As the Metaverse-related technology is different from the “2D Internet”, it is important to understand what kind of content can be created in the Metaverse and how its features can be utilized for marketing of products and services in virtual worlds. The metaverse is expected to empower creators in developing more engaging and interactive content, primarily due to advancements in virtual reality (VR) and augmented reality (AR). Creators will face higher expectations, not only to produce traditional passive two-dimensional content but also to design the platforms through which users actively engage with the content. In the near future, creators such as

Youtubers, TikTokers, and podcasters may go beyond producing conventional content, extending to the creation of digital replicas of themselves, their living spaces, studios, and other objects. This shift will redefine content consumption as audiences are immersed in interactive experiences. For example, envision participating in a cooking segment where you can physically sense the food's texture, manipulate it, and receive guidance on cooking techniques from a professional chef. The essence of Marshall McLuhan's famous statement, "the medium is the message," will profoundly shape this upcoming era of content creation. The metaverse is a platform not just to facilitate the creation of interactive and immersive content but also to empower creators in developing more intelligent content, using the most recent advancements in artificial intelligence (AI). Should the metaverse fulfill its potential, creators will collaborate with AI-assisted tools that allow them to translate abstract concepts into readily consumable content. This collaboration might encompass AI-driven video editing, assistance in animation through AI, or even the use of AI for music composition. (Forbes, 2022).

Metaverse technology will shape the world and the very human experiences in many different ways. Physical boundaries will become less obvious and more thin. AR, MR and VR devices will assist creators in reaching their audience in completely revolutionary ways as AI tools will enhance the creation experience and offer new creative solutions. Although it will provide artists with new challenges, it seems like the emergence of virtual experiences is an inevitable step in the life of next generations. The future content landscape of virtual worlds within the metaverse remains uncertain, evolving alongside advancements in metaverse technology. Despite the ongoing development and varied interpretations of metaverse content, content creators and marketers need not be experts in its evolution to capitalize on this emerging medium. In approaching content creation for the metaverse, attention can be directed towards key concepts anticipated to play a significant role in our virtual future. Envision the metaverse as a network of virtual worlds interconnected on the internet, complete with functioning economies—an idea already manifesting in platforms like the Sandbox and Roblox. Within the metaverse, users will lead virtual lives mirroring aspects of

their physical realities, engaging in activities such as work, entertainment, socializing, and shopping. Profound and defining experiences, such as forming relationships and acquiring new skills, are expected to unfold in this aspect of human experience. Often referred to as "Web 3.0," the metaverse represents the next evolution of the internet, constructed by creators using technologies like virtual and augmented reality. Joe Pulizzi, the founder of The Tilt website and email newsletter, views metaverse content through a lens shaped by its diverse definitions. He suggests that if the metaverse serves as an online space for users to create communities and engage in commerce, content could range from simple chatting platforms to complex virtual landscapes like the Sandbox. Existing platforms like Roblox and Fortnite are seen as early entrants into the metaverse, where users interact with content and participate in buy-and-sell transactions. In the metaverse, the lines between the content medium and the content itself blur. With an entirely digital environment, every element, from virtual furniture to the interactive world, becomes a form of content. For content creators and marketers, the metaverse presents a distinctive opportunity to connect with and captivate audiences. These emerging opportunities are reshaping the conventional content creation process. The metaverse alters the nature of content interaction, revolutionizes monetization strategies, and transforms content marketing systems. As the internet undergoes the transition from Web 2.0 to Web 3.0, a shift is expected towards immersive experiences that bridge the digital world with physical sensations, integrating Web 3.0 content seamlessly into the evolving metaverse environment. Contrasting with the information-focused Web 1.0, characterized by the emergence of search engines facilitating quick access to information, Web 2.0 took place in an era of social media dominance. Content creation strategies shifted, allowing anyone with a smartphone to instantly create and share content. Web 2.0, designed as a centralized system, meant content platforms gained ownership of creators' content and audience data, ultimately profiting from both. Now, at the early stages of Web 3.0, synonymous with the metaverse in many expert circles, a decentralized content culture is anticipated.

Joe Pulizzi of The Tilt describes this shift as "decentralized and community-

driven," emphasizing the role of creators in driving scarcity and value through concepts like cryptocurrency and NFTs. This marks a departure from the centralized profit model of Web 2.0 platforms. Content creators are envisioned as the foundation of the metaverse by industry experts. While companies provide the necessary technology and tools, individual creators are seen as the architects shaping the metaverse's future.

According to brand builder and futurist Anat Baron, content creation in the metaverse presents numerous opportunities. She highlights the thriving creator economy that has emerged, where social networks, YouTube, and podcasts have enabled individuals to become influencers monetizing their content. In the metaverse, creators are expected to leverage new tools, including VR, mixed reality, and AR, to enhance their content with immersive elements, allowing users to feel like active participants rather than passive observers. This transformative potential marks a significant evolution in content creation within the metaverse (Marxent, 2022).

The evolution of content creation between Web 2.0 and Web 3.0, within the metaverse framework, involves the integration of new technologies that bring 3D visualizations to existing Web 2.0 platforms. This innovative and interactive content not only enhances consumer engagement but also incorporates elements crucial for authentic campaigns, laying the groundwork for future metaverse marketing. While the internet has progressed beyond Web 2.0, the full realization of Web 3.0 is yet to be achieved. The most groundbreaking content creation today exists in the transitional space between these two phases, leveraging the creative possibilities enabled by Web 3.0 ideas while operating within the constraints of Web 2.0 technology. Several examples exemplify the integration of Web 3.0 elements into Web 2.0 platforms such as 3D Visualizations and Augmented Reality. AR technology allows creators to overlay digital items onto real-world environments.

A notable instance of successful AR implementation is Pokémon Go, where users engage in a real-world hunt for virtual Pokémon using an app. The game's innovative AR feature contributed to its instant success, boasting 1 billion downloads and $904 million in revenue in 2021 from in-app purchases. Brands like State Farm have adopted AR for creative campaigns, organizing a virtual treasure hunt where

users sought out virtual footballs in their surroundings through mobile devices. Prizes, including non-fungible tokens (NFTs), gift cards, and apparel, added an extra layer of engagement. This approach effectively communicated State Farm's commitment to innovation and customer enjoyment (Marxent, 2022).

The blending of virtual and physical experiences extends to retail, where AR technology enhances consumer interactions. Furniture retailers, for instance, use AR and 3D technologies to develop apps allowing users to place realistic 3D renderings of furniture items in their homes. This immersive experience enables users to visualize products in their living spaces, make informed purchase decisions, and even complete transactions directly through the apps. These examples illustrate how technology, including AR, 3D visualizations, and NFTs, is pushing the boundaries of content creation within the transitional landscape between Web 2.0 and the emerging Web 3.0/metaverse era. This shift not only enriches user experiences but also sets the stage for the transformative potential of future metaverse marketing strategies.

The new creator economy refers to a vast online market where individuals produce content for which other users are willing to pay. The metaverse supports this creator economy by introducing new methods for monetizing, sharing, and owning content. While the collective appreciation of content is not a new concept - thousands of independent bloggers, photographers, and performers have been active on the internet for years - the creator economy has emerged as a relatively recent phenomenon, spurred by the COVID pandemic. With people compelled to stay indoors, many turned to content creation as a means of combating boredom, resulting in a surge of creativity that found an eager audience (Forbes, 2022).

This surge has given rise to a thriving online economy that enables individuals to derive income from their self-expression. For many, being a content creator is not just a side hustle but a full-fledged profession. Over 50 million people identify themselves as content creators, contributing to a market that has reached $104 million, with 41% of creators earning $69,000 or more annually. Web 3.0 is poised to bolster the creator economy through three key tools: decentralization, NFTs, and Decentralized Autonomous Organizations (DAOs). One of the cores of the metaverse

is decentralization. Unlike current platforms such as Instagram, Twitter, and WordPress, where some rights over content and audience data are shifted towards the corporation, the metaverse promises creators the ability to retain their proceeds and intellectual property (IP) rights without intermediaries. In the new creator economy facilitated by Web 3.0, creators will have the freedom to explore imaginative ways of monetization. The decentralized nature, backed by blockchain and DAOs, will enable direct monetization, whether through cryptocurrency payments or access to exclusive communities using NFTs. Creators will embrace these opportunities, thanks to the direct access they gain to their audiences. In Web 3.0, NFTs empower creators to introduce scarcity to their original works, providing fans with a chance to express support. This contrasts with the monetization streams of Web 2.0, where users pay for subscriptions, content, or offer donations to their favorite creators. NFTs also bring the benefit of royalties, a feature absent in Web 2.0. Content creators are expanding their revenue sources beyond individual audiences, as businesses recognize the value in the creator economy and seek partnerships with content creators. As Pulizzi notes, "In this experimental environment, individual or small-team creators have an advantage, as they have nothing to lose. Brands should monitor these creators, engage in various groups, and consider forming partnerships or, if it aligns, acquiring projects" (Expat Advisors, 2018).

Modern users are actively seeking diverse content from trustworthy sources, expressing a decreased tolerance for interruptive communication. Furthermore, the majority of consumers prefer digital options across various content types. These evolving preferences present an opportunity for us to anticipate and fulfill the desires of new audiences. The expansion of our online presence has brought about significant and swift changes in content consumption patterns. Particularly, in the digital era, the younger generation accustomed to the Internet, are on the verge of entering and reshaping content preferences, especially within the metaverse. Audiences with access to an abundance of online content, exhibit lower patience levels and can quickly replace any content with a simple click. While some may interpret this as an attention span deficit, it is more accurately a reflection of a lack of patience. Elevated standards

and a wealth of choices create pressure for content creators. Collaborating with content creators could become a substitute for establishing a brand legacy, as audiences increasingly prioritize content over long-term reputation. The shift towards digital and remote experiences, accelerated by the pandemic, has been embraced by consumers staying indoors. Those valuing remote work, for instance, seek improved virtual office spaces. Although there is still demand for in-person shows and events, content creators who provide virtual or hybrid options are rewarded by consumers. With the rise of misinformation over recent years, public trust in various mainstream media has diminished. Content creators and marketers must work to earn the trust of consumers before expecting to derive value from their interactions. This emphasis on trust and authenticity, prevalent in Web 2.0, becomes even more significant in the metaverse, where consumers highly value genuine campaigns. Content creators should be prepared to engage consumers in unconventional ways that go beyond the traditional purchase model, focusing on attracting time, attention, and loyalty before seeking financial rewards (Expat Advisors, 2018).

Metaverse content marketing involves the strategic use of content by businesses to establish and enhance brand awareness while fostering a deeper connection with consumers. Unlike traditional content marketing aimed at promoting one-time purchases, the focus here is on building enduring relationships. The transition from Web 2.0 to the community-driven and decentralized metaverse requires a thoughtful approach to content marketing, necessitating a thorough risk assessment and a well-defined strategy for brands venturing into this virtual space. In the metaverse, the principles of content marketing diverge from those of Web 2.0. While content marketing in the latter was somewhat detached from product-centric advertisements, this trend intensifies in the metaverse. The approach shifts towards leveraging ownership and user engagement to guide individuals into a novel ecosystem of experiences, increasing lasting brand loyalty. According to Baron, a leading expert, metaverse content marketing can be defined as "a race to create the best experiences." The emphasis is on crafting memorable and engaging experiences that entertain and inform, thereby fostering increased interactions between the brand and the customer.

While content marketing remains a conduit to drive sales, the key lies in finding innovative ways to sell without resorting to overt sales tactics. Creating buying experiences within the brand's metaverse is crucial to ensuring that users remain immersed in the brand's world without the need to exit. Ultimately, the central challenge is attracting customers to the brand, requiring a continued focus on grabbing attention in creative ways via virtual experiences (Expat Advisors, 2018).

Establishing the presence of a business in a new country involves careful planning, organizational skills, understanding of both international and local markets, a thorough risk analysis, and, notably, a substantial investment. Therefore, it is crucial to address and foresee as many costs and challenges as possible. This is where artificial intelligence (AI) proves invaluable in facilitating the strategic decision-making process and streamlining the overall management of the company's expansion. Furthermore, prior to the selection process, the Human Resources Department can conduct a more transparent recruitment and selection process to identify individuals whose profiles align with the organization's needs, reducing reliance on traditional resumes. These AI tools enable a detailed analysis of internal employee data, allowing for the identification of patterns to evaluate various aspects. This goes beyond assessing employee performance and tenure; it extends to determining which employees can adapt well to different situations, understanding their skills, strengths, weaknesses for improvement, objectives, internal team dynamics, leadership capabilities, and a wealth of information. Consequently, Human Resources departments can proactively recognize potential candidates who may be the most suitable for an international assignment before the expatriation process begins (Expat Advisors, 2018).

Moreover, AI solutions may facilitate the localization process of content products for foreign audiences. The combination of AI and localization has profoundly reshaped how businesses engage with global audiences. Localization, the process of integrating content, products, or services to align with the linguistic, cultural, and functional needs of a specific target market or audience, has become a crucial strategy. According to Nimdzi, 9 out of 10 individuals express a willingness to disregard a product if it is not available in their native language, underscoring the critical role of

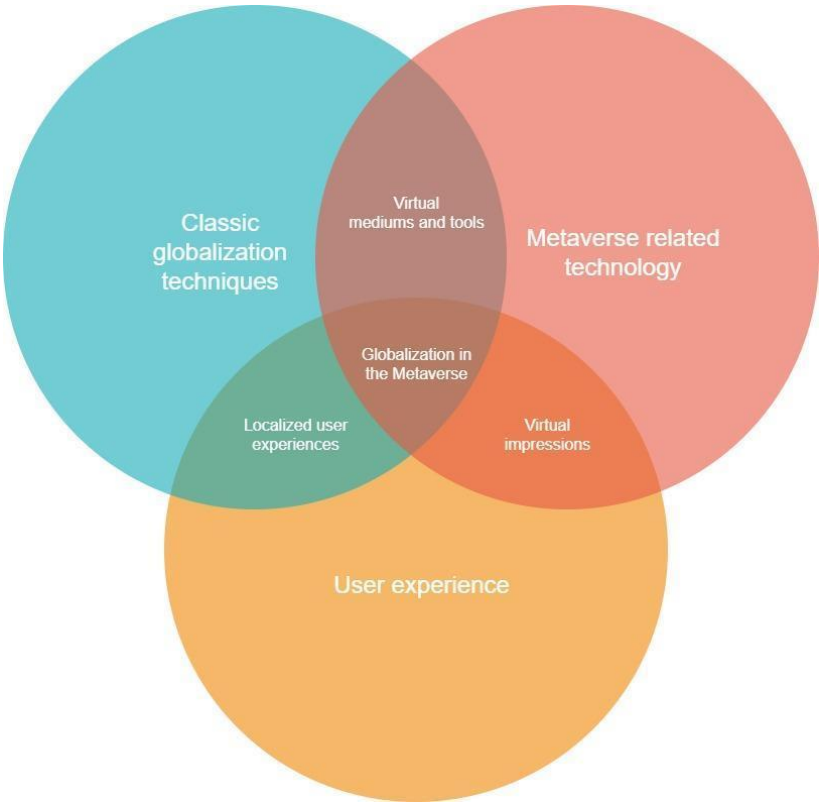
localization for businesses targeting specific markets. AI emerges as a valuable tool to expedite this process and enhance its consistency. AI-driven machine translation technologies, such as neural machine translation (NMT), have significantly advanced translation accuracy and efficiency. These systems can rapidly process vast amounts of multilingual content, enabling companies to translate websites, product descriptions, manuals, and other materials into multiple languages with increased speed and uniformity. AI plays a fundamental role in extracting and analyzing content from diverse sources like social media, customer reviews, and forums, offering valuable insights into customer preferences and cultural nuances. This information proves instrumental in creating targeted and culturally relevant localized content. The analysis of localization data by AI provides valuable insights into the effectiveness of localized content and marketing strategies in different regions, guiding businesses in making informed decisions for future localization efforts. AI-powered Quality Assurance (QA) tools are employed to check the accuracy and quality of localized content, automatically identifying potential issues such as mistranslations, inconsistencies, and deviations from style guides. This reduces human errors and ensures linguistic and cultural appropriateness. AI systems contribute to managing and maintaining terminology consistency across various translation projects, safeguarding brand identity and ensuring accurate and consistent usage of technical terms across languages. Through Natural Language Processing (NLP) techniques, AI systems gain a deeper understanding of human language, enabling more sophisticated translation and localization processes. This proficiency extends to handling complex sentence structures, idiomatic expressions, and context-specific meanings. AI's impact extends to the Localization of User Interfaces (UI) and User Experience (UX), adapting software applications and websites to align with the language and cultural preferences of the target audience. This encompasses not only translating text but also adjusting UI elements, graphics, and date formats to ensure a seamless user experience. For businesses operating internationally, AI-powered chatbots and virtual assistants provide multilingual customer support, facilitating real-time communication with customers around the world. In the Metaverse, AI facilitated localization can be used

to improve localization of content and help creators enter foreign markets. Despite the significant strides made by artificial intelligence in the field of localization, there are notable limitations that impact the accuracy, efficiency, and cultural appropriateness of the localized content. One key challenge lies in AI's difficulty in understanding context-specific nuances, cultural references, and idiomatic expressions, leading to potential inaccuracies in translations or localized content. Language often relies on contextual cues, posing a challenge for AI models to fully comprehend. Another limitation is AI's struggle to recognize and adapt content according to the cultural sensitivities and preferences of different regions. Achieving effective localization demands a deep understanding of cultural norms, an aspect that AI systems may not fully grasp without extensive training and data. Moreover, AI lacks human emotions and creativity, making it challenging to convey emotions effectively or generate content with artistic or creative elements, such as marketing slogans or advertisements. While AI has expanded its support for numerous languages, some languages may have limited resources and training data available. This can result in less accurate translations or localization in those languages. Additionally, AI-generated translations may still necessitate human post-editing to ensure quality, accuracy, and cultural appropriateness, adding an extra step to the localization process. AI models are susceptible to unexpected errors or biases, especially when the training data contains biases or when the model encounters linguistic structures not encountered during training. Continuous updates and refinement are essential for AI models to keep pace with evolving languages, cultural shifts, and new terminology (Poeditor, 2023).

To sum everything up, globalization in the metaverse is a mix of classical globalization techniques integrated into virtual reality technology to address the quality of user experience.

Fig 1.6

Globalization in the Metaverse



Source: created by the author.

Successful globalization strategy in the Metaverse will provide seamless virtual user experience with minimal amount of distractive elements and high quality content that the audience will deem valuable. As the decentralization process continues to expand, public media gain less authority over independent creators who will eventually take their place in the Metaverse where the success of the specific brand or specifically content product will be relied on the reputation of the creator. Therefore, the question of globalization is not a question of the process itself, but building qualitative relationships with your audience through the content will provide globalization as a result. Even today, companies start to invest big sums into marketing their products through independent creators. Obviously, what is valuable today is the reputation and masterful experience delivery.

CHAPTER 2: ANALYSIS OF PARAMOUNT PICTURES' METAVERSE INITIATIVES

2.1. General Characteristics and Analysis of Paramount Pictures' Economic Activity

Paramount Pictures, subsidiary of Paramount Global, established in 1912, is one of the oldest and most influential film studios in the United States, playing a pivotal role in the evolution of Hollywood's studio system. Its economic activities encompass diverse revenue streams including box office sales, home entertainment, licensing and merchandising, and rights sales to television and streaming services, with a significant contribution from international markets (Paramount, 2024). The studio, known for its major productions and iconic franchises, competes in a dynamic market alongside major players like Warner Bros., Disney, and Universal (LinkedIn, 2024). “Driven by iconic consumer brands, its portfolio includes CBS, Showtime Networks, Paramount Pictures, Nickelodeon, MTV, Comedy Central, BET, Paramount+ and Pluto TV. The company holds one of the industry’s most extensive libraries of TV and film titles. In addition to offering innovative streaming services and digital video products, Paramount provides powerful capabilities in production, distribution and advertising solutions (Paramount, 2024). Paramount's economic landscape has been reshaped by the digital transformation of the industry, presenting both challenges and opportunities in the face of fluctuating box office revenues, high production costs, and the rise of digital platforms. The studio's ability to navigate economic trends, technological advancements, and changing consumer preferences is crucial for its ongoing success in the ever-evolving film industry.

Over the year ending December 31, 2022, Paramount Pictures' financial outcomes present a mixed picture. The company achieved a total revenue growth of 5%, climbing from $28,586 million in 2021 to $30,154 million in 2022. Despite this overall increase, the TV Media segment experienced a downturn, with revenues dipping by 4% to $21,732 million. In contrast, the Direct-to-Consumer sector surged by 47%, reaching

$4,904 million, indicating a successful expansion in the company's digital and streaming services. Similarly, Filmed Entertainment revenues also enjoyed a significant rise of 38%, amounting to $3,706 million, indicating post-Covid increased demand in theatrical screenings. However, not all trends were positive, with Eliminations showing a 16% increase in losses, and more starkly, Operating Income plummeted by 63% to $2,342 million. Diluted Earnings Per Share (EPS) followed suit, suffering an 85% decline to $1.03. Despite the increase in revenue, these figures point towards a challenging period for Paramount, with profitability pressures evident in the steep decline in operating income and EPS, signaling a potential need for strategic reassessment (Paramount, 2024).

Table 2.1

Revenue, operating income and EPS

$ IN MILLIONS, EXCEPT PER SHARE AMOUNTS	Three Months Ended December 31			Twelve Months Ended December 31		
GAAP	2022	2021	B/(W)%	2022	2021	B/(W)%
Revenue	$ 8,131	$ 8,000	2 %	$ 30,154	$ 28,586	5 %
• TV Media	5,883	6,302	(7)%	21,732	22,734	(4)%
• Direct-to-Consumer	1,396	1,072	30 %	4,904	3,327	47 %
• Filmed Entertainment	936	694	35 %	3,706	2,687	38 %
• Eliminations	(84)	(68)	(24)%	(188)	(162)	(16)%
Operating income	$ 182	$ 2,664	(93)%	$ 2,342	$ 6,297	(63)%
Diluted EPS from continuing operations attributable to Paramount	$ (.29)	$ 3.05	(110)%	$ 1.03	$ 6.69	(85)%

Source: Paramount

While revenue grew, there is a decline in TV media revenue and an increase in Direct-to-Consumer revenue which indicates lesser demand and decreasing popularity of classic television and increasing preference to subscription-based and individual licensing products that people are able to watch at home. Next table provides financial results that confirm the last statement.

Table 2.2

Revenue in advertising and subscription

$ IN MILLIONS	Three Months Ended December 31				Twelve Months Ended December 31			
	2022	2021	$ B/(W) %		2022	2021	$ B/(W) %	
Revenue	$ 1,396	$ 1,072	$ 324	30 %	$ 4,904	$ 3,327	$ 1,577	47 %
• Advertising	460	441	19	4	1,533	1,298	235	18
• Subscription	936	631	305	48	3,371	2,029	1,342	66
Expenses	1,971	1,574	(397)	(25)	6,723	4,319	(2,404)	(56)
Adjusted OIBDA	$ (575)	$ (502)	$ (73)	(15)%	$ (1,819)	$ (992)	$ (827)	(83)%

Source: Paramount

For the year ending December 31, 2022, Paramount Pictures reported a significant increase in revenue, reaching $4,904 million, which marks a 47% rise from the $3,327 million recorded in 2021. This growth is particularly notable in the subscription segment, which expanded by 66%, from $2,029 million to $3,371 million, highlighting a strong consumer shift towards the company's subscription services. Advertising revenue also saw an increase, albeit a more modest one of 18%, ending the year at $1,533 million. However, expenses over the same period escalated sharply by 56%, from $4,319 million to $6,723 million. Consequently, the Adjusted Operating Income Before Depreciation and Amortization (OIBDA) experienced a substantial decline, worsening by 83% from $(992) million in 2021 to $(1,819) million in 2022, reflecting a challenging environment where the increase in revenue was overshadowed by the surge in expenses which are claimed to be investments in new products and international expansion.

For the twelve-month period ended December 31, 2022, the financial performance of the company reflected both growth and challenges. The company's revenues saw an increase, reaching $30,154 million, compared to $28,586 million in the previous year, showing a positive trend in sales or service income. However, the costs and expenses also rose, albeit at a slower rate, resulting in a higher operating income of $2,342 million, up from $2,343 million the year before, which suggests improved operational efficiency or cost control. Despite the higher operating income, the net earnings attributable to Paramount were lower at $2,058 million, down from $4,543 million in the prior year, indicating that there were significant impacts from non-operating items such as interest expense, provision for income taxes, or other extraordinary items that affected the bottom line. The basic net earnings per share for the year were $3.16, a decrease from $7.02 in the previous year, which could be a concern for investors as it reflects a lower return on their investment. This decline in earnings per share could be due to the increased number of shares outstanding, as the diluted share count went up slightly from 655 million to 662 million, or it could be a result of the reduced net income. Overall, while the company managed to increase its revenue over the twelve-month period, the decline in net earnings and earnings per share

suggests that it faced higher costs or expenses, or possibly one-time charges that negatively impacted its profitability.

Table 2.3

Paramount global and subsidiaries consolidated statements of operations

	Three Months Ended December 31		Twelve Months Ended December 31	
	2022	2021	2022	2021
Revenues	$ 8,131	$ 8,000	$ 30,154	$ 28,586
Costs and expenses:				
Operating	5,483	5,452	19,845	17,744
Selling, general and administrative	2,034	1,991	7,033	6,398
Depreciation and amortization	123	101	405	390
Restructuring and other corporate matters	309	19	585	100
Total costs and expenses	7,949	7,563	27,868	24,632
Net gain on dispositions	—	2,227	56	2,343
Operating income	182	2,664	2,342	6,297
Interest expense	(230)	(241)	(931)	(986)
Interest income	35	16	108	53
Net gains (losses) from investments	—	—	(9)	47
Loss on extinguishment of debt	—	—	(120)	(128)
Other items, net	(33)	(22)	(124)	(77)
Earnings (loss) from continuing operations before income taxes and equity in loss of investee companies	(46)	2,417	1,266	5,206
(Provision) benefit for income taxes	37	(334)	(227)	(646)
Equity in loss of investee companies, net of tax	(80)	(11)	(204)	(91)
Net earnings (loss) from continuing operations	(89)	2,072	835	4,469
Net earnings from discontinued operations, net of tax	198	36	379	162
Net earnings (Paramount and noncontrolling interests)	109	2,108	1,214	4,631
Net earnings attributable to noncontrolling interests	(88)	(50)	(110)	(88)
Net earnings attributable to Paramount	$ 21	$ 2,058	$ 1,104	$ 4,543
Amounts attributable to Paramount:				
Net earnings (loss) from continuing operations	(177)	2,022	$ 725	$ 4,381
Net earnings from discontinued operations, net of tax	198	36	379	162
Net earnings attributable to Paramount	$ 21	$ 2,058	$ 1,104	$ 4,543
Basic net earnings (loss) per common share attributable to Paramount:				
Net earnings (loss) from continuing operations	$ (.29)	$ 3.10	$ 1.03	$ 6.77
Net earnings from discontinued operations	$ .30	$ .06	$ .58	$ .25
Net earnings	$ .01	$ 3.16	$ 1.61	$ 7.02
Diluted net earnings (loss) per common share attributable to Paramount: [a]				
Net earnings (loss) from continuing operations	$ (.29)	$ 3.05	$ 1.03	$ 6.69
Net earnings from discontinued operations	$ .30	$ .05	$ .58	$ .25
Net earnings	$ .01	$ 3.11	$ 1.61	$ 6.94
Weighted average number of common shares outstanding:				
Basic	650	647	649	641
Diluted [b]	651	662	650	655

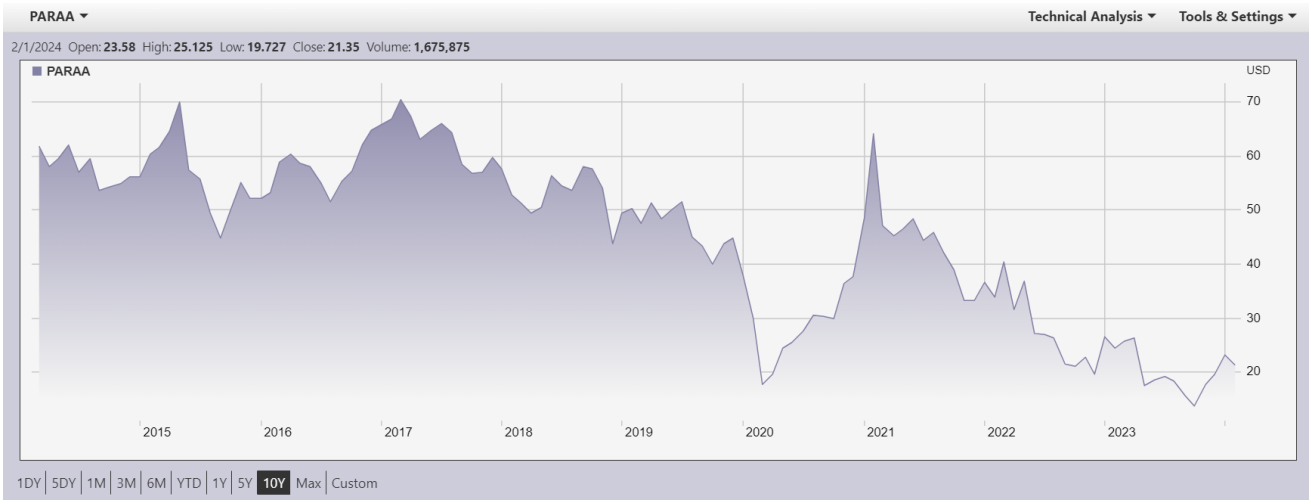
Source: Paramount

Paramount, a subsidiary of Paramount Global, is a significant player in the film industry, with diverse revenue streams including box office sales, home entertainment, licensing, merchandising, and digital services. The company experienced a 5% revenue growth, reaching $30,154 million, driven by increases in its Direct-to-Consumer and

Filmed Entertainment sectors. However, TV Media revenues declined, reflecting a shift in consumer preferences towards digital and streaming services. Despite revenue growth, Paramount faced challenges with a steep decline in Operating Income (63%) and Earnings Per Share (85%), indicating profitability pressures. The company's financial results also show a significant rise in subscription revenues, but with escalating expenses outpacing revenue growth, leading to a substantial decline in Adjusted OIBDA. The overall financial performance shows a scenario of growth amidst challenges, marked by increased revenues but impacted by higher costs and expenses, signaling a need for strategic reassessment in a rapidly evolving digital landscape.

Fig 2.1

Stock Performance in the last 10 years



Source: Paramount

Based on the provided stock performance chart, we see a volatile performance over a multi-year period. The stock price fluctuated within a certain range, suggesting a period of relative stability or sideways market movement with a significant decrease in 2020 due to the economic crisis related to the Coronavirus pandemic. However, in 2021, there was a sharp increase in stock price, which peaked before rapidly declining. The subsequent sharp decline suggests that the factors leading to the peak were not sustainable, or that there was a significant change in investor sentiment or company performance. Following this peak, the stock entered a downward trend, reaching lower lows than seen in the prior stable period. This downward trend indicates a negative performance, which could be due to a variety of factors such as declining revenues,

profits, or market share, or broader market or industry downturns. As of the last date visible on the chart, February 1, 2024, the stock opened at $23.58, hit a high of $25.125, a low of $19.727, and closed at $21.35 on a volume of 1,675,875 shares traded. The closing price is significantly lower than the peak observed in 2021, which suggests that the stock has not recovered to its previous highs and is in a lower price band. In conclusion, the overall performance of Paramount's stock as depicted in the chart shows significant volatility, a peak and decline in 2021, and a general downward trend in the following years. This would likely be a cause for concern for long-term investors, particularly those interested in stability and steady growth.

The dividend performance presented in table 2.4 that is indicated in the annexes shows a company that has consistently paid dividends over the past few years. In 2022, the company paid quarterly dividends of $0.24, resulting in a total annual dividend of $0.96. This pattern continued into 2023 with the same quarterly dividends of $0.24 until the third quarter when it increased to $0.39, indicating a positive performance or a possible one-time special dividend. The year 2024 shows a significant reduction in the quarterly dividends to $0.05, which could indicate a strategic shift, preservation of cash, or a response to decreased earnings or other financial constraints. The decrease in the dividend amount in 2024 is noteworthy and may be a point of concern for investors who value steady or increasing dividend payouts as a sign of financial health and stability.

2.2 Types and Forms of Collaborations and Partnerships by Paramount Pictures in the Metaverse

The concept of the Metaverse is relatively new, and as it is expected to change everything, it will not happen very fast. Essentially what the Metaverse signifies is a transition in devices that we use to create and consume, according to Ted Schilowitz, the chief-futurist at Paramount. Metaverse is just a new way to deal with information and at this initial stage when the market is relatively new, it is not quite ready for a big change. Therefore, Paramount sees Metaverse as a playground for experiment. Despite virtual worlds being at the initial stage of its development, companies would want to

participate in the game, since you can beat the game only if you make steps in the game (The Wrap, 2024).

Few steps that Paramount took in 2022 were minting themed NFTs for their StarTrek (StarTrek, 2022) and Top Gun: Maverick (OpenSea, 2022) universes with a limited quantity that their fans could own in the metaverse for collection purposes what company can earn money from. However, the actual value of such collectibles is questionable. In collaboration with Recur, the company has developed Paramount.xyz, a platform aimed at integrating Paramount's iconic entertainment properties into the metaverse. Inheriting successful strategies from major NFT ventures, Star Trek NFTs will feature "algorithmically-generated starships," available for purchase at $250 per pack, each pack containing a single ship with approximately an 11% chance of being the “Enterprise”. Buyers can increase their chances of obtaining a desirable ship by opting for the pricier "Admiral pack" over the "Captain pack," contingent on owning a Recur pass, another NFT costing at least $290. These ships will be part of the "Star Trek Continuum," described by Paramount as an "experiential hub" for all current and future Star Trek NFT series. This initiative involves collecting crewmates and engaging in vague missions, as per Paramount's plan. Paramount's press release vaguely describes the metaverse and associated experiences, suggesting that Recur and Paramount are planning a multi-year partnership with exclusive benefits, events, and content for Continuum holders, both digitally and in real life. This isn't the first instance of Star Trek NFTs, with previous digital “Funko Pops” and licensed offerings. Some commentators, like Chaim Gartenberg and Adi Robertson, view these releases as contradictory to the core principles of Star Trek. Many associate Star Trek with the concept of a post-scarcity society, often depicted in various analyses. Despite the controversy, Paramount is fully committing to this venture, presenting Star Trek Continuum as just the start for Paramount.xyz, and hinting at future expansions to include franchises from Nickelodeon and Paramount Pictures, potentially leading to NFTs like SpongeBob. This development marks a point where childhood memories are being commercially exploited in the perspective of the audience (The Verge, 2022).

Another initiative by Paramount launched in the Metaverse is Nickverse. Nickverse was a no-cost, crossover online multiplayer game developed by Paramount Game Studios, featuring renowned characters from Nickelodeon. It was accessible on the Roblox platform as a free experience. In the game, players could explore various areas themed around Nickelodeon shows. Released on March 31, 2022, and officially licensed by Nickelodeon, the game included maps from SpongeBob and Avatar. Apart from a central obstacle course (not located at the racetrack), the game also offered ice skating in the Avatar world and a Krusty Krab minigame in the SpongeBob world, themed Red vs. Blue. Eventually, Nickverse was discontinued, privatized, and succeeded by SpongeBob Simulator and TMNT: Battle Tycoon. Nickverse's gameplay mirrors that of Roblox, with the addition of Nickelodeon-themed features. Players are greeted by SpongeBob and a Nickelodeon employee as they board the Nickelodeon blimp. Upon reaching the Nickelodeon hub, they encounter various characters from Nickelodeon. Players have the opportunity to engage in global events, drive on racetracks, complete quests, and explore worlds inspired by SpongeBob and Avatar, among other activities (Nickelodeon, 2024).

Amongst other projects, there is another initiative that was launched by Meta (Facebook) together with Paramount and Oculus back in 2019 even before the term Metaverse went mainstream. The project streamed classic 2D and 3D movies in virtual theaters where people went on specific dates and bought tickets for virtual premieres. These virtual premieres were held via Oculus VR glasses (Meta, 2019). With Bigscreen, experiencing a movie in VR closely re-creates the experience of watching a film at a top-notch cinema or an impressive home theater setup. The unique aspect is that instead of being surrounded by people from your local area, you're joined by viewers from across the world, all from the comfort of your own sofa. To get started, you simply need to create a free account, design your personalized avatar, and visit Bigscreen's virtual lobby either before or after the movie. Movie tickets are affordably priced at just $3.99 each and can be bought directly from Bigscreen's virtual ticket office. Value that people got from such an initiative was that you could not just watch a film, but also socialize

with others (VRScout, 2019). Tickets were available for sale on BigScreenVR (BigScreenVR, n.d.)

Despite having virtual theatrical screenings, there is also an option to view films from different streaming platforms, including Paramount+ using a VR headset. Many VR sets support this feature and it means more traffic for Paramount on its platforms via VR and AR devices (Lifehacker, 2022).

Fig 2.2

Metaverse departments in major studios

	Disney	Paramount Pictures	Sony Pictures	Universal	Warner Bros.
Chief Metaverse Officer	✓	×	×	×	×
D2C/SVOD/FAST	Hulu, Disney+	Paramount+, Showtime, Pluto	×	Peacock, Hulu (via Comcast), Xumo	HBO Max, Discovery+
First-Party Game Studios	×	×	×	×	✓
Game Publisher	×	×	×	×	✓
Licensing	✓	✓	✓	✓	✓
In-house digital IP development and R&D	✓	×	*via Sony Interactive Entertainment	×	✓

Source: Enders | Analysis

Generally, all major studios are now experiencing a slight shock as they enter the emerging Metaverse market as it seems to be highly speculative. It seems to be there, however, Metaverse is a largely unexplored niche that is at the beginning stage of development as of now. Many large film studios lack the in-house resources to carry out sophisticated digital projects and therefore need to collaborate with full-service partners for both creative and technical aspects. Over time, there's been a significant reduction in research and development and strategic planning capabilities, as studios have pulled back from engaging in interactive entertainment. Presently, Disney is the sole studio with a designated Chief Metaverse Officer, marking a critical move forward. A significant challenge will be merging these new interactive entertainment ventures with their direct-to-consumer platforms. Industry observers will be keenly watching Disney, as well as Netflix, to see how they successfully incorporate interactive entertainment into their existing applications.

Despite having huge film archives, studios embarking on digital projects confront the reality that there is a limited pool of suitable assets available for such initiatives. This includes film titles, still images, and music, but very few digital assets ready for use, with the exception of some older 3D films adapted for virtual reality environments. The intellectual property owned by studios is significantly important, and these entities have a wealth of experience in the intricate world of licensing. This is especially true for major franchises that can be extended into consumer products. Licensing poses a considerable challenge for any new market wanting to leverage film-based intellectual property, both from economic and creative perspectives. Currently, studios are increasingly focusing on core franchises, particularly as they relate to expansion into subscription video on demand and the production of sequels. This focus also aligns with targeting audiences interested in interactive entertainment. However, studios have yet to fully integrate these aspects, often choosing to outsource their interactive entertainment assets instead. This decision underscores a broader dilemma studios face regarding their position in the value chain and how to manage the risk of losing margins in consumer products or interactive entertainment sectors (Enders | Analysis, 2022).

Venturing into the metaverse by expanding film franchise intellectual property through a licensing model will necessitate a great deal of resilience and patience, both financially and creatively. The approach to licensing in this context is largely opportunistic and can be quite arbitrary, especially when it comes to launching new products or services. This strategy has led to internal conflicts within studios, as the push to explore innovative partnerships clashes with the stringent revenue expectations tied to licensing deals. Maintaining creative control and ensuring the original creative vision is preserved pose significant challenges to rapid deployment and execution of projects by third parties. Currently, there's a narrow opportunity for experimentation, which is expected to diminish as studios adopt a more long-term perspective. In the short term, engaging with studios through marketing initiatives appears to be a more feasible strategy. Licensing agreements invariably include strict conditions aimed at securing content and safeguarding the studio's image and reputation, which could be particularly burdensome in the expansive and unpredictable environments of the "open world"

metaverse. Despite its slow pace and high costs, licensing remains the go-to strategy for initiating projects. Notable partnerships like Disney with McDonald's, and Warner Bros. with Fortnite, illustrate the ongoing relevance of licensing. However, the European branches of major studios have limited say in the more complex technical aspects of licensing deals, making direct engagement with Hollywood an expensive but essential step (Enders | Analysis, 2022).

The entrance of Apple and Meta into the mixed reality scene with film IP could redefine the licensing landscape. Apple's history of collaboration with Disney on product launches suggests a continuation of their partnership. Meta, with the launch of the Quest Pro headset featuring NBCUniversal content, indicates a growing interest in licensed content for MR experiences. The prevailing studio preference for licensing has also spurred speculative ventures in NFTs, which are easier to license compared to full-fledged metaverse experiences. Major studios have released NFTs based on their intellectual properties, such as previously mentioned Paramount Pictures with Star Trek, and Warner Bros. with The Matrix and Looney Tunes. Despite this, digital collectibles are considered tangential to the more substantial challenge of licensing comprehensive metaverse intellectual property extensions (Enders | Analysis, 2022).

2.3. Costs and Benefits of Implementing Metaverse-Based Strategies by Paramount Pictures

The financial details regarding the development of the Nickverse and its associated NFTs by Paramount, as well as the costs related to partnering with Big Screen, remain undisclosed to the public. Consequently, in conducting an analysis of strategies based on the Metaverse, this report will lean on available estimates and accessible information.

First of all, let's dive into the expenses behind making an NFT project. The cost of developing an NFT project varies widely, influenced by multiple factors such as concept and design, smart contract development, blockchain selection, front-end and back-end development, testing and security, minting and token distribution, integration

with digital wallets and marketplaces, and ongoing maintenance and upgrades. Initially, costs are incurred in the conceptualization and design phase, where the complexity and uniqueness of the NFTs can require professional designers or artists, thereby increasing expenses. The development of secure smart contracts, which are essential for the NFTs' functionality, varies in cost based on complexity and required expertise. Choosing a blockchain platform impacts costs due to differences in capabilities, scalability, and transaction fees, with platforms like Ethereum being popular but expensive due to high gas fees. Front-end development costs depend on the user interface's complexity and blockchain integration, while back-end development involves server-side logic and database management. Security audits and testing are critical for platform reliability, adding to the costs. Minting NFTs and distributing them incurs fees related to the blockchain used, and integrating digital wallets and marketplaces is necessary for user transactions, with costs varying by the number of integrations. Finally, ongoing maintenance and upgrades are crucial for keeping the platform running smoothly and securely, demanding a budget for future improvements. The cumulative effect of these factors means that NFT project development costs can range significantly based on the project's scope and technical requirements (Medium, 2023).

Given the wide range of potential costs involved in launching an NFT project for a film like "Top Gun: Maverick" by Paramount, we can estimate a figure based on common expenses associated with such projects. The creation and design of digital assets, especially for a major film franchise, likely lean towards the higher end, possibly ranging from $10,000 to over $100,000, considering the need for high-quality, unique content. Development and deployment of blockchain technology and smart contracts could add another $20,000 to $200,000 to the project's costs, depending on the complexity and security requirements of the NFTs. Marketing and promotional efforts to ensure the project reaches its target audience and generates significant interest could easily require an investment of $50,000 to upwards of $1,000,000, especially for a global campaign of a popular movie. Additional expenses would include platform and marketplace fees and blockchain “gas” fees, which might take up 5% to 15% of sales revenues, alongside listing fees, and legal and administrative costs, which could run

from $10,000 to $100,000, covering compliance, intellectual property rights, and other regulatory matters. Partnerships and collaborations, if involved, would further increase expenses, the scale of which would vary based on the entities involved. Altogether, a rough estimate for Paramount's expenditure on an NFT project for "Top Gun: Maverick" could easily range into the low to mid seven figures, considering the need for quality, security, and extensive promotional activities to ensure the project's success. The cost of implementation of such a project can vary from 90,000 to 1.4 million dollars. This estimate is quite speculative and would greatly depend on the specific scale, scope, and partnerships established for the project.

Speculating on the financial outcome of Paramount's NFT project for "Top Gun: Maverick" without concrete sales data involves considerable guesswork. However, considering the film's massive popularity and assuming a well-strategized release of NFTs, Paramount could have seen significant revenue. According to NFT marketplaces OpenSea (OpenSea, 2024) and CoinStat (CoinStat, 2024), there were a total of 23,300 TopGun: Maverick NFTs minted on Polygon blockchain and 150 NFTs minted on Ethereum blockchain, which results in roughly 23,450 NFTs sold at the day of the event in total. Higher amount of NFTs minted on the Polygon (MATIC) blockchain is associated with lower gas fees that are required to process the transaction and subsequently lower price. Gas fees on the Ethereum platform are higher, and therefore result in a higher cost of each individual NFT. With average price per NFT set to 200 dollars, the gross revenue from the initial sale alone could approximate $4,690,000. This figure doesn't account for potentially higher earnings from ultra-rare NFTs, which might have been auctioned for substantially more. Additionally, should there be a royalty mechanism in place for secondary market sales, which is a common practice to ensure continuous revenue from resales. Paramount could benefit from an ongoing income stream, potentially adding tens to hundreds of thousands of dollars over time, depending on the volume and value of these transactions. This speculative scenario suggests that Paramount's venture into NFTs for "Top Gun: Maverick" could have easily generated revenues exceeding $5 million, highlighting the project's potential profitability. Even

assuming that Paramount has spent 1.4 million dollars, it could have made over 3.6 million dollars from NFT sales and re-sales.

However, OpenSea (OpenSea, 2024) currently lists NFTs from the Top Gun: Maverick collection on its platform. The starting price for these NFTs is set at 0.01 ETH tokens. The collection, which consists of more than 23,000 assets, is owned by only 139 individuals, indicating that demand for the Top Gun: Maverick NFT collection is relatively low. In that case, the project could have even failed due to the low demand and subsequent drop in the price of each NFT (KalkineMedia, 2022).

Speaking of the collaboration of Paramount with Big Screen. The collaboration between Big Screen and Paramount Pictures to bring classic movies to virtual reality headsets offers a novel entertainment experience, with ticket prices set between $4 and $5 (Variety, 2019). With four movies shown weekly, potential revenue from ticket sales could be significant, assuming an average of 1,000 viewers per movie per week, which translates to roughly $18,000 in weekly revenue. Profitability depends on various costs, including licensing, operational, development, and marketing expenses. The venture's success hinges on its unique value proposition, leveraging the appeal of 3D movies in a declining 3D TV market, and its potential to attract a global audience. While exact profitability calculations require more detailed financial data, this innovative approach to movie watching using VR technology presents promising revenue opportunities, provided it can efficiently scale and manage costs.

Creating a virtual reality cinema experience with screenings of Paramount's own movies would involve substantial investment. The development costs for such a platform, which includes designing, programming, and testing to ensure a high-quality user experience, could range from hundreds of thousands to several million dollars. Operational costs, including server hosting, bandwidth, maintenance, and customer support, are expected to be significant, potentially running from tens of thousands to over a hundred thousand dollars monthly, depending on the scale of the operation and the user base. While showcasing its own movies reduces direct licensing fees, Paramount would still need to account for the internal cost allocation for using these films, which could be considered nominal compared to external licensing expenses.

Marketing and distribution efforts to promote this innovative VR cinema experience are crucial for its success and could require an investment of hundreds of thousands to millions of dollars. Additionally, creating VR-specific content or features to enhance the movie-watching experience might necessitate further investment. Overall, the total cost to launch and operate a VR cinema platform could be several million dollars, including development, operational setup, and marketing, with ongoing expenses for operation, content development, and user base growth and maintenance.

This project was shut down. Most likely, newness of the VR technology resulted in low demand for VR screenings. Also, such a project would require a significant amount of customer support and would result in lots of maintenance expenses which probably faded the income generated by ticket sales. Once technology becomes more common and easy to use, maintenance costs will go down and such a project would be more viable. However, at the moment, such a project seems to be a glimpse of what can possibly await us in the future, but it is not profitable at the moment.

It's evident that Paramount's enters the game of Metaverse-related technologies through the development of the Nickverse, its associated NFTs, and the partnership with Big Screen. The potential costs associated with these ventures, ranging from development and marketing of NFT projects like "Top Gun: Maverick" to the creation of virtual reality cinema experiences, are substantial, with estimates suggesting expenditures could range from hundreds of thousands to several million dollars. However, the potential benefits for Paramount are significant, highlighting the transformative power of Metaverse technologies to create new revenue streams, enhance audience engagement, and innovative entertainment experiences. Conversely, the challenges faced in the VR cinema venture with Big Screen, although innovative, reveal the current technological and market limitations, signifies the importance of market readiness. The project's shutdown points to the critical need for strategic patience and incremental advancements in technology and market development. In conclusion, Paramount's exploration of Metaverse-related technologies, despite the mixed outcomes, offers valuable insights into the evolving dynamics of the entertainment industry. The benefits, from creating immersive and interactive fan experiences to

opening up new revenue channels, are compelling. Paramount's continued investment and innovation in these areas, coupled with strategic market timing and cost-effective implementation, could not only pave the way for financial success but also position the company at the forefront of the next generation of entertainment experiences. As the Metaverse evolves, Paramount's early ventures into this space could yield significant competitive advantages, enhancing its brand, broadening its audience reach, and securing its place in the future of digital entertainment.

CHAPTER 3: WAYS TO ENHANCE THE EFFECTIVENESS OF PARAMOUNT PICTURES' COLLABORATION WITH THE METAVERSE

3.1. Improving Paramount's International Business Strategy through the Metaverse

Metaverse has a huge potential for the international expansion of businesses, especially the one in the entertainment industries. Following the examples and previous achievements of Paramount Pictures, I will explore other available possibilities for international business strategy improvement. International business strategy includes but is not limited to: market research and analysis, content localization, distribution channels, marketing and promotion, talent and crew management, technology and infrastructure, strategic partnerships and collaborations, continuous evaluation and adaptation.

Beginning with localization, localization of the user interface in the Metaverse does include linguistic and cultural aspects. While linguistic localization is self-explanatory and is now largely possible via artificial intelligence technology, finding a professional linguist will save the company's reputation and money. Recent case with Meta's Horizon World that was planned to be launched in Spanish is an example of poor localization choice. User interface was not entirely translated into Spanish and it turned away a lot of potential customers. On the other hand, there is another aspect to localization in the Metaverse. It is a virtual world, where users from different parts of the world can interact with each other. All around the world we are used to different kinds of experiences, we have different religions and different styles. When building a localization plan, different cultural aspects have to be included. The choices users make in avatar selection go beyond mere personal preference, often reflecting deeper cultural and societal influences, sometimes even subconsciously. Whether aiming to mirror their own appearance or adopt a completely different persona, offering a wide array of avatar customization options, including not just basic physical traits like skin, hair, and eye color but also culturally specific attire like hijab, kippah, sari, kilt and adornments such

as bindi, henna decorations. It can foster inclusivity. This approach allows users to more accurately express their cultural identities, enhancing the avatar creation process's relevance and personal significance. Localization can significantly enhance user immersion in the metaverse by adapting experiences to specific cultural contexts. Not every activity, scene, or location will resonate universally due to varying cultural norms and sensitivities. Furthermore, certain symbols, items, or references that are commonplace in one culture may be obscure or even offensive in another. To address this, consider the potential impact of cultural symbols, such as images of celebrities, politicians, comic book heroes, or region-specific events, ensuring they're appropriate and understandable across different cultures. Adapting virtual worlds to include activities, symbols, and references familiar to a local user base not only avoids misunderstandings but also enriches the user experience by making it more relevant and engaging for everyone involved (Dorota Pawlak on Medium, 2022).

Paramount could localize a virtual cinema experience for diverse global cultures by curating film selections and virtual environments that resonate with local tastes and cultural norms. This could involve offering movies with subtitles or dubbing in the local languages, and featuring regional cinematic masterpieces alongside international blockbusters to cater to a wide range of preferences. Additionally, the design of the virtual cinema itself could reflect local architectural styles or culturally significant themes, providing an immersive backdrop that feels familiar and welcoming. Special events or screenings could celebrate local festivals, holidays, or historical milestones, fostering a sense of community and cultural pride. Paramount's approach to localization would not only enhance user engagement by making the virtual cinema experience more accessible and relevant but also promote cultural exchange and understanding among its global audience.

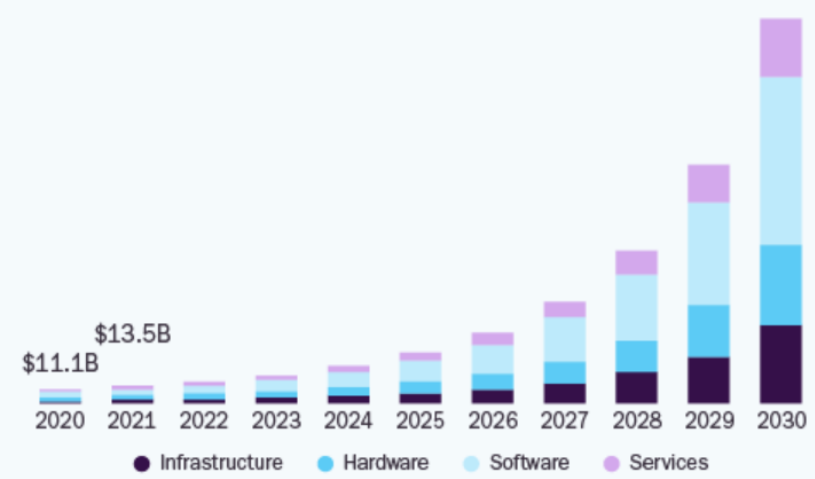
To localize a virtual cinema experience in India, Paramount could incorporate elements that deeply resonate with the rich and diverse culture of the country. This could include offering a wide selection of Bollywood hits, regional cinema classics from industries like Tollywood, Kollywood, and others, as well as international films with Hindi, Tamil, Telugu, and other regional language subtitles or dubbing options. The

virtual cinema environment itself could be designed to reflect iconic Indian architectural styles, such as incorporating elements reminiscent of the Taj Mahal or the intricate carvings of ancient temples, providing a uniquely immersive setting. Special screenings could align with major Indian festivals like Diwali, Holi, Eid, and Pongal, featuring films that celebrate these occasions or hosting live virtual events with popular Indian movie stars. Moreover, incorporating virtual stalls offering digital versions of traditional Indian snacks and beverages could enhance the realism of the experience. Through such thoughtful localization, Paramount could create a deeply engaging and culturally rich virtual cinema experience for its Indian audience, fostering a strong sense of community and belonging.

Localizing the virtual universe enhances cultural appreciation by allowing users to immerse themselves in the rich diversity of global perspectives, traditions, and variety. It fosters inclusivity by eliminating language barriers, enabling people from different regions to communicate and connect effectively. Beyond language, localization extends to adapting visuals, symbols, and customs to accurately reflect and resonate with various cultural nuances, creating a deeply immersive and culturally respectful experience. This approach to localization promotes a more inclusive, culturally aware virtual space (Stoquart, n.d.).

Fig 3.1

Asia Pacific Metaverse Market



Source: Grand View Research

Speaking of the market research and analysis, it is promising for the Metaverse in the following decade. The global metaverse market, valued at USD 65.5 billion in 2022, is projected to expand rapidly at a compound annual growth rate (CAGR) of 41.6% from 2023 to 2030. This growth is primarily driven by the escalating interest in merging the digital and physical worlds through the Internet. The rising momentum and popularity of Mixed Reality (MR), Augmented Reality (AR), and Virtual Reality (VR) technologies further fuel this expansion. Additionally, the COVID-19 pandemic and its ongoing impacts have played a significant role in accelerating the demand and development of metaverse environments, highlighting the importance of virtual spaces in contemporary and future digital interactions.

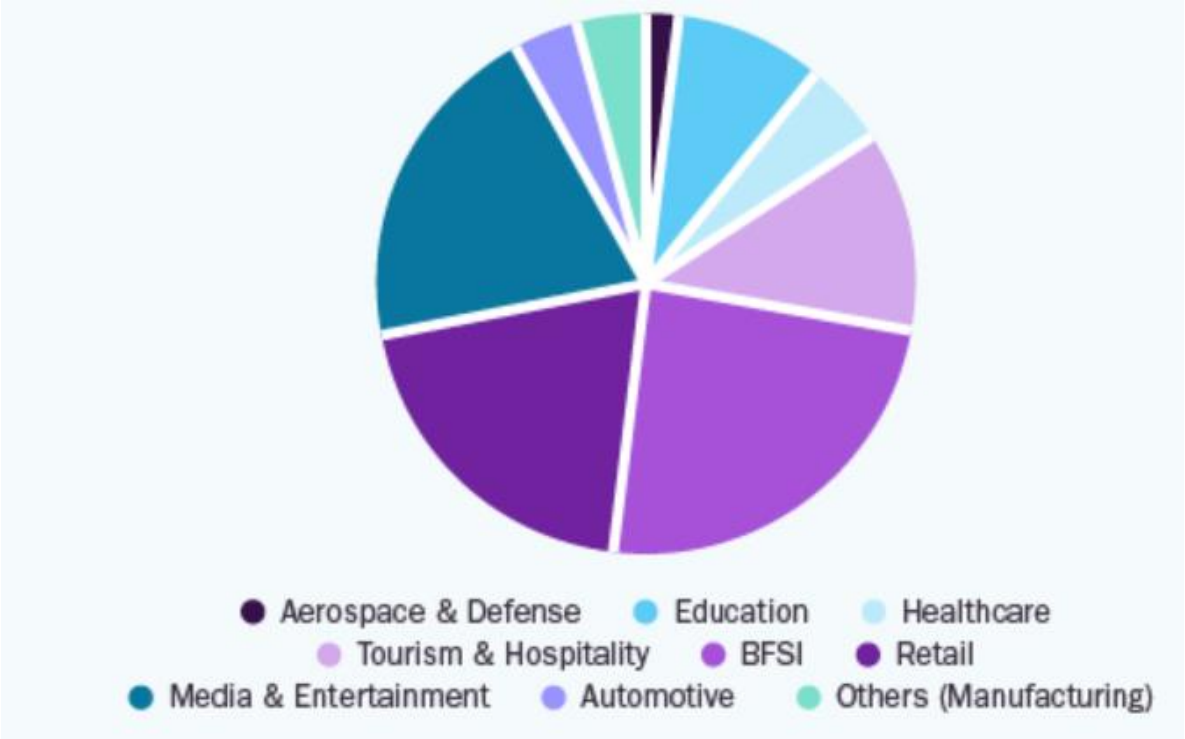
Fig 3.2

Metaverse Market

Source: Grand View Research

Fig 3.3

Global Metaverse Market



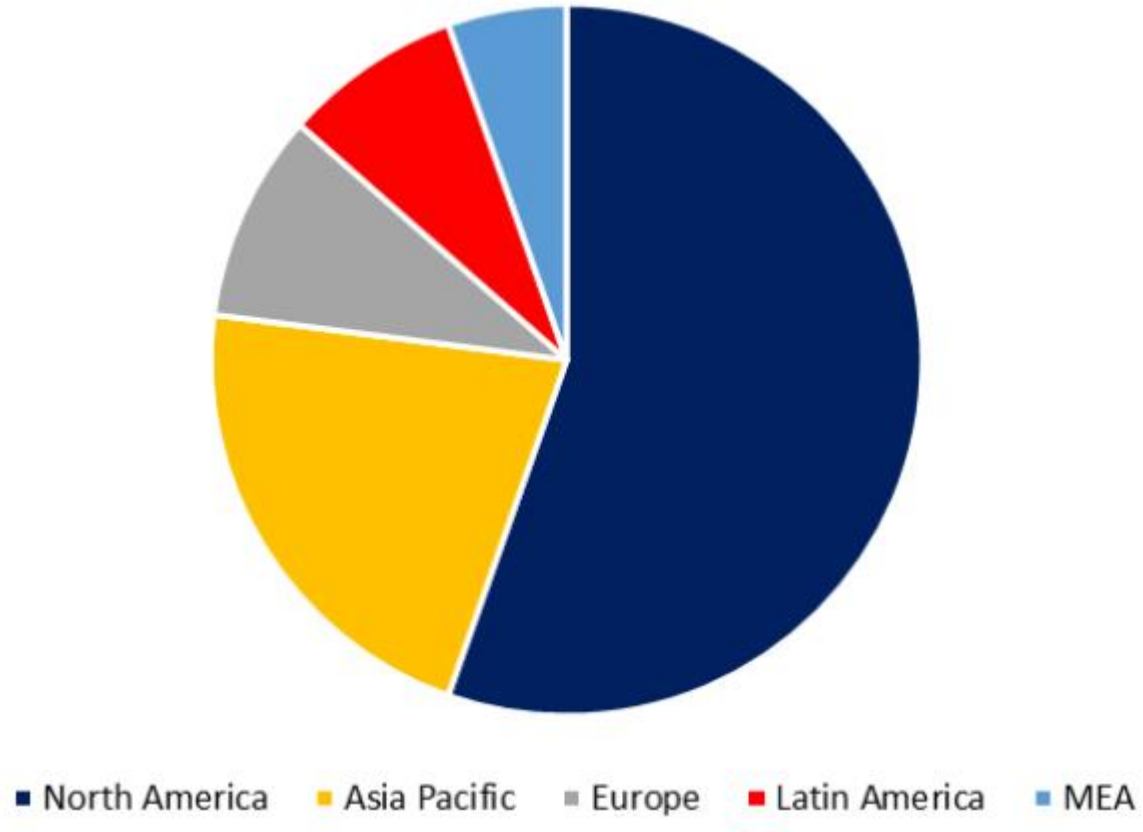
Source: Grand View Research

As the Metaverse market continues to grow, particularly in Asia and Pacific, the international market will significantly increase in the next decade. The growth, in particular, is expected to be significant in media and entertainment, banking, financial services, insurance (BFSI), tourism, hospitality and retail. The market of today does not

promise great return on investment, however, it seems that companies that keep investing in the research and development of the technology will reap the results by the end of 2030. It is expected that VR media and entertainment as well as correspondent infrastructure will grow and develop significantly. Therefore, the strategy for Paramount to conquer the international market would be to invest in creating virtual reality and other Metaverse-related experiences, such as virtual cinemas, VR products, VR video games and their localization for local audiences despite the previous not so successful attempts.

Fig 3.4

Metaverse market segmentation by region



Source: Spherical Insights

Metaverse opens a new door in terms of crew and hiring talents internationally, collaborating with partners. Not simply the hiring and interview process, but it changes the entire workflow of media productions. The answer is simple, it is virtual production.

As the virtual reality experience can bring people from various corners of Earth into one immersive reality, they can share the same workflow, while physically being in different countries or on different continents. For example, virtual production includes the creation of film sets, or virtual filming locations where the action will take place. Creators from all around the world can collaborate and design separate parts of the film in a virtually shared space. This technological advantage will allow companies to work with people internationally and collaborate with partners while not physically leaving their own studios. Paramount has to consider investing into virtual production workflow, since it can bring up new ideas and significantly decrease costs of the production.

The exploration of the Metaverse's potential for the international expansion of businesses, particularly in the entertainment industry shows the transformative power of an emerging market. It becomes clear that the Metaverse offers an immense possibility for revolutionizing international business strategies through market research, content localization, and technology integration. The emphasis on cultural inclusivity and localization not only broadens user engagement but also fosters a sense of community and belonging among diverse global audiences. Paramount's initiative to adapt virtual cinema experiences to reflect local cultures and languages has a potential for deepening cultural appreciation and connectivity. Additionally, the projected growth of the Metaverse market signifies opportunities for businesses to invest in virtual reality and other Metaverse-related experiences. Paramount's focus on virtual production workflow further highlights the shift towards a more interconnected and collaborative global entertainment industry. In essence, the Metaverse is not just an emerging digital frontier but a transformative ecosystem that promises to redefine international business strategies, enhance cultural exchange, and shape the future of global entertainment.

3.2. Transformations and New Markets Created by Metaverses for Paramount Pictures

The Metaverse is rapidly shaping a future where virtual and physical are seamlessly connected, creating vast opportunities for innovation and economic growth

across various sectors. From transforming the gaming and entertainment industry to revolutionizing commerce, retail, digital finance through MetaFi, and the explosion of NFTs, the metaverse is redefining how we engage with digital content, socialize, manage assets, and even understand ownership. Digital human avatars are central to enhancing personal expression and social interactions within these virtual spaces, offering unique ways to connect and build communities. Moreover, its applications in education and healthcare are providing immersive, interactive learning experiences and improving patient care with great precision.

MetaFi leverages the potential of metadata associated with blockchain assets to boost interoperability across various platforms. By enriching assets like NFTs and Bitcoin transactions with metadata, it allows for enhanced functionality, such as embedding links to art or including additional unencrypted data. MetaFi's ambition is to unify diverse blockchain functionalities within the Meta ecosystem, promoting interoperability through universal metadata standards. This ecosystem supports both non-fungible and fungible tokens, along with decentralized governance models like DAOs, to cultivate a comprehensive parallel economy accessible worldwide. MetaFi's strategy aims at driving the widespread adoption of Web3 and blockchain technologies by establishing a metadata-driven ecosystem that broadens Web3 and blockchain applications, emphasizing its role beyond the metaverse. The initiative advocates for consistent metadata standards across blockchains, facilitating machine-readable and sortable assets, thus encouraging interoperability and stability in blockchain projects while integrating community governance to forge a fully operational parallel ecosystem powered by blockchain. It enables owners to buy, sell, or develop virtual land and NFTs as they see fit, further enhancing the virtual experience with add-ons like wearable NFTs and consumables, deepening the connection between the virtual and real worlds. Leading companies, including Walmart, are pioneering in this space by developing virtual shopping experiences where customers can purchase goods and services within the metaverse. Additionally, other entities are exploring real estate within these virtual worlds, offering users the opportunity to acquire land for constructing dream homes,

architectural wonders, or simply spaces to socialize with friends, thereby expanding the possibilities and functionalities of these digital realms (LeewayHertz, n.d.).

With the help of metaverse technology, Paramount Pictures could revolutionize the film and entertainment industry by creating immersive virtual movie experiences and interactive worlds based on its extensive library of films and franchises. Imagine stepping into the vibrant world of a Paramount movie, exploring settings, and interacting with characters as if you were part of the story. This technology could enable Paramount to offer virtual cinemas where viewers can watch new releases or classic films in a shared, interactive environment, enhancing the social aspect of movie watching. Beyond entertainment, Paramount could utilize virtual lands as NFTs for promotional events, exclusive fan experiences, or as platforms for virtual premieres, allowing fans from around the globe to engage with their favorite stars and creators without physical or geographical limitations. The metaverse also opens up unique opportunities for content creation, where fans could contribute to the storytelling process or create their own narratives within the universes of Paramount's films, creating a new level of engagement and community building around its brands.

In the aerospace and defense industries, immersive technologies such as Extended Reality, Artificial Intelligence, and data analytics are increasingly being utilized for training purposes through simulation applications that leverage the metaverse. These advancements are anticipated to transform experiential training by leveraging real-time, data-driven platforms, resulting in a more effective and consistent transmission of skills and knowledge among trainees. Specifically, the metaverse offers a virtual environment where ground crew can conduct pre-flight procedures, thus potentially enhancing market growth. Moreover, the combination of XR and the metaverse may also enhance weapon training, flight training, and simulations. For example, in an effort to bring forth more agile and reliable methods for training, SimX, a medical device company, was awarded a contract by the US Air Force in November 2022 to develop a more sophisticated virtual reality medical simulation system. The ambition behind this initiative was to construct a system that would ensure greater adaptability and uniformity in training for emergency battlefield medical interventions (Markets and Markets, n.d.).

Paramount Pictures can harness the power of Extended Reality, Artificial Intelligence, and analytics within the metaverse to revolutionize the film industry. By adopting these technologies, Paramount could create deeply immersive virtual environments for both filmmakers and audiences. For filmmakers, XR can be used to pre-visualize sets and action sequences, allowing directors and cinematographers to explore and modify scenes before physical production begins, saving time and resources. AI can enhance post-production by streamlining editing processes and generating realistic visual effects, while analytics could provide valuable insights into audience preferences, guiding marketing strategies.

Furthermore, the metaverse offers Paramount a platform to create unique, interactive marketing campaigns where fans can engage with movie universes in real-time, attending virtual premieres or exploring movie-themed worlds, thereby boosting fan engagement and box office returns. Paramount could also explore new narrative forms within the metaverse, crafting interactive storytelling experiences that allow audiences to influence or participate in the story, leading to novel forms of entertainment that extend beyond traditional movie-watching. The integration of these technologies can potentially open up new revenue streams and reshape the way stories are told and experienced in the digital age.

Paramount Pictures virtual film set would feel like stepping into the world of the movie during its creation. This technological advancement in virtual cinematography allows to capture the essence of the scene in real-time, offering a seamless and accelerated production process. This revolutionizes the traditional filmmaking timeline and changes the creative workflow. The efficiency begins even before a single frame is shot, thanks to pre-visualization tools. Directors and their teams can plan and test every aspect of the shoot in great detail, envisioning the finished scene before filming begins. Once on set, real-time rendering translates their vision instantly onto the screen, ensuring lighting and effects are up to and beyond expectations. The efficiency continues in post-shooting, as much of the heavy lifting has already been done, making the final production phase easier.

The journey of virtual production begins in the realm of previsualization, where every scene is meticulously mapped out in a digital landscape. This initial phase is where the magic starts, as it allows the creative minds to explore and decide on the visual aspects of the scene, from framing to lighting and camera angles. This proactive planning significantly diminishes the guesswork and improvisation often found in traditional filming methods. As we go into the real-time production phase, the innovation shines. On sets equipped with LED walls or green screens, pre-crafted digital environments spring to life around the actors. The cameras roll, capturing the live performance against these vivid backdrops, effectively blending the real with the virtual. This innovative method cuts down on the need for post-production manipulation, as much of the visual artistry is achieved on the spot. During post-production, although reduced, critical tasks remain. Natural lighting effects are fine-tuned, and CGI characters receive their final touches, ensuring they're as lifelike as their real-world counterparts. The dedicated team of visual effects artists, compositors, and other post-production professionals diligently work to stitch together the various elements. Their expertise ensures that the final product narrates a single, compelling story. This entire process represents a paradigm shift in filmmaking, substantially alleviating the workload typically associated with the post-production stage and allowing for a more streamlined, efficient, and creative production journey (Videomaker, n.d.).

Cost-effectiveness is another feature of virtual production. The technology reduces the need for physical set builds and on-location shoots, trimming down logistical expenses. The dynamic nature of virtual sets means changes can be made fast, fostering a creative environment. This not only saves money but also optimizes resources, giving advantage for both indie features and big-budget cinema. The foundation of virtual production lies in its key technology. Volumetric capture technology breathes life into digital characters, making them indistinguishably real within virtual settings. Motion tracking systems scan over the actors' movements, ensuring the virtual environment stays in flawless sync. Meanwhile, camera tracking solutions work to connect the movements of the camera with the virtual world, ensuring a consistent visual experience (The Vizarts, 2023).

Examples of virtual production's achievements include “The Mandalorian,” (Industrial Light and Magic, 2020) the “Avengers: Endgame,” and the “Thor: Love and Thunder.” Each has demonstrated how virtual environments can elevate storytelling, create safe and controlled shooting conditions, and minimize production expenses. As we look into the horizon of virtual production, it’s clear the industry is facing new challenges and opportunities. Collaborative tools are getting creators to work together in virtual spaces. Augmented reality and extended reality are blurring the lines between the tangible and the digital realms, making the way for new narrative experiences. In this upcoming era, the union of the physical and digital worlds promises a cinematic revolution, a new era of cinema (Animost, 2023).

3.3. Risks Associated with Metaverses for Paramount Pictures and Methods of their Mitigation

Venturing into the metaverse presents Paramount Pictures with a set of risks, including the substantial investment required to adapt or develop the necessary immersive technology, which carries the danger of rapid obsolescence. The company also faces heightened challenges in protecting its intellectual property in an expansive digital realm, alongside navigating complex issues surrounding user privacy and data security. The uncertain market and the unpredictable pace of consumer adoption add another layer of risk, as does the potential for damage to brand reputation through missteps in this new territory. Paramount must keep up with the competition and the need for continuous innovation in a possibly saturated market. Furthermore, ethical considerations and the imperative to create a safe, inclusive online environment amplify the content moderation challenges, all of which Paramount needs to strategically manage to ensure its journey into the metaverse is successful.

For Paramount Pictures, navigating the rapidly evolving entertainment and gaming landscape presents several associated risks. The explosive growth of digital platforms poses a threat to traditional film distribution channels, potentially eroding market share and revenue. Paramount must adapt to the increasing dominance of

streaming services and the demand for high-quality content, which requires substantial investment in content creation and acquisition. Additionally, the convergence of gaming and entertainment presents new competitors like those mentioned in the market report, such as Epic Games and Unity Software, which are redefining consumer expectations and content consumption patterns. Paramount's ability to adapt to technological innovations, such as the use of digital twins and augmented reality, is crucial, yet this transition comes with high costs and the risk of swift obsolescence in an industry driven by quick technological advancement. Failure to effectively manage these risks could result in a loss of relevance and profitability in an industry that is increasingly competitive and technologically driven.

To mitigate the risks associated with the fast-paced evolution of the entertainment and gaming industries, Paramount Pictures could strategically enter the metaverse by leveraging its rich portfolio of intellectual properties to create immersive virtual experiences. This move would require forming partnerships with leading tech companies, such as those listed in the market report like Nvidia and Unity Software, to implement modern technologies while managing costs and staying on the top of innovation. By developing exclusive content for virtual platforms, Paramount can capitalize on the emerging demand for virtual entertainment and gaming experiences, getting into new revenue streams and expanding their audience base. Additionally, investing in talent skilled in AR and VR could enhance Paramount's competitiveness. To counterbalance the high costs of technology adoption, Paramount could explore new business models, such as subscription services or in-metaverse transactions, which could offer more sustainable revenue as opposed to traditional box office sales. Paramount's proactive engagement in the metaverse can also serve as a hedge against the risk of digital obsolescence, ensuring that the company remains relevant in a future where the lines between film, gaming, and virtual interaction continue to blur.

The most significant risk for Paramount Pictures is the potential failure to engage with emerging metaverse technology. As entertainment paradigms shift towards interactive and immersive experiences, Paramount's hesitance could lead to a significant competitive disadvantage. The metaverse represents a convergence of digital presence,

gaming, and community, redefining user engagement. Should Paramount abstain from this new market, it risks losing relevance with a digitally native audience that increasingly spends time and money in virtual worlds. This audience is led by tech giants and gaming companies, like those mentioned in the market report, who are already capitalizing on the metaverse's potential. Paramount's rich catalog of intellectual property offers a gateway to the metaverse, but without investment and strategic initiatives in the technology, the studio could miss out on the next frontier of digital content consumption. The opportunity cost of inaction includes not only loss in profits but also the erosion of brand equity and cultural impact in an age where the metaverse is poised to become a central entertainment hub.

Numerous metaverse platforms are leaning towards adopting cryptocurrencies, NFTs, and other digital forms of assets as their primary currency exchange mediums, potentially leading to technological hardships for individuals not aware of cryptocurrency and the way it works. This shift also introduces issues of trust, as conventional financial intermediaries like banks might be bypassed, and regulatory bodies might struggle with oversight and jurisdiction over these digital transactions. The risk of cyber theft is increased, with hackers possibly targeting weaknesses in software or code to steal from crypto wallets or digital asset pools managed by smart contracts. Furthermore, as some enterprises push for a "creator economy" within the metaverse, allowing users to earn from their creations or participation, there could be additional trust concerns regarding the fair distribution of rewards and safeguards against exploitation or fraud (Theirmindia, 2022).

To address these challenges within the metaverse, Paramount could adopt a new strategy. Firstly, investing in education and tools that simplify the use of cryptocurrencies and digital assets can help make the technology more accessible and reduce the skill barrier for users. This might include user-friendly wallets, straightforward trading platforms, and comprehensive guides on digital asset security. Secondly, establishing partnerships with trusted financial intermediaries and leveraging blockchain technology could introduce a layer of trust and security, ensuring transactions are transparent and traceable while still bypassing traditional banking

systems. Thirdly, working closely with regulators to develop clear guidelines and frameworks for digital transactions could help mitigate legal and jurisdictional uncertainties. Paramount could also invest in advanced cybersecurity measures to protect against hacks and exploits, including regular audits of smart contracts and infrastructure. Finally, to foster a safe and equitable creator economy, implementing robust systems for reward distribution and user protection against abuse is crucial. This could involve transparent reward mechanisms, community governance models, and strict policies against manipulation, ensuring a secure and trusting environment for all participants within the metaverse.

The ultimate aim for the metaverse is to achieve full interoperability, allowing customers and employees the ability to transfer their identities, assets, experiences, and data across different platforms in the future. Though it's still early to say for certain, the hope is that it will enable seamless shopping, socializing, and meeting attendance across any platform, moving away from the current way where data and rules are controlled by each platform provider. The prospect of achieving complete interoperability is ambitious and may be idealistic. Nonetheless, even a slight shift towards making platform transitions smoother could introduce new challenges related to trust. The absence of centralization might lead to you and your partners losing control over data, necessitating a new strategy for data collection, management, analytics, and security. This strategy must be capable of safeguarding your stakeholders' privacy and fostering trust that promotes data sharing, wherever they may be. It's crucial to establish transparent regulations, particularly regarding consent, so that users are fully aware of who accesses their data and for what reasons.

Paramount Pictures, like any major player in the entertainment industry entering the metaverse, could navigate these challenges by investing in robust data management and security infrastructures designed for the interoperable digital landscape. This means developing systems that not only protect user data across various platforms but also ensure that users' experiences with Paramount's content remain seamless and personalized, regardless of the digital environment they choose to engage in. Paramount could lead by example in setting industry standards for data governance and user consent

in the metaverse, thus building a foundation of trust with its audience. Collaborating with other industry stakeholders to advocate for and establish interoperable norms and privacy safeguards can help Paramount not only adapt to the evolving digital ecosystem but also shape its future direction, ensuring the studio remains at the forefront of entertainment innovation while respecting and protecting user privacy.

To ensure a safe environment, the metaverse requires a comprehensive framework of regulations covering aspects like security, user interaction, taxation, data management, and adherence to legal standards. While the specifics of these guidelines remain under development, it's clear that metaverse platforms are already introducing complex challenges in governance and security. The progression of a decentralized digital world opens up new vulnerabilities to cyber threats, particularly through devices like wearable technology. Cyberattacks in a three-dimensional setting could have profoundly distressing effects. Additionally, the emergence of metaverse-exclusive criminal activities, such as fraudulent schemes involving non-fungible tokens and deceitful investments linked to specific cryptocurrency tokens, presents new legal challenges (PWC, n.d.).

Paramount Pictures, like other entertainment industry giants, can navigate the challenges posed by the metaverse by developing a strategic approach that includes establishing robust security protocols and actively participating in the formation of industry-wide standards for governance, data protection, and regulatory compliance. To safeguard against the unique threats of the metaverse, such as fraudulent activities involving digital assets and NFTs, Paramount could invest in cybersecurity technologies and expertise, particularly in areas related to digital and virtual content. Additionally, collaboration with other stakeholders, including technology companies, regulatory bodies, and other content creators, can help create a safer and more regulated digital environment. Paramount could also explore innovative storytelling and content distribution methods within the metaverse, turning potential challenges into opportunities for engaging with audiences in novel and immersive ways. By being at the forefront of advocating for clear rules and ethical practices in the metaverse, Paramount

Pictures can not only protect its assets and intellectual property but also play a pivotal role in shaping the future of digital entertainment.

In the envisioned metaverse, individuals are expected to have control over their digital selves, encompassing their data, history, and belongings, usable across various platforms. This contrasts with the current state of the internet, where identities are often existing within specific companies, platforms, or apps. In the metaverse, not only users but also assets and organizations will possess their own distinct identities that are interoperable across different platforms. Even if this ideal scenario is not fully realized, there is a push towards creating digital identities owned by the users themselves. This could enable consumers to choose which parts of their identity they wish to disclose, allowing for anonymity or pseudonymity. Alternatively, this role might be undertaken by companies or intermediaries. The absence of control over the digital identities of key stakeholders could lead to challenges in establishing trust and safeguarding against phishing and fraud. To foster trust in these metaverse identities, blockchain technology for credential verification and advanced forms of multi-factor authentication tailored to the metaverse are suggested. For particularly sensitive cases, requiring the verification of multiple identities before concluding transactions could be beneficial. Utilizing software that can spot fakes and bots is also advised to prevent identity theft and impersonation. Participating in or monitoring coalitions focused on developing digital identities can be strategic, allowing for influence over the creation of these identities and the ability to adjust data governance and authentication methods accordingly (MarshMcLennan, n.d.).

Paramount Pictures can address the challenges and opportunities presented by the evolving digital identity landscape in the metaverse by adopting a proactive and innovative approach. As the metaverse promises a new era of digital interaction, Paramount could explore the integration of blockchain technology to offer secure and verifiable digital assets, such as exclusive movie content or virtual merchandise, tied to blockchain-based identities. This approach not only enhances security and trust in digital transactions but also enriches the user experience by allowing fans to own and transfer unique digital assets across platforms. Paramount could also pioneer in developing

immersive experiences where users can engage with their favorite films and characters in the metaverse, ensuring these interactions are safe and authentic through the use of advanced authentication methods like multi-factor authentication and fake detection software. Furthermore, by actively participating in or forming coalitions focused on digital identity standards and governance, Paramount can influence the development of the metaverse to ensure it aligns with their strategic interests and the safety of their stakeholders. Monitoring the evolution of digital identity and adjusting their strategies accordingly will be key for Paramount to navigate this new digital frontier effectively, leveraging it to create innovative, engaging, and secure experiences for their audience.

The experience of customers and employees is set to transform with the progress of virtual reality or extended reality technologies. This shift will introduce them to unprecedented visuals, sounds, movements, and even emotions. In such immersive three-dimensional environments, instances of privacy breaches or aggressive behaviors could have more profound impacts. As stakeholders venture into your digital realms, they will anticipate robust protection measures from you. Failure to shield them from mistreatment or misinformation could significantly ruin your brand's reputation. For entities looking to engage in or develop metaverse platforms—be it through virtual shops, online meetings, or digital entertainment—it's crucial to implement novel guidelines and safeguards, including the supervision by third parties and the establishment of teams dedicated to content moderation. These measures are essential to ensure a metaverse experience devoid of misinformation, harassment, or abuse. Additionally, reevaluating privacy protocols is necessary to accommodate a digital landscape that permits users to interact and disclose information beyond current internet capabilities. Furthermore, in an online world where deceiving appearances are easily created, maintaining authenticity is important. Demonstrating that your metaverse presence aligns with your core values and objectives is a vital strategy for fostering trust within these virtual spaces (Insurance Business, 2023).

Paramount Pictures can address these emerging challenges by proactively establishing a secure and trustworthy virtual environment. This involves creating a comprehensive strategy that prioritizes the safety and privacy of its users within these

digital spaces. Paramount can achieve this by developing advanced security protocols and implementing strict content moderation systems to prevent misinformation, harassment, and abuse. Collaborating with third-party oversight bodies can also enhance the credibility and security of their metaverse presence. Moreover, Paramount should commit to upholding high privacy standards that reflect the enhanced capabilities and risks of the metaverse, ensuring that user data is protected and that interactions remain confidential. In fostering a culture of authenticity, Paramount must ensure that its virtual offerings align closely with its brand values and the expectations of its audience, thereby building a metaverse environment that not only captivates but also maintains the trust of its users. By adopting these measures, Paramount Pictures can navigate the intricacies of the metaverse, leveraging its vast potential while safeguarding against the inherent risks of such immersive digital experiences.

The concept that the physical world remains constant even when you're not present is mirrored in the metaverse; once users disconnect from their VR or XR devices, the actions they participated in continue to exist. This includes the enforcement of agreements and asset trading through smart contracts, as well as the availability of digital goods on virtual shelves for purchase by other users. Virtual machines will also persist in their production activities. For businesses to have confidence that their virtual endeavors, investments, and presence will operate seamlessly within this continuous digital realm, there's a necessity to revisit and potentially overthink digital services, surveillance, and regulatory measures. Innovative technologies present solutions to aid in this adjustment. The integration of blockchain with artificial intelligence has the potential to automate the verification of identities, assets, transactions, and contracts, thereby fostering trust in the sustained operations within the metaverse. It's also prudent to involve independent groups, both from within and outside the organization, to conduct thorough audits of the smart contracts' programming as well as the foundational hardware and software infrastructure (Cybermagazine, 2023).

Paramount Pictures may navigate the challenges of maintaining a robust presence in the digital and metaverse realms by leveraging a combination of technological presence and strategic oversight. The studio could implement blockchain technology

integrated with artificial intelligence to automate and secure transactions, identity verification, and the authenticity of digital assets within the metaverse. This approach not only enhances the trust in digital interactions but also provides the way for innovative storytelling and engagement platforms. Furthermore, Paramount Pictures might consider establishing dedicated teams for continuous monitoring and auditing of digital services, including the smart contracts and the infrastructure powering its virtual environments. These teams could consist of internal experts as well as external auditors, ensuring a comprehensive oversight mechanism. This dual strategy of adopting new technologies for automation and security, along with monitoring and auditing, would enable Paramount Pictures to effectively address the complexities of operating in persistent digital worlds, thereby ensuring a seamless and trustworthy virtual experience for its audience.

As Paramount Pictures embarks on its journey into the metaverse, the company confronts a set of risks and opportunities that come from the shift occurring in the entertainment industry. The metaverse, with its promise of immersive, borderless digital worlds, represents the next frontier in storytelling and audience engagement. However, Paramount must navigate the dual challenges of technological obsolescence and the threat to intellectual property, while also addressing the complex issues of data privacy, security, and ethical content moderation. These challenges demand not only significant financial investment but a visionary approach to integrating the physical and digital realms of entertainment. Moreover, Paramount's advancement into the metaverse includes high competition and the necessity for perpetual innovation. The entertainment landscape is rapidly evolving, with consumer expectations shifting towards more interactive and engaging experiences. This transition requires Paramount to rethink its content creation, distribution, and monetization strategies in the context of a digital ecosystem that is still in its infancy. The uncertain pace of consumer adoption and the potential for market saturation further complicate Paramount's strategic planning, necessitating a flexible, forward-thinking approach that can adapt to the variety of technological advancement and market dynamics.

Yet, within these challenges lie opportunities for Paramount Pictures. By leveraging its portfolio of intellectual properties, Paramount can create captivating virtual experiences that transcend traditional media boundaries. Strategic partnerships with technology leaders and a commitment to innovation can enable Paramount to redefine entertainment, offering audiences new ways to connect with stories and characters in deeply personal, interactive ways. This also opens up new revenue streams, from virtual goods and experiences to new forms of audience participation and content monetization. Paramount's success depends on its ability to balance the risks with a clear-eyed vision of the future of entertainment, where the digital and physical worlds converge in service of storytelling.

Paramount Pictures also has the opportunity to lead by example in addressing the ethical, security, and privacy concerns that accompany the rise of the metaverse. By establishing robust protocols for data protection, content moderation, and user safety, Paramount can set industry standards that ensure a secure, inclusive, and equitable digital environment. This commitment to ethical innovation can enhance Paramount's brand reputation, fostering trust and loyalty among audiences and stakeholders.

In conclusion, Paramount Pictures' success will depend on its ability to adapt emerging technologies, protect its intellectual assets, and remain committed to innovation and ethical principles. Paramount's journey into the metaverse is not just an exploration of new digital landscapes but a bold reimagining of what entertainment can be in the 21st century. By embracing the challenges and opportunities of the metaverse, Paramount Pictures can make it to a leadership position in the digital transformation of entertainment, ensuring its relevance in a rapidly evolving global media landscape.

CONCLUSION

The research of the Metaverse in this study reveals a world of digital innovation, with its own opportunities and challenges, that would revolutionize the landscapes of international business and entertainment. The Metaverse, a term that induces images of vast virtual spaces and advanced digital interactions, emerges at the intersection of several technologies: virtual reality, augmented reality, blockchain, and artificial intelligence. This convergence creates a multidimensional platform that not only blends the physical with the virtual but also promises to reshape the ways in which global business strategies are formulated and executed, and how audiences across the globe engage with digital content.

Paramount Pictures' and other leading entertainment companies' strategic ventures into the Metaverse showcase the pioneering spirit of traditional industries as they progress in this new digital era. The entertainment giant's initiatives, from making innovative collaborations to creating digital assets such as non-fungible tokens and virtual experiences. Paramount's approach serves as a case study in extending brand reach and engaging with audiences in immersive, novel ways within the virtual reality of the Metaverse. These endeavors not only spotlight the potential for transformative content delivery and audience engagement strategies but also unfold the challenges and ethical considerations inherent in venturing into such a dynamic, evolving digital ecosystem.

The promise of the Metaverse in new markets, broadening audience reach, and providing innovative solutions to mitigate the risks of digital ventures is vast. Realizing these opportunities and risks is necessary for such technological innovation, as well as prioritizing user-centric experiences, and proactively addressing the Metaverse's unique challenges. Paramount Pictures' engagement with the Metaverse shows the immense potential and challenges, offering valuable insights into the broader implications for digital innovation in international business and beyond.

As we forge ahead into the digital future, the Metaverse stands as a testament to the intricate dance between technology and creativity, offering a groundbreaking shift for conducting business and redefining entertainment in a globalized world. The path to unlocking the full potential of the Metaverse will require collaborative efforts that are rooted in ethical considerations, aimed at creating an inclusive and accessible virtual environment for all. This endeavor calls for a robust body of future research dedicated to exploring the impacts of Metaverse initiatives on international business practices, cultural exchanges, societal norms, and ethical frameworks, highlighting the need for regulatory guidance and ethical standards to navigate this complex, digital frontier.

In delving deeper into the findings from this study, it becomes clear that the Metaverse represents a world of immense potential in international business and digital culture. Industry pioneers like Paramount Pictures and other leading entertainment enterprises are leaders in exploring this digital innovation, charting courses through virtual spaces that promise to redefine our concept of connectivity, creativity, and commerce. Successfully navigating this uncharted digital territory will demand a radically new strategy that integrates strategic adaptability, ethical integrity, and collaborative innovation across sectors. Such a comprehensive approach will not only facilitate a seamless transition into the Metaverse but will also ensure that this digital revolution catalyzes societal advancement, bridging digital and physical realities in ways that enrich human experiences and foster a more connected, creative, and equal global community.

The advancement of virtual production marks an evolutionary step within the Metaverse, significantly impacting content creation and international business. Walt Disney’s exploration into virtual production showcases its ability to merge real-time graphics with traditional filmmaking, offering a glimpse into a future where creative processes are more dynamic and cost-efficient. This technique not only streamlines production but also fosters global collaboration, allowing creators from various locations to work together in virtual environments.

As virtual production technologies become more refined and accessible, their integration into the Metaverse is expected to expand, enhancing the creation of immersive experiences. However, this growth comes with challenges, including the need for new skills and the potential for ethical dilemmas in digital content creation. Addressing these will be crucial for leveraging virtual production's full potential, ensuring it contributes positively to the Metaverse's evolution and redefines our interaction with digital narratives.

The Metaverse invites us to envision a future where digital and physical realities merge, creating a variety of interconnected experiences that redefine our conceptions of community, creativity, and commerce. This digital convergence challenges us to reimagine the possibilities of human interaction, collaboration, and innovation in an increasingly digitized world. As we stand at the threshold of this new era, our collective journey into the Metaverse offers a unique opportunity to reshape our world, promising a future where the digital and physical coexist in harmony, enriched by the boundless potential of digital innovation. In this context, the Metaverse not only represents a new frontier for technological advancement and business strategy but also a canvas for societal evolution, where the fabric of our digital and physical lives is intricately united together, writing a new chapter in human history marked by unprecedented levels of interconnectivity, creativity, and inclusivity.

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ANNEXES

Table 2.4

Dividend information

Declared	Ex-Date	Record	Payable	Amount	Type
2/22/2024	3/14/2024	3/15/2024	4/1/2024	0.05	U.S. Currency
Total dividends in 2024:				0.05	
10/12/2023	12/14/2023	12/15/2023	1/2/2024	0.05	U.S. Currency
8/1/2023	9/14/2023	9/15/2023	10/2/2023	0.05	U.S. Currency
5/8/2023	6/14/2023	6/15/2023	7/3/2023	0.05	U.S. Currency
3/10/2023	3/17/2023	3/20/2023	4/3/2023	0.24	U.S. Currency
Total dividends in 2023:				0.39	
9/21/2022	12/14/2022	12/15/2022	1/3/2023	0.24	U.S. Currency

8/2/2022	9/14/2022	9/15/2022	10/3/2022	0.24	U.S. Currency
4/5/2022	6/14/2022	6/15/2022	7/1/2022	0.24	U.S. Currency
2/10/2022	3/14/2022	3/15/2022	4/1/2022	0.24	U.S. Currency
Total dividends in 2022:				0.96	
10/6/2021	12/14/2021	12/15/2021	1/3/2022	0.24	U.S. Currency
8/2/2021	9/14/2021	9/15/2021	10/1/2021	0.24	U.S. Currency
5/26/2021	6/14/2021	6/15/2021	7/1/2021	0.24	U.S. Currency
2/9/2021	3/12/2021	3/15/2021	4/1/2021	0.24	U.S. Currency
Total dividends in 2021:				0.96	
10/21/2020	12/14/2020	12/15/2020	1/4/2021	0.24	U.S. Currency
8/3/2020	9/14/2020	9/15/2020	10/1/2020	0.24	U.S. Currency

5/19/2020	6/12/2020	6/15/2020	7/1/2020	0.24	U.S. Currency
2/12/2020	3/13/2020	3/16/2020	4/1/2020	0.24	U.S. Currency
Total dividends in 2020:				0.96	
12/19/2019	12/27/2019	12/30/2019	1/10/2020	0.24	U.S. Currency
8/1/2019	9/9/2019	9/10/2019	10/1/2019	0.18	U.S. Currency
5/29/2019	6/7/2019	6/10/2019	7/1/2019	0.18	U.S. Currency
1/31/2019	3/8/2019	3/11/2019	4/1/2019	0.18	U.S. Currency
Total dividends in 2019:				0.78	
11/5/2018	12/10/2018	12/11/2018	1/1/2019	0.18	U.S. Currency
7/30/2018	9/7/2018	9/10/2018	10/1/2018	0.18	U.S. Currency
5/25/2018	6/7/2018	6/8/2018	7/1/2018	0.18	U.S. Currency

2/1/2018	3/8/2018	3/9/2018	4/1/2018	0.18	U.S. Currency
Total dividends in 2018:				0.72	

Source: Paramount